

State capacity and institutional change: a case study of telecom regulation in Brazil

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Introduction

In the 1990s, the Latin American countries went through an important wave of reforms, which have transformed the structure and the role of the states in the region. These reforms reflect to a large extent the pressures that have developed as a result of the globalization process. A landmark in this process was the international agreement at the World Trade Organization for the liberalization of telecommunications (Braga, 1997). Increased competition in the global markets and an increased capital mobility combined with important domestic fiscal crises have led countries in the region to privatize a vast array of state owned enterprises and implement a number of initiatives to foster competitiveness and promote the country's insertion in the international economy. In fact, Latin America has been the region in which the privatization process was more intense (cf. Figure 1.1.). Not only the privatization episodes in the region were far more numerous than in other parts of the world, the changes in the role of the state were equally unsurpassed elsewhere. An important transformation in the structure of the state has taken place in the region and new patterns of state-society relations have also developed as a result of a concomitant process of democratization that occurred in the region.

This paper is part of a larger research project aims at mapping out these changes and evaluating the distinct national patterns that have emerged. This is done with a specific reference to the patterns of state capacities in two markedly distinct areas of state activity: regulation of telecommunication and agricultural/ industrial/innovation policies (Asociacion 2004). For the case of Brazil, the research focuses on the industrial sector and the corresponding organizational field structured around the initiatives for technological innovation.

Brazil was a reform laggard in Latin America having embarked on the privatization bandwagon much later than the rest of Latin America. Chile, Argentina and Mexico privatized much earlier than Brazil, whereas Uruguay remained the only country in the Southern Cone where the process was blocked, primarily due a combination of institutional variables and strong popular preferences for state ownership (Table 1.1). Brazil has a record of strong state intervention in the economy and was a very successful case of import substitution industrialization. State intervention was not de-legitimized as in many other Latin American countries. As explored in this research, there are important institutional legacies in the country that help explain the current configuration of industrial policy and initiatives to foster the competitiveness of the economy.

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Country	Total Privatization Revenues (1988-97) (US\$ current mil)	1988-97 Privatization Revenues/1997 GDP (%)	Number of Privatization Sales (1988-97)
Argentina	27921.0	9.53	157
Bolivia	884.2	11.10	82
Brazil	34559.4	4.21	101
Chile	1484.1	2.00	26
Colombia	5685.1	5.23	27
México	33353.1	9.27	243
Uruguay	15.0	0.08	8

source: World Bank

1.1 The policy-making process and state capacity : a framework for analysis

State capacity is conceptualized in this study with reference to the broader institutional environment of a given country. Therefore the concept as developed here goes beyond the more circumscribed notion of state capacity as administrative or bureaucratic capacity. The concept of “enlarged state capacity” is proposed to capture the embeddedness of bureaucratic capacities within the broader institutional environment. This study focuses the national responses to globalization, which can be viewed as an external shock. Globalization imposes new tasks for national states because it essentially weakens the capacity of states to regulate the national economies. These new tasks are directly related to the notion of an enlarged state capacity as discussed below. Increased financial integration and capital mobility means that the scope for country specific interventions is limited. The emergence and consolidation of global markets in areas such as telecommunications and the corresponding technological sectoral change implies that national solutions based in domestic private firms or state monopolies are no longer viable alternatives. Similarly, as markets become increasingly global, the ability of national economies to provide solutions that are purely endogenous is very limited. Instead the alternative for states is to identify niche markets in which they have competitive advantages – which are increasingly manufactured, i.e. the product of coordination mechanisms in which states play crucial roles. The ability to adapt to the changing international order is determined by a number of factors. Figure 2 provides a schematic representation. The figure can be read from the left to the right and from the top to the bottom. The former stresses the importance of the external shock in society, whereas the latter captures the capacity of the state to initiate change.

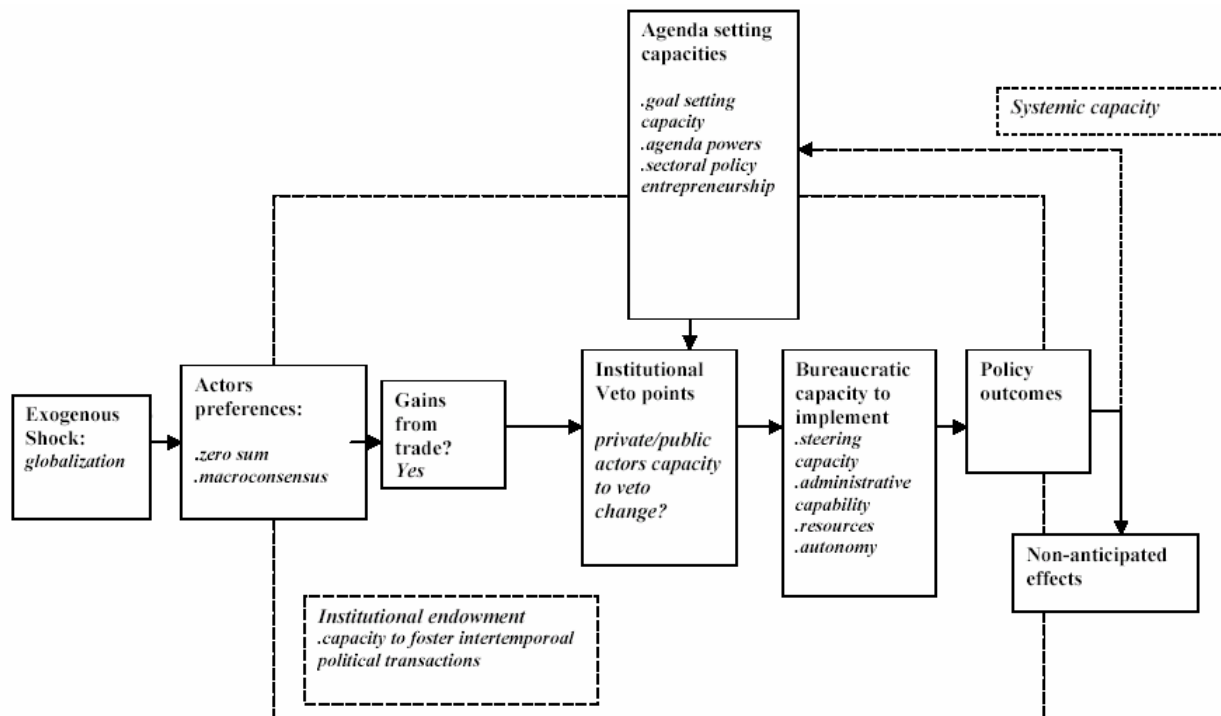
Responses to globalization are the product of exchanges between actors in which there are potential yet varying gains from trade. We could argue that the preference divergence or convergence between actors is an important factor that may contribute or not to the initiation of reforms, making possible the capture of these gains. The more polarized these preferences are, the more unlikely it is that reform proposals will be adopted. If there is macro-consensus in society the chances that initiatives that allow the expansion of the welfare frontier are high. Conversely, if actors are polarized in a zero sum game, these chances are low. Examples of polarization are post conflict situations in which the gains from collaboration exceed the perceived cost of collaboration with the “enemy” or where actors are trapped in a bad equilibrium because of their strong ideological stances. Regarding the national responses to globalization that are the object of this study, divergence hinges on the role of the state in regulation, the privatization of public utilities and in policies for innovation and competitiveness. Macro consensus on these issues is generally conducive to change and active policy entrepreneurship if the consensus is

pro-reform. But it might also block change if the consensus is against the reform. This is particularly true if there are institutional veto gates for the expression of the veto players' preference for the status quo. Plebiscites are a prime example of such a veto gate and can be used by those against the reform proposals to block change. Certain federal arrangements that favor the expression of governors' preferences in national policy-making and an independent judiciary represent other types of institutional veto points or gates. Veto players can also be part of the government coalition itself. Large coalitions usually imply that the space for policy initiation may be reduced. Conversely the smaller the size of the government coalition, the larger the leverage enjoyed by a government in proposing changes.

A crucial factor affecting the national responses to globalization is the executive's ability to set goals. The capacity to initiate and pass reforms in the legislature is dependent on several interrelated factors. Reforms are usually embedded in mechanisms of policy transfer, more often than not of an international or global nature. Domestic policy communities made up mostly or at least involving bureaucrats along with experts outside government and of party cadres play an important role in this connection. In the Latin American context, career public servants and experts with international exposure (particularly economists) usually dominate policy formation. The stronger these bureaucratic structures, arguably the higher the chances that new reforms will be proposed and sustained. The capacity to pass legislation is also dependent on the executive's agenda powers in relation to the legislature. The higher the agenda powers, we can hypothesize that the higher the capacity to approve reforms.

Once a reform initiative is actually proposed and approved it must be implemented. Implementation is key because any reform proposal is incomplete and many crucial elements are in fact decided upon while reforms are implemented. It is here that the conventional notion of state capacity focuses. State capacity in fact also involves administrative capabilities (human and financial resources as well as information). In many areas such as regulation, central banking or taxation, it also requires political autonomy (in contrast to industrial policy and R& D). It also requires some kind of "accountable insulation", i.e. insulation with accountability mechanisms. Bureaucratic insulation from the market actors and from the political sphere is necessary and is a pre-condition for effectiveness. State capacity also involves steering capacity, i.e. the capacity to coordinate the actors involved. Not all of the policy outcomes of the reform process are in fact anticipated. Good policy outcomes feed back onto the state itself and foster systemic capacity. As indicated before these processes are embedded in a broader institutional environment. Agenda setting capacities and institutional veto gates are constitutionally defined and represent the rules of the game. All of the factors discussed above relate at a broader level to the issue of credibility. Autonomy and independence as well as coordination and steering they all relate to the capacity of states and actors to make credible commitments. The institutional endowment represents therefore the broader context in which the game described above is played. The quality and effectiveness of the institutional rules to enforce political transactions determines the level of credibility of the reform decisions taken.

Figure 1.2. Enlarged state capacity: a framework for analysis



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The paper contains a case study of state capacities in the telecommunication sector. The data suggest that the regulatory model by independent regulatory agency has been only partially implemented and that the transition to a new regulatory regime has remained largely incomplete. The analysis concludes by considering to what extent the regulatory policy implemented by the National Telecommunications Agency (Anatel) have produced the desired regulatory outcomes in terms of accountability, quality of services and expansion of coverage, autonomy and predictability.

