

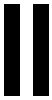
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**COMPETITION, COMPETITIVENESS AND  
DEVELOPMENT: LESSONS FROM  
DEVELOPING COUNTRIES**

**CHAPTER II**



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# Regulatory design and competition policy implementation

## II.1. REGULATORY DESIGN AND COMPETITIVENESS: EVIDENCE FROM A SAMPLE OF BRAZILIAN INFRASTRUCTURE SECTORS

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### 1. Introduction

The objective of this paper is to establish a positive relationship between competitiveness in infrastructure and regulatory design.

Competitiveness means systemic cost reduction in the economy that may occur at the plant level, at the economic group level or at the sectoral level. Although competitiveness defined in this way is not easy to measure, it is possible to use an indicator of effectiveness of the regulators' action as a variable that affects competitiveness.

The effectiveness index is the result of the regulators' action and reflects the success in eliminating market failures, increasing both sector productivity and consumer satisfaction. Although regulators do not act directly upon competitiveness, they influence it through their role in promoting competition.

Thus, the goal is to test the hypothesis that the level of independence of the regulatory agencies has a positive impact on the effectiveness index thereby affecting competitiveness.

The expected result is that sectors with independent agencies will present a higher effectiveness index.

Although most elements of institutional endowments are common to all sectors within the same country, regulatory design can vary across sectors. Empirical data show that there are a wide variety of government choices for regulatory design, producing different outcomes across sectors.

This chapter is divided into six sections, including this introduction. Section 2 will briefly describe the conceptual framework. The objective of this part is to define what can be considered a good regulatory design.

Section 3 contains indexes that capture aspects of what was considered to be a good regulation. In particular, two indicators will be used: i) the independence index

(II) for a regulatory agency; and ii) the effectiveness index (EI) for the performance of a regulated sector.

Section 4 provides the basic institutional information about the regulatory agencies created in Brazil in the second half of the 1990s.

Section 5 provides a brief summary of the performance of the regulated sectors of the regulatory agencies discussed in Section 4. The objective of the section is to rank the selected sectors according to both the II and EI proposed in Section 3.

Finally, a test of the hypothesis that more independent regulatory agencies lead to better performance is provided. The test will only be a partial and qualitative one because there is not a large enough sample of countries and sectors. But the methodology will be ready for a cross-country comparison, which would be the natural extension of this work.

## **2. Conceptual framework**

One of the objectives of the literature of institutional design is to evaluate the influence of a regulatory system on sector performance. Successful regulatory policy improves both efficient and private investments. The way a country's political and social institutions interact with regulatory processes and economic conditions influences the confidence of investors and the performance of privatized utilities.

The research will use the conceptual framework development by Levy and Spiller (1996). They suggest that credible commitment to a regulatory regime can be cultivated even in what appears to be a problematic environment and that without that commitment long-term investment will not take place. These authors understand regulation as a design problem with two principal elements: regulatory governance and regulatory incentives. The first one refers to the social mechanisms to restrain government discretionary moves and to solve conflicts between firms and regulators.

The second one involves specific norms related to price regime, subsidies, competition policy, entry barriers and interconnection rules. The two elements are choice variables for governments undertaking public sector reforms, limited by the institutional endowments of the country.

They argue that the credibility and effectiveness of a regulatory framework vary with a country's political and social institutions. Three complementary mechanisms are in place to restrain arbitrary administrative action:

- Substantive restraints on discretionary actions by the regulator;
- Formal or informal restraints on changing the regulatory system; and
- Institutions to enforce the restraints.

In addition to influencing a regulatory system's ability to restrain administrative action, political and social institutions also have an independent effect on the type of regulation that can be implemented and therefore on the appropriate balance be-

tween commitment to a particular regulatory system and flexibility in response to economic changes.

Policy makers' choice of regulatory governance is constrained by the specific institutional endowment of the nations, which determines the form and the range of options for resolving them. In turn, choices about regulatory incentives are also constrained by institutional endowment and by the governance features built into the regulatory system. Chart 1 shows the main elements of a nation's institutional endowments for the two regulatory components.