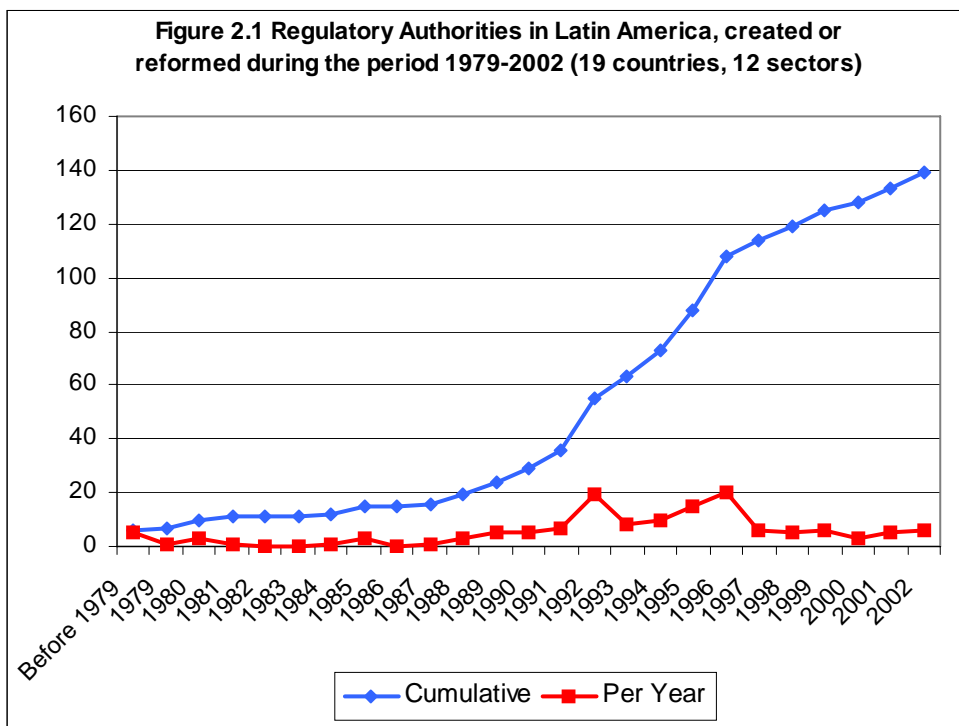
State transformation and state capacity in regulation

Independent regulatory institutions in the telecom industry

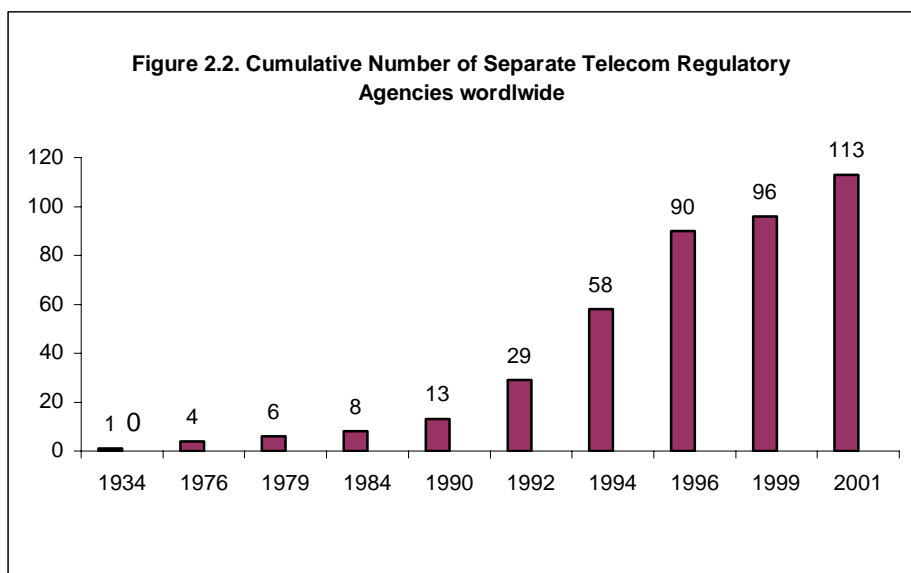
State capacity for regulation of the telecom industry has to be re-built from the scratch following the privatizations of the 1980s and 1990s. This was caused by a move from the previous regime of endogenous regulation to a regime centered on regulation by independent regulators. It should be noted that endogenous regulation by line ministries and bureaucratic departments required an entirely different set of characteristics of regulators, which will be discussed in the subsequent sub- sections.

The change in the regulation regime has been a worldwide trend and has occurred in a large variety of sectors from financial and social regulation to utilities. From a survey of 19 Latin American countries, Jordana and Levi-Faur (forthcoming, 3) reports that from a meager 43 regulatory authorities created before 1979 (mostly in the financial sector), the overall number had grown three fold to 138 by 2002.

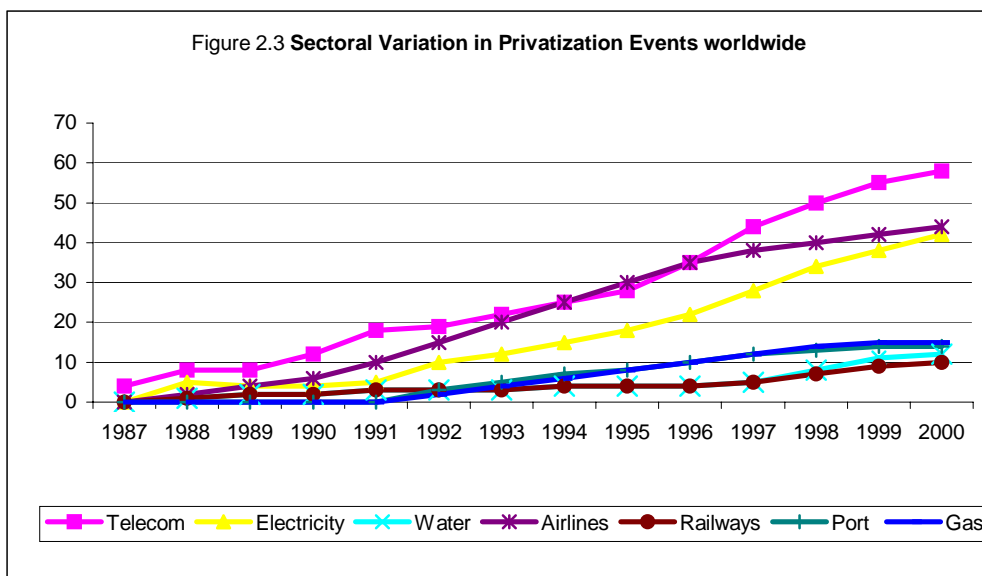
Telecommunications has been the sector in which the process of privatization - followed by the setting up of regulatory agencies – was more intense (see graph 1). Levi-Faur (2003) reports an almost tenfold increase in the number of independent telecom independent regulators, from 13 in 1990 to 113 in 2001. Indeed, in most countries it was the show case for privatization . Regulatory institutions in this area became the model for the introduction of a new governance regime for infrastructure. In Latin America 62% percent of all telecoms regulators enjoyed some degree of autonomy. By 2004 all countries in Latin America had already privatized their telecoms except for Costa Rica and Uruguay (this latter only partially) (Levi-Faur 2004).



Source : Jordana e Levi-Faur(2003)



Source: Levi Faur (2003)

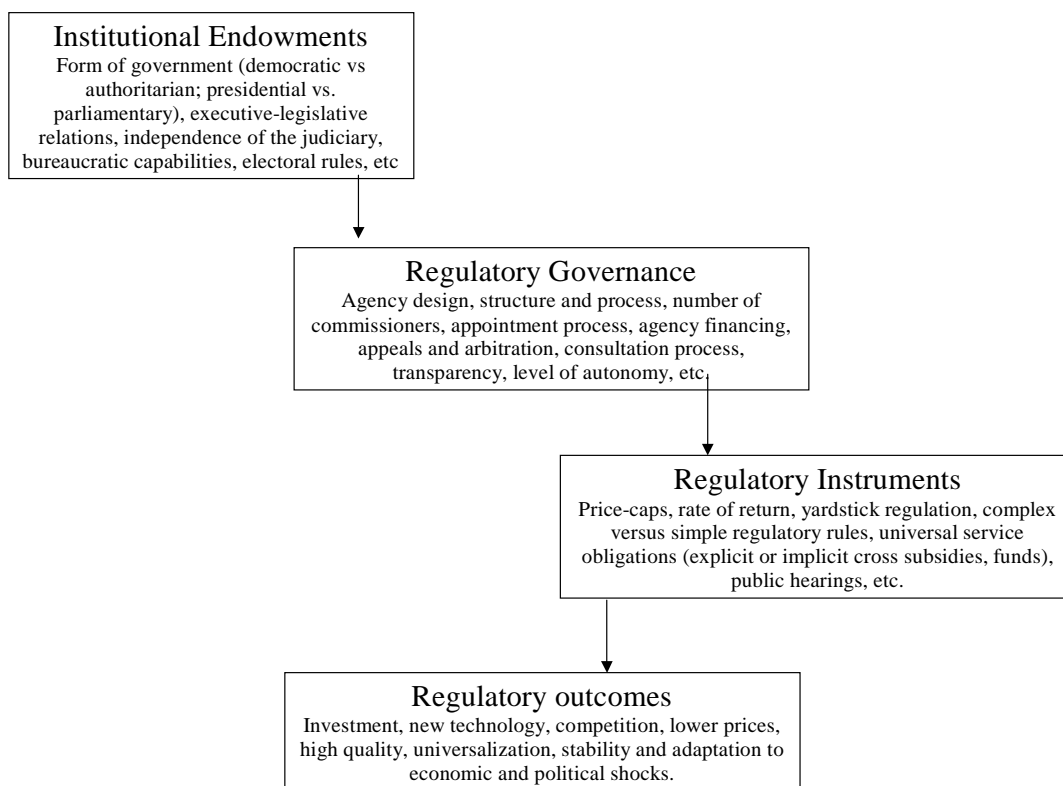


Source: Levi-Faur (2002)

Regulation: A framework for analysis

As indicated before, the analysis of state capacity in the area of regulation in this project builds upon the notion of “enlarged state capacity”. Although this is also true to a less extent in other areas, such as innovation policy, this concept suggests that state capacity in regulation is determined in crucial ways by the broader institutional environment. This assumption is based on the perception that the regulation that emerges as the output of the regulatory process, and consequently its impact on a country’s economic and institutional performance, is crucially determined by regulatory governance, which in turn is conditional on the country’s institutional endowments (Levy and Spiller, 1996). These relations are shown in Figure 1. The choice of regulatory instruments cannot be made without regard for both regulatory governance and institutional endowments and institutional legacies. Both of these can be viewed as restricting the actors involved in the regulatory process. The main difference between them is that institutional endowments and legacies vary slowly over time and cannot be seen as choice variables for policy makers, e.g. one would not expect a country to change its electoral rules as part of its regulatory policy. In other words, institutional endowments are path dependent processes. Regulatory governance, on the other hand, includes rules and restrictions that are choice variables for policy maker, and consequently establish the environment under which the actual regulatory engineering will operate. What the figure emphasizes is that the choice of regulatory instruments, and ultimately the impact of regulation on economic performance, is conditional on both the institutional endowments and regulatory governments. Because the institutional endowments must be taken as given, the choice of regulatory governance is limited to forms that are compatible with that endowment. For example, a country that does not have an independent judiciary will not be able to successfully make use of concession contracts. As another example, a country with strong presidential powers, such as Brazil, may find it necessary to provide the regulatory agencies with significant levels of autonomy as a credible commitment against opportunistic behavior.

Figure – The Regulatory Process



The main focus of our study of state capacities for regulation is not, as is most commonly the case in studies by economists, on regulatory instruments and their impact of economic performance. Instead we are interested in assessing the quality of regulatory governance. As Figure 1 makes clear, this involves taking stock of the country’s institutional endowments and analyzing how these shape and constrain the choice and functioning of regulatory governance, as well as looking at the administrative capabilities. This requires the analysis of the country’s political institutions and the policymaking game between the various political actors as well as the human, financial and organizational resources deployed for this function. In addition we are interested in assessing how these factors in turn impact on the choice and functioning of regulatory instruments.

In order to structure the analysis we classified the issues to be explored in three broad categories that follow Figure 1 and the discussion above (though naturally any given issue affects the whole regulatory process): (i) institutional endowments; (ii) regulatory governance; (iii) regulatory instruments. The specific issues to be addressed in each of these categories are elaborated below.

Institutional Endowments and legacies

In order to understand why specific choices of regulatory governance were made (for example specific agency design), and why they work as they do, it is necessary to understand the political institutions and the policy making game that generate those outcomes. This involves taking into account who are the political actors involved and what are the rules of the game in which they interact? That is who can initiate political action that impacts the regulatory process, who has the power to “vote”, who holds a

veto point, what is the sequence the action must take and what are the reversion points if the action is vetoed? Political actors involve the Executive, ministries, Congress, specific committees, Governors, political parties, the Supreme Court, lower Courts, the *Ministério Público* (District Attorneys), the *Tribunal de Contas da Uniao* (TCU) (General Accountants Office), competition authorities, environmental authorities, consumer groups, the press, the staff at the regulatory agencies, investors, international organizations, among others.

In this category the analysis of the recent attempts to change agency design by the Lula government provide a natural experiment that can yield insights into the role of political institutions in determining the choice of regulatory governance. Upon coming to office in January 2003 the new President expressed dissatisfaction with the level of independence of the regulatory agencies and his inability to interfere more directly in the regulatory process. In April 2004 a proposal was sent to Congress of a law that substantially reduced the level of agency autonomy, providing the ministries with power over decisions that were previously exclusive to the agencies and instituting several means of “social control” over the agencies actions. This event is interesting for the purpose of this project because it provides a relatively rare case of shift in the presidency with clear changes in preference, which leads to an attempt at changing the rules of the game that is mediated by the political institutions. By examining how the political institutions respond to this stress we can derive insights regarding their role in influencing the choice and functioning of regulatory governance. The fact that the process of changing the current regulatory rules has already taken nearly a year and a half, has been widely debated through several public hearings and congressional committees, and has lead to a greatly attenuated proposal when compared to the initial project, suggests that political institutions are in fact constraining the Executive’s move. The project will still pass through Congress where further changes will possibly be made. Whatever the outcome, the point is that events like this are insightful in understanding regulatory outcomes, and we intend in the project to systematize more clearly how political institutions affect regulatory governance in Brazil.

Another important issue for understanding the regulatory outcomes in Brazil that falls into the category of institutional endowments is the role played by the Judiciary and control institutions.⁴

Regulatory Governance

Regulatory governance is the focus of our study of enlarged state capacity. We want to understand why in each case a specific institutional design was chosen and how each aspect of that design affects the functioning and effectiveness of the regulatory agencies. In order to do this we need to describe, characterize and analyze each of the following aspects of the regulatory governance in different agencies:

⁴ Also key in this connection is the role played by the *Ministério Público* (District Attorneys) and the *Tribunal de Contas* (General Accountants Office). These are institutional players that exist in most countries yet would not normally be closely associated with the regulatory process. In Brazil, however, it is becoming clear that both of these players participate intimately in that process. Both are well endowed with financial and human resources, both have the legal and political instruments to significantly constrain what the agencies do, and both are highly motivated to exercise a close oversight and intervene when they judge necessary. In addition the *Ministério Público* has complete independence from other powers to pursue those goals whereas the TCU is more politically constrained due to its links with Congress and the Executive. As a result both players have participated actively in the regulatory process, to the point where they are commonly involved in the day-to-day business of regulatory agencies. Examples of instances where they have constrained agency choices and behavior are: (i) questioning minimum prices and procedures set for concession auctions; (ii) questioning the methodology adopted by the electricity generator for calculating the X-factor in price-cap concession contracts, which lead to a change in methodology; (iii) questioning the use of the fund for universal service in the telecommunications sector, leading billions of reais to be currently impounded and unused; (iv) closing down of numerous electricity generating projects due to environmental concerns

- (i) clarity of roles and objectives;
- (ii) autonomy from political intervention;
- (iii) participation in the regulatory process by firms, consumer and others;
- (iv) accountability;
- (v) transparency;
- (vi) predictability;
- (vii) qualification and technical capacity; (viii) stability of staff.

The purpose here is to look closely at the “input” into the regulatory process, as they should be crucial determinants of the quality of the “output”. One important example that this project will examine is the qualification and technical capability of the staff at the regulatory agencies. An agency that does not have a highly educated and well-trained staff, cannot and should not try to implement the complex regulatory rules that are necessary to deal with the natural information asymmetries involved in regulation. These asymmetries imply that regulators will rarely be able to achieve first-best outcomes, however, second-best outcomes can be reached through regulation that takes into account moral hazard and adverse selection problems. Implementing and enforcing these regulations, however, requires substantial levels of human capital from the regulatory staff. In the absence of such a staff it is probably better to implement simpler rules, with less power deal with the information asymmetries, as ill-implemented complex rules may lead to even greater losses. Brazilian bureaucracy is on average more highly trained than most of Latin America, and there are some islands of excellence. For the purpose of this project the question is to assess the capacity of the staff at the regulatory agencies and the pool from which future workers will be drawn. This involves analyzing hiring procedures, on the job and external training, career paths, motivation, stability, accountability, revolving door possibilities, among other issues. In most infrastructure sectors the agencies were first staffed with people from the old state enterprises and the related ministries and secretariats. Whereas these were mostly engineers, over time there has been an increase in the number of lawyers, economists and other professions involved. Also, although the staff at most agencies was initially hired without public entrance exams, Brazilian law requires that eventually all position holder have passed such exams. Several of these exams have already been held and others are on the way. These changes may have profound impact on who ends up holding those positions and the motivation. Another issue is whether the existence of a stable bureaucracy constrains the ability on new governments, including new directors, to change regulatory policy. We intend to assess these issues and their consequences for the quality of the regulatory process.

Another example of an aspect of the regulatory governance that we will examine is the use of public hearings in the process of designing important regulations. These are widely used in Brazilian regulation and we intend to assess the way they function and their impact on the regulatory process. Whereas public hearings may be simply a means of allowing transparency, they can also serve the purpose of achieving consensus or for informing political principals of agency deviations (fire alarms).

⁵ We intend:

- (i) to characterize the nature of public hearings in regulatory proceedings in Brazil;
- (ii) quantify their pervasiveness;
- (iii) understand which issues go to public hearings and which do not;
- (iv) assess who participates and how;
- (v) and determine whether and how public hearings affect the regulation that gets implemented.

⁵ For the discussion of fire alarms and police patrol models of control over the bureaucracy there is a large literature. Cf.

Regulatory Instruments

We argued above that it is important that there be a good match of regulatory instruments and regulatory governance. Our purpose here is not so much to analyze the specific instruments used, such as price caps mechanisms or universalization through a fund mechanism, but whether those instruments are compatible with the regulatory governance and institutional endowments. For example, in telecommunications and electricity, tariffs are set by a price-caps mechanism whose purpose is to circumvent the information asymmetries between regulator and firm concerning the latter's cost structures. In order to do this it is necessary to estimate the initial level of costs to determine the initial tariff, predict the expected level of cost reduction so as to determine an X-factor that shares efficiency gains with consumers without unduly penalizing the firm, write this into concession contracts, arbitrate conflicts that will arise over both issues covered and not covered by those contracts, monitor for quality and other non-price margins where the operator may try to reduce costs, etc. In this process there are several aspects that relate to the regulatory governance and institutional endowments. One example is whether the staff of the agency has the human capital to implement this mechanism, which involves the use of economic and financial instruments as well as an understanding of the law. A badly chosen X-factor can have severe consequences for the sector's stability. Another important question refers to the index used for readjusting tariffs.

State capacity and the independent regulatory model: constraints and possibilities

Independent regulatory institutions represent a new form of public regulation of economic activity, which replaced the regulation by departments in the state bureaucracy. In this type of endogenous regulation the regulators were under the direct control of governments which also hold property rights over public monopolies.⁶ Regulation by public ownership was the predominant mode of regulation for decades in the area of infrastructure gas, electricity, water, railways, and telephones. These firms hold the characteristics of natural monopolies.⁷

The argument for regulation by independent agencies does not hinge on the type of ownership involved – public or private – but on the incentive structure that firms face and its implications for quality of service, coverage and universalization. Endogenous regulation has a number of important regulatory failures: there is no separation between operation and regulation, which in turn cause distortions competition and antitrust policies, as well as in quality control (Majone 1996; Majone 1999). The public argument for the setting up of agencies in Brazil is that by conflating the activities of regulation and operation, the public monopolies produced organizational rigidity, low capacity to respond to technological change and inability to promote the interest of consumers. Public ownership was associated with low accountability and weak social control mechanisms. Technological change was an important leitmotif for the change in the regulation regime. In the area of telecommunications, advances in transmission technologies allowed competition in sectors that were thought to be natural monopolies.