**Chart 1:** Elements of Regulatory Components

	<b>Elements</b>
<b>Governance</b>	Legislative and executive Judicial Custom and other informal Character of the contending social Administrative
<b>Incentive</b>	Administrative Distributive politics Regulatory

Source: Adapted from Levy and Spiller (1996)

The first element, legislative and executive institutions limit a country's options for regulatory governance. It consists of formal mechanisms for appointing legislators, for elaborating laws and regulations, and for determining the relations between the two institutions. The second one, judicial institutions, consists of formal mechanisms for appointing judges, determining the internal structure, and for resolving disputes among agents. An independent judiciary is an important aspect of the institutional environment.

An important finding of Levy and Spiller (1996) is that although the incentives affect performance, their full impact occurs only if the proper regulatory governance structure is in place.

The conceptual framework developed by Levy and Spiller (1996) permits one to analyse the interaction of the country institutional endowment (the regulatory institutions' structures) and performance. The government can attenuate the scope for government opportunism and reassure investors by appropriately designing the regulatory agencies. Specific rules regarding the agency's budget, the process of nomination and substitution of regulators, and the requirements for making different types of decision are examples of desirable characteristics of a good institutional environment as argued in Mueller and Pereira (2002).

Good governance of the regulatory agency can improve sector performance. Therefore, the existence of poor governance structures is a relevant feature to be taken into consideration in the institutional environment in Brazil.

The existence of political instability demands independent institutions, and a professional and competent administration to ensure policy stability. An II is supposed to evaluate the independence level of Brazilian regulatory agencies.

It is taken for granted that agency independence *per se* is not enough to assure good performance in the regulated sector. For example, a hostile policy environment, a fragile macro environment, the absence of clear rules and limited discretion all have a negative impact on sector performance. But the assumption is that agency independence is crucial for obtaining good sectoral performance.

### **3. Indicators of independence and effectiveness**

This paper applies particular methodologies to estimate an index of the independence of competition agencies (II) and an index of the effectiveness (EI) in order to rank a sample of Brazilian agencies. The II consists of compound qualitative criteria: existence of group decisions, financial independence, decentralized nomination of counsels, the requirement of certain technical skills for holding positions in the agency, stability on the job for counsellors, influence of other institutions in the decision-making process and the authority to apply sanctions.

The EI consists of a compound of different quantitative indicators such as price and investment. Using these two indexes, we rank the following Brazilian regulatory agencies:<sup>1</sup>

- the Brazilian Electricity Regulatory Agency (ANEEL);
- the Brazilian Telecommunication Regulatory Agency (ANATEL);
- the Brazilian Petroleum Regulatory Agency (ANP);
- the Brazilian Overland Transportation Regulatory Agency (ANTT);
- the Brazilian Waterways Transportation Regulatory Agency (ANTAQ).

Using data on regulation in these deregulated sectors in Brazil, the research intends to provide evidence that regulation design affects sectoral performance. Empirical data comes from the Brazilian Institute of Geography and Statistics (IBGE), the Competition Defence Administrative Council (CADE), regulatory agencies and consumer protection agencies.

#### **3.1. Independence index (II)**

The notion of an independent regulatory system is an important theme in the regulation literature. Although it is accepted that independence is a necessary attribute for an effective regulator, the concept is difficult to define because it has multiple dimensions.

Moreover, to be independent, not only should a regulator be physically and operationally separated from those it regulates, but it should also be empowered to carry out policy by making objective, well-reasoned, written decisions arrived at through transparent processes, and based on a complete, public record. Regulators should be free from undue political influence during this process, and impartial decisions based on the record should not be undermined for political reasons. Finally, the scope and substance of a regulator's jurisdiction should be clearly mandated by statute, and there should be adequate funding to carry out its responsibilities.

Independent agencies should have the following characteristics:

- Stable and very well-defined functions
- Autonomy in making decisions
- Financial autonomy
- Technical specialization
- Transparency

In relation to the functions of the agencies, the latter should be very clearly defined by statutory mechanisms and rules set by Congress. This not only diminishes investor's risk in relation to discretionary actions of the concessionary power but also heightens the ability of consumers to check on fulfilment of aims set by a sector's regulatory agency. Furthermore, delineation of functions is also a form of ensuring that companies carry out the determinations of the regulatory agent – as in the case of the authority of the agency to apply sanctions without the right to appeal to the Executive Power.