As Majone (1996) argues regulatory failures can be found in both types of regulatory regimes – independent and endogenous (see Table 1.2), but regulation by independent agencies tend to produce superior regulatory outcomes, particularly as far as political accountability is concerned as well as protecting the interest of consumers. Separation of ownership and operation is the key factor

⁶ There are cases in which regulation continued to be assigned to government departments despite the fact that the public monopoly was privatized. Chile represents the chief example of this. The telecom regulator is a under-secretariat for telecommunications.

⁷ Technically there are economies of scale such that the provision of services by only one firm can be more efficient than should the service be subject to competition by many providers. Average costs for each of these providers would be higher than those of the monopolistic firm. This has to do primarily with the existence of increasing returns to scale.

accounting for these superior outcomes. There are a number of pre-conditions for these superior outcomes to emerge. The next section describes the features of the institutional design, which are required, and their interaction with a number of characteristics of the institutional endowments.

It should be stressed however that the key rationale for the setting up of the regulatory agencies is that they represent pre-commitment devices, which are required for the successful implementation of privatization. They represent institutional mechanisms for attracting international investments. Because they reduce the risks of ex-post opportunism they reduce regulatory risks.

Table 2.1 Comparing two types of regulatory failure	
Regulation by independent agency	Endogenous Regulation
Capture of regulators by regulated firms	Capture of public managers by politicians and trade unions
Overcapitalization (the so called Averch-Johnson effect)	Over manning
Anti-competitive regulation	Public Monopolies
Vague objectives (regulate in the public interest)	Ambiguous and inconsistent goals given to public managers
Poor coordination among different regulators	Poor-coordination among different public enterprises
Insufficient political accountability of independent regulatory agencies	No effective control over public enterprises by parliament, the courts or the sponsoring minister

Fonte: Majone (1996: 18)

Institutional design and credible commitments: autonomy versus accountability. Independent agencies are characterized by a number of traits of their institutional designs. These independent bodies are granted autonomy to operate outside the hierarchy of the corresponding line ministries and not subject to traditional forms of command and control.

A key characteristic is that they have the power to authorize operations and monitor market and firm performance but also to interfere in the price structure and quality of service as well as on the funding mechanisms for the authorized services. In addition, arbitration has been used without the need to abide for the general legal procedures. In terms of institutional design the agency's autonomy is related to the aspects listed in Table 1.1.

Institutional design for autonomy and independence

Autonomy and stability for agency's directorship

- Fixed terms of office
- Staggered terms of office
- Tenure for directors
- Legislative approval required, use of public hearings for confirmation of appointment
- Special qualifications required

Functional, financial and managerial independence

- Last level for appeal in the administrative sphere
- Special status (special autarchy) without subordination to Ministry
- Power to issue legally binding rules
- Power to initiate a legal process and to adjudicate
- Arbitration powers
- Budgetary autonomy
- Career staff

Transparência

- Ombudsman with fixed term of office
- Full disclosure of all decisions and procedures
- Representation of consumers
- Procedural Justification for each vote and decision
- Public hearings
- collegiate directorships

These characteristics are self-explanatory, but a few of them deserve additional comments. In Brazil, the agencies have the status of *autarquias especiais*, which implies that they are located within a line ministry but are formally independent, e.g. they are not accountable to the minister in charge. This link is merely a functional connection. The directors's autonomy vis-à-vis political agents are ensured by the fixed and staggered terms of office for the directors, and by different lengths of tenure for directors and the chief executive officers.

The first aspect is crucial because it limits the potential for capture by the chief executive. The staggered terms of office for different directors generates incentives for impartiality in decisions. Because the directors can only be dismissed after a final judicial decision (e.g. not subject to appeal) regarding an administrative crime, they have an additional incentive not to follow political directives by politicians or industry. Appointees are also subject to confirmation by the legislative branch following a public hearing in congress. Because the Legislature acts as an additional veto point, executive control is also checked.

For agencies to behave autonomously, it is necessary that they enjoy financial independence, for which they should have their own budgets and an independent source of funding. Similarly, functional autonomy are dependent on the agencies having a career staff with high levels of expertise so as to minimize information asymmetries between agencies and industry. On the other hand, if an external actor can easily reverse agency's decisions, e.g. the Judiciary, their decisions are not credible and industry actors can use appeals strategically so as to reduce their effectiveness. The agencies can only

be contested in the Judicial branch not in the administrative realm. Moreover in the Judiciary, appeals should only be based on procedural issues not on the content of agency's decisions.⁸ If regulatory agencies can initiate procedures regarding antitrust issues, they become less dependent on the antitrust agency, and acquire more autonomy. Some agencies sign performance contracts with the purpose of enhancing managerial accountability, but this mechanism in fact reduces agencies' autonomy. Performance contracts have been proposed following the diffusion of new public management, but their effects in fact generate perverse incentives and political subordination to the executive branch.⁹ Because agencies have to meet targets set by the line ministries (otherwise sanctions would be applied to managers), there is a trade off between accountability incentives and political autonomy. In the case of regulatory agencies in the infrastructure sector, the independence vis-a-vis the interests of government and industry would be circumscribed.¹⁰

It could be argued that most of the chief characteristics of the agency's institutional design were introduced on the assumption that they reduce regulatory risk. But they are also influenced by the diffusion of NPM's ideas and more generally the notion that the public sector should be granted more managerial autonomy. This occurred in Brazil through the Ministry for the Reform of the State and Administration (MARE) that prepared the Master Plan for the Reform of the State. This was the key document that informed the constitutional amendment for administrative reform proposed by the Cardoso government in 1995. Following the approval of the plan, a number of changes much in the spirit of the NPM were implemented. The Plan did not include provisions for the regulatory agencies, but introduced performance contracts, ombudsman, and other new figures in the Brazilian administrative state.¹¹

There are a number of features introduced to guarantee transparency – including the figure of the ombudsman as well as the full disclosure of all decisions and documents (minutes of meetings, technical justification for decisions etc., references to prior decisions and jurisprudence). The representation of consumers and consumer's protection agencies are also justified on the grounds of social control and accountability. In addition, public hearings are a central element of ex ante control of decisions. Not only all the suggestions by those attending the hearings have to be registered but also the technical reasons that justify their rejection have to be publicized. The new format introduces a trend towards proceduralization in administrative practice, which has a potential for enhancing accountability. Last but not least, the requirement that all decisions are legally collective decisions that bind all directors involved is another distinctive element of the agency's institutional design. This is expected to guarantee the prevalence of technical rationality and reduce partiality in decision-making.

In the subsequent sections, we examine at length the extent to which the expected effects of the

⁸ As decisões das agências nos EUA equivalem a decisões de tribunais de primeira instância, o que ainda não é o caso no Brasil, malgrado a tendência à procedimentalização do direito na área.

⁹ Such contracts however have not been used in the US where the independent regulatory agencies have been established for over a century.

¹⁰ This would be less harmful in the case of the regulatory agencies operating in the area of social regulation (environment, health insurance, etc.).

¹¹ The master plan identified three levels or spheres of activities of the state: the strategic core, in charge of policy formation and strategic planning; the sphere of activities that should be a state monopoly (such as policing, regulating natural monopolies, taxing), and which should be carried out by executive agencies; and the sphere of activities which the state have a funding role but whose execution could be delegate to social organizations (e.g. education and health). The regulatory agencies are a specific type of executive agency. They require a more autonomous format in view of the intrinsic characteristics of natural monopolies. Bresser Pereira, the architect of the reform, argued that they should be more autonomous because the tasks of ensuring quality of service and competitive markets are more complex.

institutional design can be found. To anticipate the general conclusion, the most important finding is that the new institutional arrangement for regulation has not been fully implemented and that many of the expected effects have not emerged. Not only many of the desired effects have failed to appear because of non-implementation of the features of the independent agency model but also because of the broader institutional environment. It is therefore misleading to talk about a new regulatory regime in the country. Table 2.3 lists a number of key questions that addresses the extent to which the model has been implemented.

Table 2.3

Key questions for assessing institutional design

Agency autonomy (measures if the regulator is independent from short-term political pressures.)

Appointment process of Directors (if via Congress or under executive discretion.)

Degree of insulation (rules regarding dismissal of board directors. Under what conditions a regulator can be fired.)

Budget (If Congress and/or the Executive can interfere in the agency's budget. Where do the agency's funds come from? Industries' fee, government appropriation, other sources?)

Who can grant authorization? The agency or the related Ministry?

Who defines and approves tariff?

Who has the veto power? (Can the President or Ministry veto a regulator's decision?)

Agency oversight (accountability, transparency)

Governance contract which defines targets and procedures that agencies are obliged to follow

To which body the agency is responsive (Ministry, state secretary, etc.)

Accountability/ Interface with society (are regulatory decisions and meetings under public control? Is the regulator obliged to publish its decisions?)

Regulatory decision-making

Who and how can the operator appeal in each instance? (i.e. Ministry, Executive, other executive body, judiciary, public prosecutor, etc.)

Can the operator appeal under statutory, evidential, or procedural basis?

Can consumer and competitors appeal?

Administrative capabilities. Staff. Who are the staff at the regulatory agencies and what are their qualifications and technical capabilities.

Where they come from and who are they? (Are they politicians?)

How are they selected and evaluated?

What are their levels of training and technical skills?

Does the staff have frequent access to further training?

Is the staff highly motivated?¹²

These questions address the issue of institutional design and will be discussed in the context of the objectives of regulation. These include essentially the following: antitrust objectives and the organization of competitive markets; the definition of tariffs and prices; quality control of goods and services.

In relation to first of these objectives, the key issue in the area of telecommunication is how to ensure competition as a means to achieving efficiency. Because the industry is organized as a network, the control of the network by the incumbent is the main obstacle. Regulation is necessary to guarantee

¹² Wallsten 2004.

access so that multiple entrants can compete. This can take the form of unbundling of vertically integrated incumbents in which different sectors of the network is assigned to different firms, or by guaranteeing access to the network by new firms. In Brazil the model adopted in the privatization was the former option. The incumbent's facilities situated upstream in the network was opened to entrants located downstream.¹³ Thus in the area of telecommunications, the new long distance operators were guaranteed access to the fixed local network owned by the incumbents. The latter was previously owned by Telebras and subsequently transferred to three concession areas in which the country was divided in 1998.

The case of the Brazilian National Agency for Telecommunications (ANATEL)

From privatization and the evolution of the regulatory framework for telecommunications

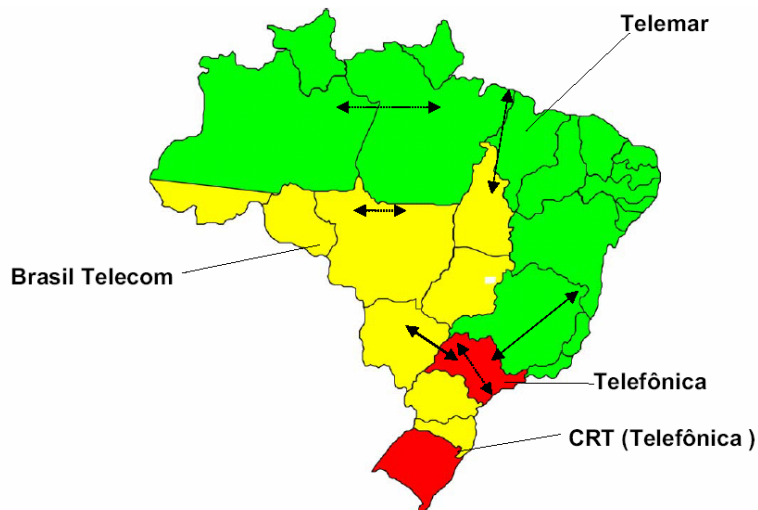
Before privatization, the infrastructure sectors used to be organized like holdings of open capital with their property rights in the hands of the state. The telecommunication, energy, and petroleum companies were regulated by departments or secretaries directly attached to the correspondent executive branch (ministries). Specifically in the case of the telecommunication, the DENTEL (Department of National Telecommunication), was in charge of regulating the sector. The state holding company, Telebras, used to control the operator of long distance calls (Embratel) and the 54 regional operators (approximately one for each state with the exception of the state of Rio Grande do Sul), as well as a long distance national and international carrier, Embratel. Most of these regional companies also owned a mobile company. With 85 thousand workers in 1999 (the double of the giant state owned company in the area of oil, Petrobras) the Telebras system used to be the largest and powerful sub-sector of the Brazilian state. The process of privatization in the country started in 1991 with the National Program of De-statization. Between 1991 and 2000 more than US90 billion was sold in one of the largest privatization programs worldwide and the largest program ever implemented in the country. In the telecom sector only (taking into account the transferred debts), about US\$ 29 billion was invested during the privatization of the sector.

Prior to privatization that occurred in July 1998, the sector was reorganized and the regulatory agency, Anatel, was already created. The first step was the constitutional amendment no. 8, of 1995, that eliminated the state monopoly in telecom services. Then all the state companies were amalgamated in three large regional companies. This was part of the privatization strategy and aimed at regulatory purposes. Unlike what happened in other countries in the region, privatization took place only after the General Law of Telecommunications (Law 9472/97) was approved. The specific sequence by which the regulation framework preceded the privatization process was key to the subsequent success. Two principles informed the new framework: universalization of service and competition. The Brazilian model learned from the UK and US experience. From the UK it copied the duopoly strategy and the use of regulatory asymmetry designed to assist entrants to the market. Indeed in each of the three regions that were created, concessions were auctioned for a second company so that for each of these regions a transitory duopoly was formed for the provision of local service and intra-state long distance calls. From the US the model copied the vertical separation of Telebrás and unbundling ((Mattos and Coutinho 2005). Figure 1.7 provides a map with the distribution of the three regions. In each of these regions the mobile company was separated from the owner of the fixed service. In order to encourage the entrance of new companies into the market, the new model introduced regulatory asymmetries favoring new companies. There are compensatory advantages for them to compensate for anticompetitive practices from incumbent companies. These included the prohibition of the incumbents

¹³ Mas exige-se uma separação contábil entre a incumbente controladora da rede e sua empresa *downstream*.

to use wireless local loop technology; the requirement that only the incumbents had to meet the universalization targets; etc. As it is suggested by Possas (2002), however, the incumbents still would benefit from economy of scale and scope, network externalities which reduces the efficacy and, at the same time, makes it more difficult to regulate.¹⁴

Figure 3.1



Source Mattos and Coutinho 2005

Unlike the developments in the energy sector, privatization of telecoms in Brazil has been single out as a very successful case. As indicated the sequence of developments was appropriate: a number of institutional and legal parameters were put in place before the privatization of the sector started. In August 1995, the constitutional amendment that eliminated the public monopoly in telecommunications was approved. In July 97, Congress approved the general telecommunications law (LGT) proposed by the executive branch. In November 97, the independent regulatory agency, Anatel, was created. Anatel issued its General Licence Plan (Plano Geral de Outorgas - PGO) in 1998. The PGO divided the country in four areas for the purposes of granting the licenses for fixed telephone services (Serviço de Telefonia Fixa Comutada (STFC)). Anatel also approved its universalization plan and the Plano Geral de Metas de Universalização (PMGU) and its plan for quality control (PGMQ). In April 98, the cellular telephone licenses – B Band was approved. Finally, in July 98, Telebras and its subsidiaries were privatized. This was followed by the setting up of the Telebras “mirror” licenses in November 1998. In 1999, competition in the long distance call market started. In August 2000, Anatel was mandated to oversee the implementation of projects financed by the Ministry of Telecommunications with resources from FUST (the Fund for Universalization of Telecommunications), which were put in place in 2001. In 2001, Anatel conducted the auctions for the granting of licensees for Bands C, D and E of the personal mobile service (Serviço Móvel Pessoal).

The new regulatory framework established a number of rules aimed at assuring competition and

¹⁴ It happened in the Brazilian case (Herrera 2002, p. 4). These conflicts appear in the legislative process of agency's creation. Cf. Amaral (2000)

universalization. For competition these include the following. First, the model called for the vertical separation of telebrás. Restrictive cross-ownership rules were created so that a single company would not be able to buy other companies operating in different segments of the market (e.g. long distance versus local calls). The same shareholders were not allowed to acquire more than 20% of the voting capital of more than one of the three companies in the fixed system or of Embratel, the long distance operator. In addition, mergers among the companies were prohibited and their owners were not allowed to participate in the auctions of the entrant fixed companies. These rules were temporary and lasted until 2002 and 2004 for entrants and privatized companies respectively (Mattos and Coutinho 2005). Moreover, none of the eight mobile privatized companies could be bought by a group operating in the same area.

Second, to ensure competition a duopoly was created in each of the areas covered by the three regional companies (plus the long distance service). These companies would face one competitor- known as the “mirror company” in the area, and no restrictions in terms of ownership were introduced for these mirror companies. This entry restriction applied to fixed services only and was transitory, lasting until the end of 2001 when other companies could enter the market. Should the incumbents meet the universalization targets before 2002, they were allowed to enter other areas of business. Otherwise they could only do it after 2004. Most companies anticipated their universalization targets and were free of restrictions in 2003.¹⁵

Third, a number of regulatory asymmetries were introduced. The two most important were a) entrants were not required to meet universalization targets, being able therefore to cream skim or cherry pick in the market; b) they were not subject to tariff controls, in contrast to incumbents, which would be subject to the price-cap controls. The price cap rule or the RPI-x rule was modeled at the UK experience and was thought to be superior to existing mechanisms. It creates an incentive for the companies to reduce costs because they can capture the productivity gains within each review period. Additionally entrants could cable tv networks, use local wireless local loop technologies.

In relation to universalization, the main measures were: a) The introduction of an universal service plan to be complied with by the incumbents. The services were considered as rights to telephone services independent of income or location. Price discrimination would therefore be forbidden. Targets were set for states and municipalities as well as social groups (the disabled) and specific beneficiaries (Schools, hospitals) and a schedule were imposed. These targets were set in quantities both for private access and public access. For long distance, the target involved the increasing use of fiber optics cables. In the transition stage, cross-subsidization was implicitly used for the purposes of meeting the targets of universalization. After 2000, when Law 9.998/2000 was passed, the universalization was to be funded with resources from a new fund, the FUST. The latter was funded by a 1% tax on the revenues of the telecommunications companies.

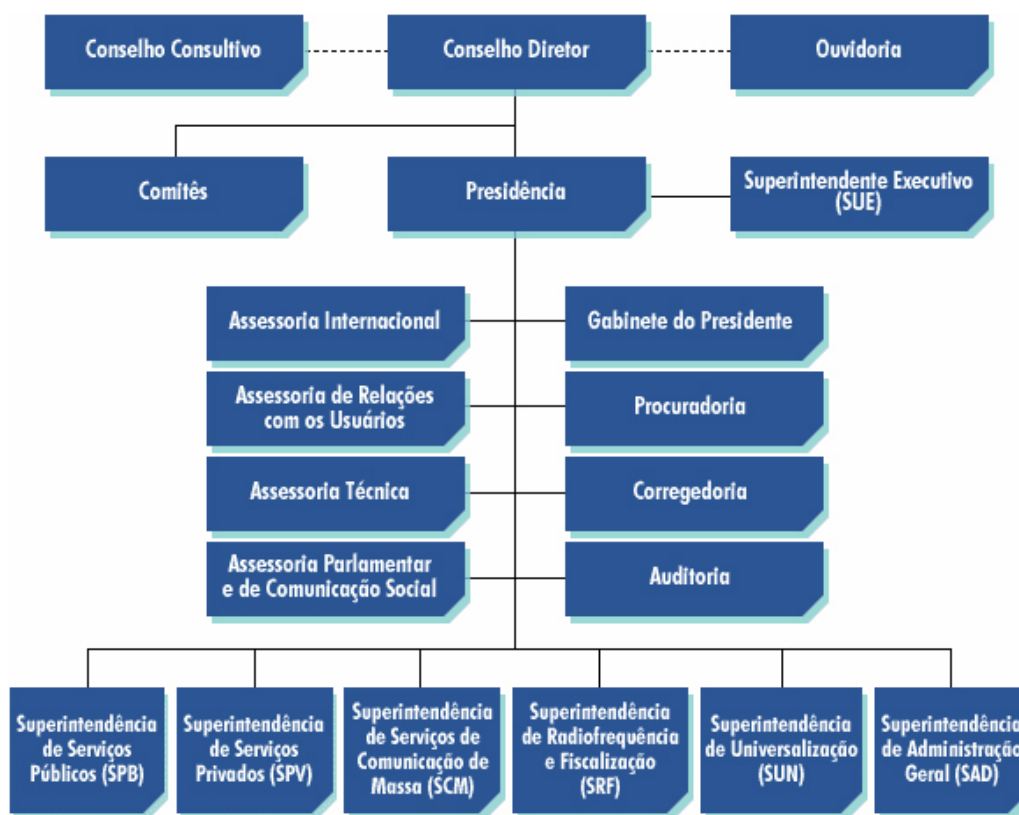
The institutional design of ANATEL

The National Agency of Telecommunication (ANATEL) was created by the Law nº 9.472 on July 16, 1997 as a special organization attached to the Ministry of Telecommunication which deals with the organization of the telecommunication services of the country and the institutional design of the regulator. It was implemented by the Decree nº 2.338 on October 7, 1997. The ANATEL has the objective to regulate the sector, to implement policies according to the General Law of

¹⁵ There were exceptions for these restrictions. In areas where the mirror companies were not willing to operate, new companies known as “small mirrors” were allowed to operate and licenses were issued.