Decision-taking autonomy is important in the sense that an agency is independent in relation to government. This means that agency directors should not be subject to dismissal for reasons related to disagreeing with government on the course of regulatory policy.

Financial autonomy has helped to increase the degree of decision-making autonomy and diluted government pressure. Financial autonomy is only feasible when the agency's revenues come from its own resources, for instance from licensing fees for concessions or fees charged for overseeing regulated companies.<sup>2</sup>

Technical specialization reduces asymmetries of information between the company and the regulator, reducing the risk of capture. In that sense, technical training for agency directors is a means of reducing company pressure on the agency.

Finally, transparency is essential to obtain social legitimacy for the agency's work. In order to appreciate the views of the different interest groups, agencies should ensure that there are many channels of communication with consumers. This can be facilitated by public consultations, holding hearings prior to taking decisions and publishing documents for preliminary appreciation.

- The stability and delineation of functions are determined by statutory mechanisms and rules established by Congress; they may be evaluated on the basis of

the following aspects: i) less influence of other institutions in the decision-making process and ii) greater authority to apply sanctions;

- Decision-making autonomy may be assessed by: i) board members being designated jointly among the Powers, ii) board members holding secure mandates, and iii) a pluripersonal criterion for agency decisions;
- Financial autonomy is determined by an agency having its own budget and funding arrangements, and
- The technical capability of an agency will depend on the criterion for designating members being their technical specialization

In relation to the delineation of functions, less influence of other bodies of the direct administration in decision-making processes – as determined by their intervention in the procedures of the agency, such as the power to bring cases before the agency, proceed to conduct investigations, make agreements, etc. – heightens the agency's degree of autonomy, since it will have greater authority to mediate or arbitrate disputes. An agency's credibility is greater when – after conducting all investigations and analyses – it has the authority to apply any sanctions necessary without them being reviewed by other instances of the administration. In Brazil, there is no trend for intervention by other bodies of the direct administration in decision-making processes; sanctions applied by regulators cannot be appealed to other administrative instances of the Executive Power.

In the case of decision-making autonomy, firstly a joint designation procedure favours plural representation of interests and reduces the political commitment of regulators with the Executive Power. Secondly, one must emphasize the importance of a pluripersonal decision-making process, since commissions – instead of superintendencies, for example, which are more unipersonal in nature – enable greater decision-making autonomy, if only because it is more expensive for an economic agent to influence a joint decision-making process with several regulators than when a decision is a single individual's responsibility. Finally, holding secure tenure of a position means that regulators are protected from threats of dismissal as a means of bringing pressure to bear on decision taking. Secure tenure in a position may be assessed by the existence of a fixed-term mandate, its duration and the degree of freedom of the Executive to remove regulators from their positions.<sup>3</sup>

In the designation procedure for all regulatory agencies in Brazil, the President proposes the head of the agency and appoints him or her after approval by the Senate. In other words, appointments are centralized. Concerning secure tenure for agency presidents and board members, they have mandates for a certain period that does not coincide with that of the President. However, there are strong restrictions on the President's ability to dismiss agency directors. Finally, the decision-making process is pluripersonal.

In relation to budget autonomy, having their own funding lessens the degree of subordination of agencies in relation to the direct administration, which could other-

wise steer decisions by threatening to alter budgets. In the Brazilian case, agencies usually enjoy certain autonomy in budgeting.

In relation to the requirement of technical specialization, i.e. the reputation and specific knowledge of the regulators, this feature reduces risk of capture and heightens the social legitimacy of decisions. In Brazil, in general, technical specialization is a priority criterion when selecting agency directors.

In relation to the transparency of the regulatory process, one must emphasize the effort made by the agencies to provide information for consumers and other interested agents. However, debate continues concerning the means of ensuring regulatory authority accountability.<sup>4</sup> Although this is an important discussion, the issues reach well beyond the scope of this study.