Telecommunication, to formulate strategies aiming at increasing the competition, and oversee the market. Its scope includes controlling, preventing, over sighting, and repression of infringements of economic order, excluding the tasks the Brazilian Administrative Commission of Economic Defense – CADE (a similar institution of the American counterpart, Federal Trade Commission – FTC). The Directing Council of ANATEL is the highest instance of the decision-making process of the agency which is made up by five directors appointed by the president of the country followed by the approval of the Senate. The head of the council is chosen by the President for a single three years term. However, the council members have a single five year term and can be fired for illicit behavior only. During their term, council members are not allowed to exert any professional or political function, but just in the academic sphere. After finishing their terms, council members have a quarantine of 12 months.

Figure 3.2
ANATEL – Organizational Chart



In addition to the Directing Council the agency has also another arena, Consult Council, aiming at including a representation of the society. This Council has 12 members, 2 appointed by the Chamber of Deputies, 2 by the Executive branch, 2 indicated by the companies, 2 by the consumers, and 2 members indicated by the organized society. The objective of this Council consists in taking positions about the General Plan of Granting, regarding the targets of universalization of services offered, requesting information, and formulating suggestions. The model objects more inclusion of public groups and departments as a mechanism of controlling the potential regulatory failures.

The agency has still an independent Ombudsman), without relations with the Directing Council. He/she is also appointed by the President for a two years term. The general prosecutor of the agency is attached to the General Attorney of the Union aiming at normatively orienting and technical oversight.

The institutional structure of the agency also includes five superintendence and committees coordinated by the council members. The budget of the agency basically provides from the resources from the Telecommunication Oversight Fund (FISTEL).

A preliminary assessment of state capacities in the regulation sector

This section provides preliminary evidence about state capacity in the area of telecommunications following the changes described above. The features to be discussed include human, financial and organizational resources; accountability transparency and accountability; and quality and coverage of services. The evidence shows that many of the important pre-requisites of the new institutional arrangement were not met. These findings are at odds with the favorable results found in terms of expansion of coverage and improvements in quality of service.

Administrative capacities, organizational and financial resources

In the area of human resources, there were important violations of the independent agency format. As in other infrastructure sectors, the agency was first staffed with people from the old state enterprises and the related ministries and secretariats. In 1996, most of the 343 employees of Anatel were transferred from Telebrás, and worked previously for Dentel. This created an important conflict of interest problem because most of the regulators were in charge of regulating firms that employed them in the past. In 2004, 269 staff at the agencies were former Telebrás employees. In addition, despite the fact that only 85 of the 1,234 employees were non-tenured appointees, 49% of the agencies' employees were on temporary contracts (Table). This situation was caused by the fact that the legislation that created a federal career in regulation was contested by the Workers Party in the Supreme Court, which declared the Law unconstitutional (see later in the text).

Table 3.2 ANATEL – Human resources by type of employment (september 2004)	
Types	Quantity
Telebrás employees	269
From other departments/organs	47
Temporary Contract	623
Career civil service from Ministry of Communications	210
Non-tenured appointments	85
Total	1234

Source: Anatel Human Resources Department

On a positive side there a number of aspects worth mentioning. Anatel is the largest regulatory agency and its staff is usually regarded as highly skilled. Although pay levels were highly competitive at the beginning there has been some erosion in the real value of pay over time. In addition, whereas employees were mostly engineers, over time there has been an increase in the number of lawyers, economists and other professions involved. Also, although the staff at most agencies was initially hired without public entrance exams, Brazilian law requires that eventually all position holder have passed such exams. At Anatel, although those on temporary contracts passed through a highly selective procedure, they are untenured and therefore do not have an incentive to become neutral and independent. Even the non-tenured appointed personnel have adequate pay levels and are regarded as reasonably competent. Table 3.3 shows data on the pay levels of regulatory institutions in the country.

In the period 2001 to October 2004, 1137 employees participated in training schemes (Table 3.4).

Year	Quantity employees
2001	480
2002	383
2003	180
2004 (October)	94
Total	1137

The most important factor undermining the functional autonomy of the agency is the fact its financial self-sufficiency is denied in practice, mostly by the impounding (*contingenciamento*) of its resources. The executive branch has consistently frozen the proceedings collected through a variety of mechanisms (concessions grants, fees and fines) in order to meet its fiscal targets. These funds amount to vast sums of resources. In 2002, the impounding of resources reached 24, 1% of the agencies resources. In 2003, it climbed to 38%, 3. Although we did not find any evidence that this state of affairs has significantly affected the political independence of the agency, it has certainly affected its operational capacity to meet their stated goals.

Table 3.5 ANATEL - Budgetary Execution (2001-2003)

2001

Expenditure Nature Group (GND)	Initial Endowment	Authorized	% of Total	Planned	Liquidated	Paid
1 Personnel and Social Responsibilities	117.912	117.912	22,7%	39.340	39.340	38.887
3 Other Current Expenditures	308.723	308.723	59,6%	146.210	146.209	119.995
4 Investments	70.755	70.755	13,6%	18.495	18.495	8.021
5 Financial Investments	21.000	21.000	4,1%	20.999	20.999	20.999
TOTAL	518.391	518.391	100,0%	225.046	225.046	187.905

Values in R\$ 1000

2002

Expenditure Nature Group (GND)	Initial Endowment	Authorized	% of Total	Planned	Liquidated	Paid
1 Personnel and Social Responsibilities	110.249	108.128	14,8%	73.004	73.004	72.295
3 Other Current Expenditures	347.260	347.260	47,4%	149.347	149.347	125.825
4 Investments	70.100	77.800	10,6%	28.361	28.361	22.170
5 Financial Investments	31.000	23.300	3,2%	7.510	7.510	7.510
8 Impounding	176.402	176.402	24,1%	0	0	0
TOTAL	735.011	732.890	100,0%	258.223	258.223	227.802

Values in R\$ 1000

2003 (until 05.10.03)

Expenditure Nature Group (GND)	Initial Endowment	Authorized	% of Total	planned	Liquidated	Paid
1 Personnel and Social Responsibilities	102.294	102.294	16,1%	56.722	22.980	72.295
3 Other Current Expenditures	224.708	224.708	35,4%	56.943	26.210	125.825
4 Investments	60.639	60.639	9,5%	1.172	719	22.170
5 Financial Investments	4.679	4.679	0,7%	0	0	7.510
9 Impounding	243.318	243.318	38,3%	0	0	0
TOTAL	635.640	635.640	100,0%	114.838	49.910	49.832

Source: Technical Study n° 21/2003 COFF Chamber of Deputies

Accountability mechanisms and control

The control of the activities of an independent agency like Anatel is mostly indirect. Although Anatel's directorship is nominated by the President and appointed by Congress, because there is no hierarchical subordination between the agency and the Ministry of Telecommunications or the Presidency, vertical accountability is low. The agency is only accountable for the procedural elements of its decision making and of its practices. The main actors that are involved in this process are the Ministério Público Federal (Federal Public Prosecutors's Office), the Tribunal de Contas da União (audit institution) and the Secretaria Federal de Controle (Internal control). Legislative oversight is very limited. The Senate oversees the regulators through its Comissão de Fiscalização e Controle, its recently created Subcomissão das Agências Reguladoras and the Comissão de Infraestrutura; whereas the Chamber of Deputies's oversight is accomplished through its Comissão de Defesa do Consumidor. In the following, we briefly review the role of the Ministério Público Federal and of the Tribunais de Contas in the regulatory process (Gomes 2004).

Ministério Público Federal (MPF)

As mentioned before a key control institution in Brazil is the Ministério Público Federal (MPF). Mandated to defend the public interest, the MPF has played an important role in controlling the agency's autonomy. It has been very active in the oversight of the agencies administrative behaviour. Because it has great independence, expertise and legal powers the MPF had managed to effectively change the agency's behaviour in the sense of making it more open and transparent. Table 3.7 contains the recommendations approved by the MPF for the telecommunications sector. These recommendations are equivalent to instructions that have to be followed within a specified period of time (usually 10 days) unless very detailed explanations are provided. Most of these recommendations refer to Anatel itself. A prominent example of the role played by the MPF is the extensive list of alterations it recommends for the General Plan of Quality and Targets (PLMQ). The recommendations are made considering that the reasons why the suggestions for the PLMQ proposed by consumers, NGOs and public institutions to Anatel were not made public by the agency:

“Considering that the final approval of the concession contracts and the General Plan for Quality Targets (PGMQ) followed the Anatel Public Consultation n. 426, in which a host of contributions and suggestions by civil society, non-governmental organizations and public institutions, the majority of which were discarded, and that the reasons for not incorporating them in the final text were not disclosed ..”