This work adapts a methodology to calculate the Independence Index (II) originally proposed by Gheventer (2003). The degree of independence of the agency depends on seven factors:

**Decision Process (DP):** This attribute characterizes the nature of the decision process. It can be individual or collective. Some agencies have a civil society member (ombudsman). In this case, the attribute value will be higher;

**Budget Autonomy (BA):** It is supposed that the existence of own resources reduces the degree of subordination of the agency in relation to the direct administration;

**Nomination Process (NP):** This attribute differentiates nomination processes between individuals and the collective, the latter receiving a higher value;

**Technical Specialization (TS):** reputation and knowledge in the field on the part of regulators. This should reduce the capture risk and increase the legitimacy of the decisions;

**Leader Stability (LS):** The stability in the position means that the regulators are protected from political and other pressures. The following elements determine the stability of the regulators: the existence of a fixed mandate, its duration and the degree of freedom of the Executive to fire the regulator;

**Political Interference in the Decision Process (PI):** The interference of the direct administration in the procedures of the agency;

**Enforcement Capability (EC):** adequate instruments to implement the legislation, especially the sanctions.

The measurement criterion of the independence degree is quite simple. A value of 1.0 point is attributed to each element that has a crucial role for the independence of regulatory agency. The absence of an institutional characteristic that favours inde-

$$II = \sum_{i=1}^7 a_i; \quad a_i \in \{0;0,5;1\} \quad (1)$$



pendence is allocated the value zero. For some factors, a middle value (0.5) is attributed.

At the end, the partial points are added. Equation 1 formalizes the II. where  $i$  represents each specific attribute and  $a_i$  represents the score.

The larger the agency punctuation, the larger is the independence index associated with the agency.

### 3.2. Effectiveness index (EI)

The design of effective regulatory agencies involves defining regulatory scope and policies. This chapter uses an adaptation of an indicator proposed by Afonso and Garcia (2001) to calculate the Effectiveness Index (EI) of the Brazilian regulatory agencies. These authors use a similar methodology to that developed by the United Nations to create the Human Development Index (HDI) to propose a quantitative measure of the Infrastructure Development Index (IDI). The idea is to create an index that permits one to assess agencies' capabilities to obtain good competitive conditions in the regulated sectors.

The first step is to choose both economic and social indicators to compound the sector index. Two historical series were chosen for each regulated sector.

Real Price Index (PI);

Investments Index (INI);

The second step is to combine the two series to construct one series expressed by Equation 2:

$$EI = \beta_1 * PI + \beta_2 * INI \quad (2)$$

The next step is to estimate the parameter ( $\beta_i$ ) weights. Afonso and Garcia (2001) suggest the "Main Component Method" (MCM) to determine the  $\beta_i$  values. This statistic framework estimates the parameters by means of linear combinations of the series. For this, the method maximizes the variance of the series linear combination. The optimization problem presented above uses Equation 3 as a restriction:

$$\sum_{i=1} \beta_i = 1 \quad \text{where } i \in \{1;2\} \quad (3)$$

With the values obtained in the optimization process for the parameters, a new series is constructed starting from Equation 2, and the first component is denominated. Having calculated the first component, the objective is to obtain the second component. A new restriction is then imposed on the optimization problem: the vector of parameters of the second component should be orthogonal to the vector of

parameters of the first component. In this way, the new objective is to obtain parameters that maximize the variance of the linear combination that are not correlated to the parameters of the first component. This procedure is repeated successively up to the number of series used in the maximization (two in the present case).

#### **4. Changes in the Brazilian institutional environment and the regulatory agencies**

The institutional environment in Brazil was significantly altered during the 1990s with less direct intervention in economic activity and the state taking on more of a regulatory role. The creation of regulatory agencies was one of the key features of this process of institutional change. This section analyses the elements of the Brazilian regulatory framework and the factors indicative of the conditions that determine regulatory agency independence in relation to pressure from government or the regulated enterprises.

The first part of the section examines changes in relation to the previous institutional environment. The second part presents the characteristics of the current institutional environment and deals with the issue mentioned above, based on an examination of the regulatory agencies' independence.