Tabel 3.7
Recommendations from the *Ministério Público Federal* for the Telecommunications sector, 2000-2004

Year	Firm or agency involved	Level of government	Description of recommendation
2004	ANATEL	National	Determine that operators should review service contracts and the penalties (juros de mora) imposed
	ANATEL	State RJ	Monitor and control irregular advertisements of operators of fixed services.
	EMBRATEL/ TELEMAR NORTE	state RJ	Include in advertisements clear information on tariff changes.
2003	ANATEL	National	Alter criteria for definition of "local area" so that areas within same municipalities are separated
	ANATEL	National	Review and incorporate alterations in existing contracts
	ANATEL	National	Review and incorporate alterations in the General Plan for Quality Targets (PGMQ).
	TELEMAR	National	Individualize local calls from fixed service to make clear for consumers the services rendered
2002	TELEFONICA S A	National	Participate in public hearings to clarify questions about tariffs and services, if requested to do so, and send activity reports to the State Assembly of the state of Sao Paulo.
	ANATEL	National	Determine that company is to Participate in public hearings to clarify questions about tariffs and services. Carry out quality of service audits in the company
	EMBRATEL	National	The company is to allow consumers to choose not to use operator services in telesex service
	TELEGOIAS CELULAR	National	Inform consumers of tariff composition in all advertisements for pre-paid services.
	DTCOM	State	Allow consumers choice of date of charge of bill of service vencimento de seu débito.
2001	TELEMAR	National	Pay back consumers in subsequent bills all deductions for LBV
	ANATEL	State (SP)	Nulify top paragraph of article 19 of ANATEL book of rules.
	ANATEL	State (RS)	Determine that CRT Brasil Telecom stop closing service centers; Fine CRT for this practice.
2000	ANATEL	National	Require advertisers's carriers to keep data regarding telecoms adds.
	ANATEL	National	Monitor rigorously mistakes in phone bills
	ANATEL	National	Request concessionaries to inform consumers of all contract stipulations
	ANATEL	State SP	Determine that operator should provide detailed information of services rendered and charges, and inform consumers of procedures for free of charge suspension of services
	ANATEL	State SP	Make available for public consultation the book of rules for added value

On the base of these considerations, the MPF proposed 15 alterations in the text of the PGMQ bill. Anatel was given 10 days to disclose the reasons for not adopting the suggestions. Non compliance would imply in penal procedure. Table 3.7 provides information of all recommendations made by the MPF for the telecommunication sector. MPF's activism seems to be very effective and qualitative

information suggests that Anatel actually preempts possible MPF's actions in their behaviour (interview with Anatel director).

Transparency and Participation

Anatel's decision-making process is indeed very transparent. Its decisions are publicized widely in its site. It also makes extensive use of public hearings. These two aspects should be separated. Transparency is crucial not only for society but it is also a precondition for the control agencies to monitor effectively the agencies' decisions and practices. On the other hand, participation is crucial for making sure that the interests of consumers and civil society is effectively represented in the policy-making process.

The public hearings have been effectively used and their results made available in electronic format. For evaluation purposes a key question is to what extent the public hearings allow for the incorporation of public regarding proposals and to what extent the process allows for true participation. Mattos (2004) provides a detailed case study of the public hearing for the Universalization Law. The data he compiled illuminates the micro-dynamics of the participatory process. Table 3.8 provides data on manifestations and suggestions by type of actor. The data show that corporate interests offer the majority of both manifestations, accounting for two-thirds of the effective suggestions made. Of these suggestions by corporate interests the vast majority (over 90%) refer to aspects related to the private interest of the concessionaries or telecom firms. More significantly is the number of suggestions that were effectively incorporated into the final approved text of the Universalization Law.

It should be noted the evidence shows that the process was indeed participatory to the extent that about a quarter (24,3%) of all suggestions were somehow incorporated in the law (Table 3.10). But more significantly, corporate interest were contemplated in about the same percentage: 24,4% of all the proposals were targeted at the interests of the corporate sector in the telecom business. The conclusions from this case study is that participation by consumers and their allies in the regulatory process is still low. The sheer number of proposals on the part of business points not only to the higher organizational capacity of business but also the fact that diffuse interests are inherently incapacitated to compete with organized business in this pluralistic environment. It is premature to offer conclusions here but one hypothesis is that the public hearings may have enhanced the influence of business in the regulatory process. Should Congress be more involved in the process would the results be less biased to corporate interests?

Table 3.8. Public Hearings - Bill on Universalization
Number of suggestions by type of actor

Suggestions	Number	%
A Companies and associations of the telecommunications sector	646	61,35%
B Companies and associations of other economic sectors	31	2,94%
C Consultancies and advocacy offices	31	2,94%
D Governmental bodies	105	9,97%
E Associations of consumer protection	22	2,09%
F Other Non-Governmental organizations	20	1,90%
G Individuals	189	17,95%
H Workers unions in the telecommunications sector	9	0,85%
Total	1053	100,00%

Number of suggestions manifested by interest category

Interest category	Number	%
Private corporate	701	66,57%
Diffuse	156	14,81%
Public Administration	127	12,06%
Formal Legalist	69	6,55%
Total	1053	100,00%

Source Mattos (2004)

Table 3.9. Public Hearings - Bill on Universalization(iv) Number of suggestions manifested by type of actor in each interest category
(considering all public consultations)

Interests	Actors								
	A	B	C	D	E	F	G	H	TOTAL
Private corporate	91,44 %	4,28 %	3,42 %	0,00 %	0,00 %	0,00 %	0,86 %	0,00 %	100,00%
Diffuse	1,28 %	0,64 %	4,49 %	14,74 %	7,69 %	5,77 %	60,26 %	5,13 %	100,00%
Public Administration	0,00 %	0,00 %	0,00 %	62,20 %	7,87 %	8,66 %	20,47 %	0,79 %	100,00%
Formal Legalist	4,35 %	0,00 %	0,00 %	4,35 %	0,00 %	0,00 %	91,30 %	0,00 %	100,00%

Table 3.10. Case Study of Public Hearings - Bill on UniversalizationNumber of suggestions incorporated in the text of the rules published by interest category
(considering all the public consultations), which resulted in norm published at the end

Interests	Total of suggestions in consultations with final result by interest	Total of suggestions incorporated by interest	%
Private/corporate interests	437	107	24,49%
Diffuse interests	102	32	31,37%
Public Administration	29	5	17,24%
Formal Legalist suggestions	45	5	11,11%
Total	613	149	24,31%

Quality of service and Coverage expansion

Following privatization the expansion of coverage was very significant. By 2003 Brazil's tele-density, considering fixed and mobile services, reached 48.4 per 100 inhabitants (See Table 3.11. This is a remarkable achievement even considering the fact that teledensities indicators improved significantly in Latin America following privatization. The expansion of fixed lines in comparative perspective

within Latin America can be seen in Table 3.12. The gap between Argentina and Brazil diminishes considerably, and the comparison with Mexico shows a growing advantage for Brazil. The expansion of cell phones was even more impressive. Between December 1994 and December 2004, when the number of cell phones reached 61 million apparatuses, the annual growth rate was 8%. The formidable expansion of cell phones can explain the very high total teledensity in Brazil in comparative terms that is presented in Table 3.11.

The rapid expansion of coverage was largely due to the regulatory framework. According to the concession contracts, should a company reach the universalization targets before the deadline set in the contract the constraints to operating in other markets and the ban on cross-ownership would be lifted. Because of the great expansion of fixed lines an increasing number of these lines have remained idle. In 2005, about 10 million of the 49 million fixed lines were not in service. This prompted companies to press Anatel for raising the tariff for basic services to compensate for the costs of maintaining these lines. These developments are non-anticipated outcomes of the regulatory policy.

Table 3.11. Quality of service and Coverage expansion, 2003 (ITU)

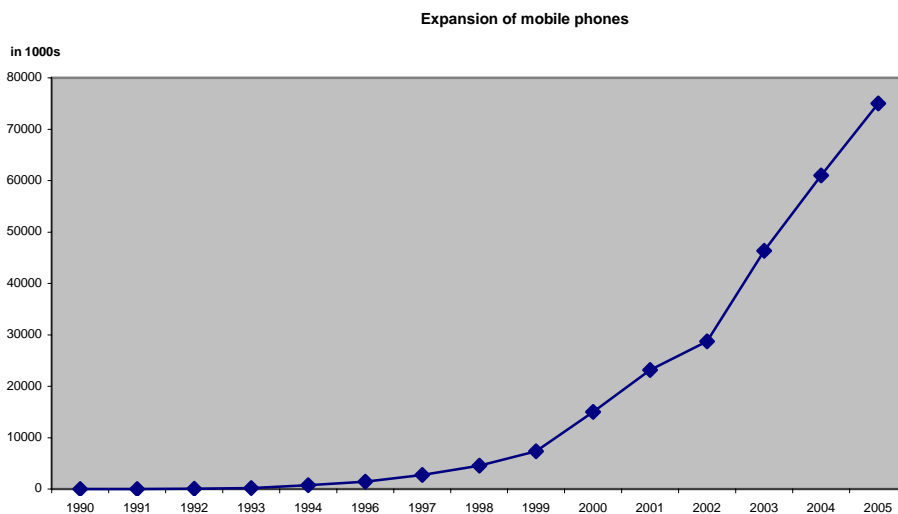
	Telephones (Millions)	Total	Main lines (fixed lines)	Cell phones	Density Total Telephones per 100 inhabitants.
1	US	340	181	159	116,4
2	Brazil	85	39	46	48,4
3	México	41	15	26	39,5
4	Canadá	33	20	13	104,6
5	Colômbia	15	9	6	34,2
6	Argentina	14	8	6	39,2
7	Chile	10	3	6	67,4
8	Venezuela	9	6	3	36,2
9	Peru	5	2	3	17,3
10	Equador	4	2	2	30,3

3.12 Expansion of Teledensity for fixed lines in Brazil 1994-2001

Teledensity of fixed lines for each 100 inhabitants (in %)

	Brazil	Argentina	Dif. Bra/Arg (%)	Mexico	Dif. Bra/Mex (%)	Latin America ^a	Dif. Bra/LA
1994	8	13.7	-41.6	9.2	-13.0	8.7	-8.0
1997	10.7	19.1	-44.0	9.7	10.3	11	-2.7
1998	12.4	20.3	-38.9	10.4	19.2	11.5	7.8
1999	15.1	20.1	-24.9	11.2	34.8	12	25.8
2000	18.6	21.3	-12.7	12.5	48.8	12.8	45.3
2001	22.1	23.9	-7.5	13.9	59.0	13.7	61.3

Figure 3.3 Expansion of mobile phones in Brazil



In contrast with this great expansion, the data on quality of service however does not suggest improved efficiency over time. Telecom’s services, particular in relation to fixed services, rank first in overall consumer complaints to Consumer Protection Agencies (Procons) all over the country. It accounts for 77% of all complaints in the state of São Paulo whereas mobile service corresponds to the 13%, although the number of mobiles surpassed fixed phones since 2003. Data on consumer satisfaction is also dubious. A survey by USP and UFRGS in 2002 found an overall satisfaction score of 72%. About half of residential and non-residential users found tariffs to be too high. In a Gallup survey, only 45% of users in Rio, in 2004, replied that the quality of service was “good”. (Lins 2004).

Efficiency: competition

The positive aspects described above were achieved without much competition. Competitive markets emerged in the long distance and mobile services. Fixed service has virtually remained a monopoly. Table 3.12 shows the data for the market share of incumbents. In the three regions it has reached about 95% of the market. This can be attributed to two factors. First, this was caused by the failure by Anatel to ensure interconnection for the entrants (Lins 2004). Second, the costs of wireless systems were too high.

Table 3.13 Market Share de Active services (June 2004)

	Região I	Região II	Região III
Incumbents	96,1%	94,9%	97,5%
Entrants	3,9%	5,1%	2,5%

Source:: www.Teleco.com.br

The same pattern of formation of an oligopoly by incumbents can be found in national long distance calls. In this case there has been a trend towards concentration in the incumbents to the detriment of Embratel. In international long distance services Embratel is also losing ground, but its share is still very large. In 2000, its market share was 92.2%, but in 2003 it declined to 76.5%. Here the main competitor is Interlig and, increasingly, providers using VoIP, which account for 50% of total traffic.

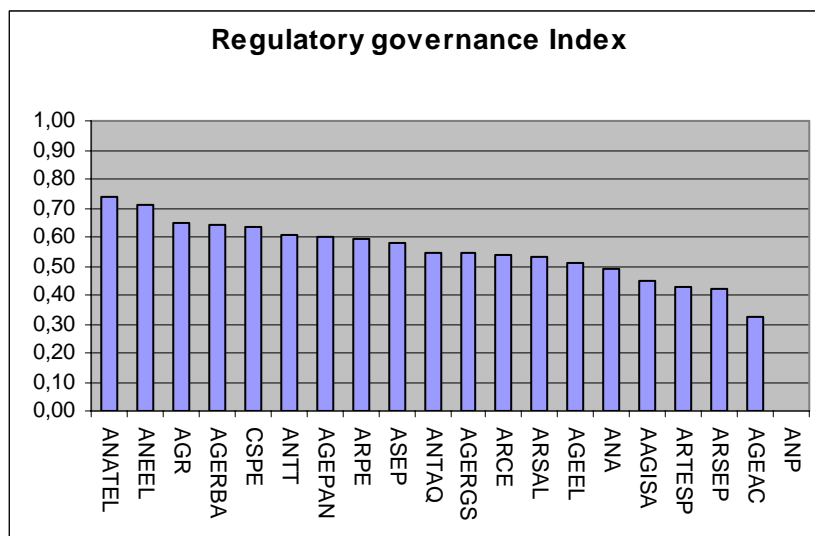
Table 3.13 Market Share of long distance carriers (% of in minutes)

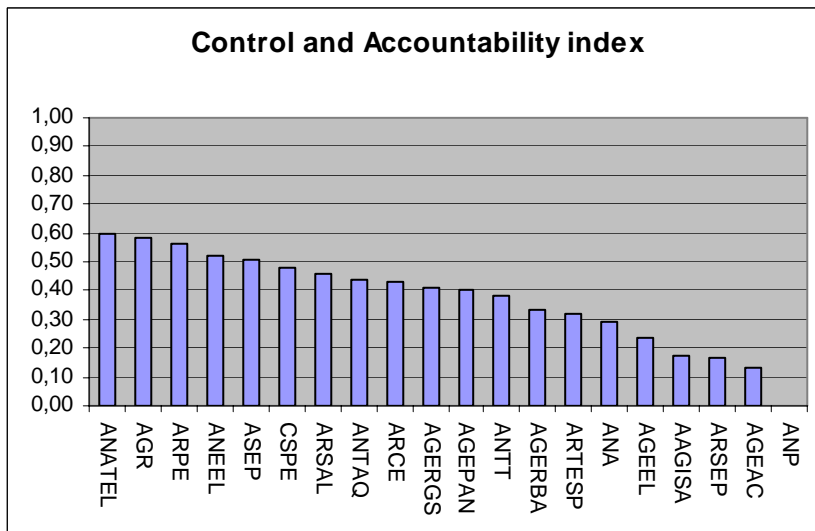
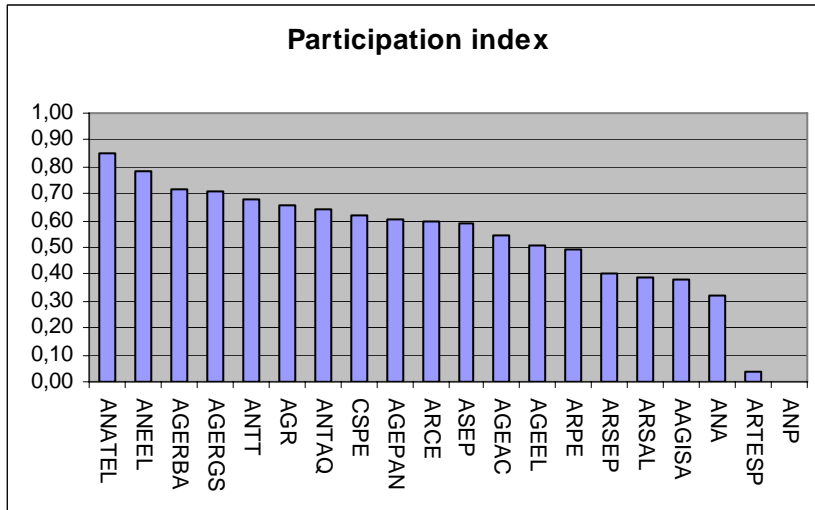
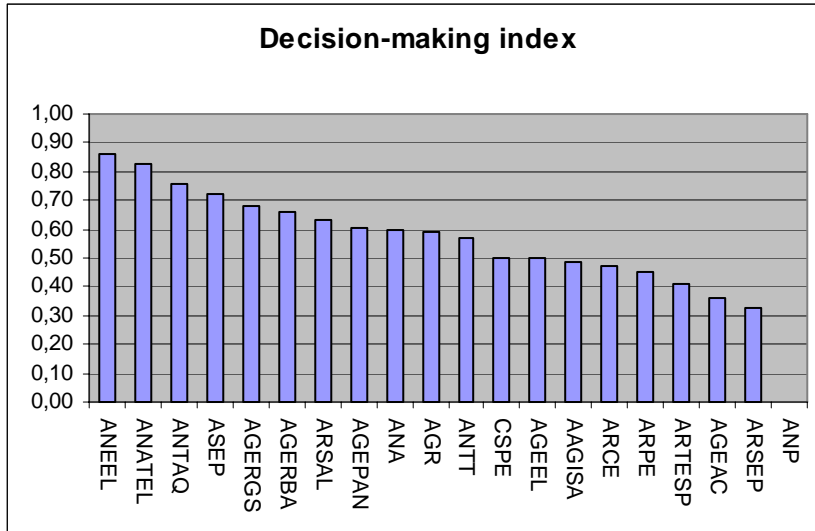
	Embratel	Incumbents (fixed lines)	mirrors
2004	21.0%	72.2%	6.8%

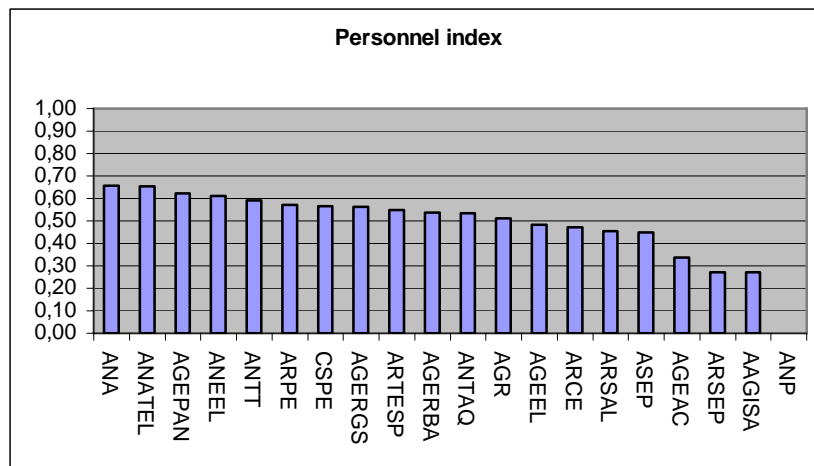
Source:: www.Teleco.com.br

Anatel compared to other state and federal agencies

In this section we present a comparison between Anatel and other regulatory agencies in terms of regulatory governance. We compare Anatel with 15 state level regulatory agencies and 4 federal agencies (in the areas of transportation, water resources, oil, and electricity). In this exercise we used the results of a survey with indicators related to the analysis presented in 2.2.4 (see annex for methodology). A number of indicators for personnel (human resources), decision-making, accountability and control, and participation were used. These four dimensions make up the composite index for regulatory governance. This is an additive index that was built and normalized from 0 to 1. The most interesting finding is that Anatel came up as the the agency with the best index for regulatory governance. Anatel ranked first in two dimensions, participation and control and accountability, and ranked second in the other two dimensions, decision-making and personnel.







Conclusions

The preceding analysis shows that Anatel has represented an important process of institution-building and is a robust institution. The telecommunications sector in Brazil has been depicted as a success story and much of the accomplishments in terms of expansion of coverage and quality of service - are due to the role played by Anatel. However, this agency diverts from the idealized model of regulatory institution in a number of very important ways. Furthermore, many of the results were non-anticipated outcomes. First, it never had financial autonomy and its resources continue to be impounded. This has reduced the agency's autonomy but still an important degree of autonomy remained. Second, Anatel has never had its own career staff. Despite the existence of a highly qualified cadre of technicians, the fact that many staff was recruited from other institutions weakens it. Third, it failed in important ways to introduce competition because the mirror companies in local telephone services represent a minuscule share of the market.

Fourth, despite the fact that the agency is very transparent, public hearings and other mechanism for participation do not guarantee effective participation by consumers as a result of information asymmetries that remain. Notwithstanding it is the best regulatory agency in the country and compares very favorably with its counterparts in the region (Gutierrez 2003). A number of features of the broader institutional endowment of the country help explain the relative success of the experience. First, the executive displayed important agenda setting powers and was able to overcome a number of potential fragmenting tendencies of the political environment resulting from the functioning of federalism and form the fragmented party system. Moreover the broader bureaucratic capacity of the Brazilian state was also key to ensuring effective policy implementation even when these resources were at odds with the independent agency model. More importantly, a tradition of contracts being upheld in the courts also helped creating a stable political and institutional environment.

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