##### **4.1. Transition to the current institutional environment**

The institutional situation in place in Brazil through the 1980s dates back to the process of industrialization of the country in the 1930s. Under this model – known as the import substitution model – the State built up a productive structure, mainly involving infrastructure and intermediate goods and services, in order to encourage industrialization. In addition to the prominent presence of the State, this model was also characterized by a closed economy producing mainly for the domestic market. On the basis of this structure, the Brazilian economy showed high growth rates that were sustained through the 1970s.

By the 1980s, however, this model was no longer feasible due to the lack of external funds and a financial crisis of the Brazilian State. These factors, combined with falling productivity in the state sector led to criticisms against the utility monopolies providing public services. In the 1980–1989 period, the annual growth rate fell to 1 per cent *versus* 7 per cent in 1970–1979.

By the early 1980s, inflation had already soared to three digits. In the early 1990s, reforms were carried out with the purpose of a) raising Brazilian companies' exposure to foreign competition;<sup>5</sup> b) reducing the role of the State in the productive apparatus, with privatizations; and c) boosting the inflow of external funds, with capital account liberalization.

Some authors claim that liberalization favoured higher productivity<sup>6</sup> and aided macroeconomic stabilization policy, contributing to reverse the inflationary spiral as of 1995, as the data in Chart 2 suggest.

**Chart 2: Brazil – economic indicators – 1990–2001**

	<b>GDP growth (%)</b> (1)	<b>Av. rate (%)</b> (2)	<b>Inflation (IPCA) (%)</b> (3)	<b>Productivity (Jun) (1991=100)</b> (4)	<b>Trade balance (US\$ bn)</b> (5)	<b>Capital inflow (US\$ bn)</b> (6)
<b>1990</b>	-4.35	32.1	1620.97	86.31	10.8	0.6
<b>1991</b>	1.03	25.2	472.69	104.99	10.6	3.8
<b>1992</b>	-0.54	20.8	1119.09	108.70	15.2	14.5
<b>1993</b>	4.92	16.5	2477.15	116.58	13.3	12.9
<b>1994</b>	5.85	14.0	916.43	123.59	10.5	54.0
<b>1995</b>	4.22	13.1	22.41	123.71	-3.5	10.4
<b>1996</b>	2.66	13.6	9.56	124.78	-5.6	22.0
<b>1997</b>	3.27	13.6	5.22	142.29	-6.7	10.9
<b>1998</b>	0.13	13.6	1.66	146.75	-6.6	18.6
<b>1999</b>	0.81	13.6	8.94	142.02	-1.3	3.5
<b>2000</b>	4.36	13.6	5.97	150.47	-0.7	8.7
<b>2001</b>	1.51	12.0	7.67	146.93	2.6	0.9

Sources: (2) Averbug (1999: 47) and Oliveira (1996: 78); (3) Fibge; (4) Ipea data; (1), (5) and (6) the Central Bank.

The second phase of the privatization process was characterized by capital account liberalization.<sup>7</sup> Federal Law No. 8031/90<sup>8</sup> enacted the Privatization Program, which began the process of reducing direct state intervention in the Brazilian economy. Its first phase covered the 1991–1994 period and focused on privatizing industrial-sector enterprises such as steel, petrochemicals and fertilizers, which did not require the introduction of a specific regulatory framework. Receipts from privatization amounted to US\$ 8.6 billion in this period (Chart 3).

**Chart 3: Brazil - privatization programme (1991–1998)**

Sector	Number of companies	Assets sold	Debt transferred	Total
Federal companies	81	46581	11326	57907
<i>Steel</i>	8	5562	2625	8187
<i>Petrochemicals</i>	27	2698	1003	3701
<i>Electricity</i>	3	3907	1670	5577
<i>Railroads</i>	6	1697	-	1697
<i>Mineral extraction</i>	2	3305	3559	6864
<i>Telecommunications</i>	21	26970	2125	29095
<i>Others</i>	14	2442	344	2786
State-govt firms	26	23724	5311	29035
<b>Total</b>	<b>107</b>	<b>70305</b>	<b>16637</b>	<b>86942</b>

Source: Pinheiro and Giambiagi (1997).

The second privatization phase (1995–1998) comprised the sale of state-owned companies most directly active in infrastructure sectors such as telecommunications, electricity and railroads. In all, the program represented US\$ 86.9 billion; of which US\$ 70.3 billion corresponded to actual revenue from sales.

In the second phase of the privatization program, given the nature of the sectors involved, specific regulatory frameworks were required. Brazil already had some government agencies with regulatory powers,<sup>9</sup> but they did not have the same characteristics as the regulatory agencies created in the second half of the 1990s, as part of the process of transforming the role of the State in the economic sphere.

The reconfiguration of the institutional environment, replacing the closed economy and its direct intervention by the open economy along with regulation, was related to private-sector pressure to protect investments. Since investments involve long-term contractual commitments, the independence or autonomy of regulatory agencies reduce the uncertainty in relation to returns on capital, and make it less vulnerable to any intervention by the Executive in the regulated sector.<sup>10</sup>

#### ***4.2. Characteristics of the current institutional environment***

The creation of the regulatory agencies accompanied the process of opening infrastructure sector markets to private-sector organizations, either through total privatization – as in telecommunications and rail transport – or through partial privatization – as in the case of electricity – or by means of a mere permission for private organizations to enter the market without privatizing the state company – as in the case of oil.

In markets such as road and air transport, where there was no longer any direct state participation, the trend was toward allowing new competitors to enter these sectors, and to introduce or strengthen competition. In the case of the infrastructure sectors, regulation became an indispensable instrument in the quest for consumer welfare.

According to Viscusi, Vernon and Harrington (1997: 302), regulation is a restriction imposed on economic agents' discretionary decisions, and is guaranteed by the power to sanction. Such restriction is necessary in the presence of market failures, such as in the case of public goods, market power, externalities or asymmetrical information, which are typically found in infrastructure sectors.

The major objectives of regulation are: i) seeking economic efficiency, ensuring the least costly service for users, ii) ensuring the quality of the services provided, iii) ensuring universal service and iv) preventing the abuse of monopoly power.

The trend in regulation has been to move toward introducing incentive mechanisms or favouring indirect regulation. In the first case, operators that are still natural monopolies were induced to aim at similar targets to those reached in competition

situations. In the second case, regulators encouraged monitoring of a competitive structure to create an environment that is as neutral as possible for agents.

#### **4.2.1. Regulatory framework**

To be effective, regulation has to be established on the basis of a regulatory framework setting the rules for the sector in which each institution has very clearly defined functions, attributions and responsibilities. Setting clear rules in relation to the working of the market tends to reduce uncertainties and make investments more attractive. The regulatory framework must have the following instruments:<sup>11</sup>

- Control over market entry or exit,
- Competition policy,
- Definition of tariffs and incentive mechanisms,
- A means of monitoring concession contracts,
- Independent regulatory agencies.

The aim of having control over entry is to ensure productivity and efficiency, thus enabling a monopolist to exploit economies of scale and produce at the lowest possible cost. The aim of having control over exit is to avoid harming the consumer due to a sudden departure from the sector that may cause interruption of services.

Competition policy aims at ensuring access to essential infrastructure; this is crucial during the transition from a monopolistic environment to a competitive one, since the knowledge or information possessed by incumbent and incoming companies may be asymmetric. During this period of transition, regulatory policies must seek to encourage the creation of a competitive environment, in the most neutral way possible for agents. In this respect, an important point is regulating access to certain infrastructure features that are crucial for the sector. This regulation may involve equality of access through breaking down or separating structures and regulating interconnection prices.

In the case of ensuring access, the aim is to avoid discriminatory practices against entrants through prices or low-quality connections. In the case of structural separation between competitive and monopolistic segments, the aim is to eliminate practices such as cross-subsidies or discrimination of access. In relation to interconnection prices, regulation should act through the agency's power of arbitration, when there is litigation between parties. As well as regulation of access, it is also important to monitor the market concentration process and supervise market agreements, stock acquisitions and any abuses of market power.

The aims of tariff setting, which must take into account the required technical standards and targets, include: i) ensuring low prices and high levels of production, ii) inducing utilization of installed capacity with maximum revenue and least cost, and iii) minimizing strains between allocative, distributive and productive efficiencies. In infrastructure sectors, the optimum price from the point of view of allocative effi-

ciency (price equal to marginal cost) merely remunerates variable costs, prejudices productive efficiency and limits the portion of revenue available for investment.

On the basis of these aims, there are three rules for tariff policy. The first is based on the internal rate of return for firms, and seeks monopoly rent, but does not encourage cost minimizing, since investments obtain guaranteed remuneration. The second is a *price cap* geared to a consumer price index minus a productivity factor. The aim is to encourage productivity and efficiency while avoiding the use of controls requiring costly information. Finally, *yardstick competition* sets standards for assessing performance used in analysing costs and prices – this mechanism is used to compare companies in the same sector that are natural monopolies at regional level. The remuneration of a company is defined comparatively in relation to the performance of other companies in the sector. The aim is to reduce inter-company costs, reduce asymmetries of information and encourage economic efficiency.

Monitoring concession contracts is necessary to oversee service quality, execution of investment plans and service targets. The advantage is that it assists the regulator in reviewing and setting tariffs, although this involves high regulatory costs. In this process, fines and penalties must be set for possible flaws in provision of services and for non-execution of targets as stipulated.

Finally, and most important for the purpose of this paper, regulatory agency independence is crucial to the proper functioning of a regulatory framework. It is crucial for agencies to enjoy independence in relation to both the government and to other agents in the sector, so that the regulator may act in defence of the consumer's welfare and have the authority to arbitrate disputes between shareholders, consumers, companies and government.

#### **4.2.2 Regulatory agency independence**

The aim of a regulatory agency is to ensure the proper functioning of regulated markets. Agencies' roles are important in sectors requiring systematic publication of regulations, frequent resolution of litigation, and specialized knowledge and constant monitoring of the market. In the Brazilian case, the role of regulatory agencies, as corporate entities under public law, involves supervising, regulating, rule making and implementing policies drafted by ministries. At times, agencies also perform arbitration and mediation.

The regulation process involves agency costs – since the (regulator) agent may not be aiming at the targets of the principal (legislator) – and the risk of capture, since the regulated company may influence the agency's decisions.

There is also a problem related to the fact that the Executive Power may wish to influence decisions made by agencies. Indeed, there may be conflicts between the immediate aims of the regulatory agencies and the goals of the State – for instance, in relation to the universalization of a service or product. In this case, the State may seek to act through measures that involve the agency more directly, such as setting

investment targets for concession contracts or tariff regulation, or through measures that do not depend on the direct involvement of agencies, such as granting direct subsidies to economic agents or to a certain section of the community.

The means of minimizing problems related to pressures from other agents not only involve a regulatory framework with very clearly defined rules, but also independent agencies whose characteristics were already discussed in Section II.

#### **4.3. Creation and functioning of the Brazilian regulatory agencies**

The general characteristics of the institutional environment posed in the previous section show certain specificities depending on the sector regulated. Chart 4 shows, in chronological order, the independent regulatory agencies created in Brazil in the second half of the 1990s.

**Chart 4: Brazil - Regulatory Agencies**

<b>Regulatory agency</b>	<b>Sector</b>	<b>Law</b>
ANEEL	Electricity	Law No. 9427, 1996
ANATEL	Telecommunications	Law No. 9472, 1997.
ANP	Oil	Law No. 9478, 1997.
ANVISA	Health	Law No. 9782, 1999.
ANS	Health	Law No. 9961, 2000.
ANA	Water	Law No. 9984, 2000.
ANTT	Transport	Law No. 10233, 2001.
ANTAQ	Transport	Law No. 10233, 2001.

A common feature in the functions of the above agencies is promoting concessions for the use of public resources or provision of services. This section analyses characteristics related to the regulatory framework and the independence of agencies in separate sub-sections.

##### **4.3.1. Regulatory framework**

In relation to the regulatory framework, we will pose the specific sector characteristics of four of the elements that make up the regulatory framework, namely control of entry and exit, regulation of competition, setting tariffs and monitoring concession contracts.<sup>12</sup> The fifth element – independence – has already been addressed.

##### **4.3.2. Control of entry and exit**

Control over entry and exit in these markets depends on a number of factors including the type of technology used in the sector. In telecommunications and electricity, for instance, more competition is allowed, whereas natural monopolies continue to exist in basic sanitation and transport. Law of Concessions No. 8987/95 governs conditions for entry or exit as well as the functioning of private enterprise in infrastructure sectors. Concession holders will only be able to cancel contracts unilaterally.

ally if a court rules that contractual rules are not being followed by the concessionary power.

#### 4.3.3. Regulation of competition

Competition policy and control of the monopoly power had greater importance in sectors that moved forward more in the privatization process and in which, for the following model and for the technological characteristics, the access to the essential

**Chart 5: Regulation of competition**

Regulatory Agency	Competition Controls
ANEEL	<ul style="list-style-type: none"> <li>– Sector legislation sought to promote competition through de-verticalization of generation, transmission, distribution and commercialisation segments. The companies had to set up subsidiaries or have separate accounting for these branches of activity;</li> <li>– Free access to the transmission network by any agent of the electricity system, aiming at new means of commercialisation through the Wholesale Electricity Market (local acronym MAE). Negotiations are subordinated to operational planning, programming and decision by the National Electricity System Operator (ONS). ONS also manages all generating and distribution companies' transmission assets;</li> <li>– The legislation also posed restrictions on share ownership, crossed shareholdings and electricity purchasing policy among agents.</li> </ul>
ANATEL	<ul style="list-style-type: none"> <li>– Regulation of competition includes measures that require prior notification of any merger or acquisition between market agents;</li> <li>– Incumbents were obliged to allow their competitors access to disaggregated elements and/or alternative points in their networks;</li> <li>– The General Telecommunications Law gives Anatel power to monitor market behaviour, as in the case of interconnection agreements. Parties to these agreements seek to inhibit tariff subsidies by means that include artificially reducing tariffs, unauthorized use of information obtained from competitors, omission of technical information, obstruction, and restraint.</li> </ul>
ANP	<ul style="list-style-type: none"> <li>– No specific rules were adopted, except the orientation that ANP should notify CADE of any fact that constitutes an infraction against the economic order;</li> <li>– There are only restrictions against Petrobrás setting up specific subsidiaries for each of its activities in the sector.</li> </ul>
ANTT	<ul style="list-style-type: none"> <li>– In the freight segment: There is no specific regulation for the road transport sector, For railroads, the concession contracts for lines now exploited by private enterprise establish interconnection obligations with other lines, carrying mutual traffic with other concession holders and mechanisms for control shareholder concentration in their the capital, In the case of the airports, there are equal access rules for marketing and sales channels and there is coordination of flight plans and routes that all airlines are subjected to.</li> <li>– In the urban passenger transport segment, regulation is decentralized on state and municipal levels, and there is no specific provision for defence of competition: In the case of interstate and international road transport, all infractions against the economic order must be notified to the Economic Law Secretariat (local acronym SDE) by order of the Ministry of Transport. Transporters with relations of economic interdependence among them are not allowed to exploit services on the same route.</li> </ul>
ANTAQ	<ul style="list-style-type: none"> <li>– In the freight segment: There is no specific regulation for port and waterway activities.</li> </ul>



infrastructure is shown to be decisive for the functioning of the sector, as is the case, for instance, in telephony, electric power and even railroads.

Chart 5 shows the regulation of competition for the regulatory agencies.

### Chart 6: Tariff setting

Regulatory Agency	Tariff setting
ANEEL	<ul style="list-style-type: none"> <li>– Tariffs for the distribution and transmission segments, which are still monopolies, are regulated by the <i>price cap</i> criterion. In the case of distribution, the tariff reduction factor, which determines the extent to which productivity gains are passed on to consumers, was null in the initial periods of the contracts. In relation to transmission, investments in transmission lines were remunerated on the basis of benchmarks for network usage and connection cost charges.</li> </ul>
ANATEL	<ul style="list-style-type: none"> <li>– Services operated in the public regime are subject to <i>price cap</i> tariffs. In the concession contracts, differentiated reduction factors were stipulated for readjusting tariffs of local and long distance wireline telephony services.</li> <li>– Services operated in the private regime may enjoy tariff freedom, unless the tariff is one of the factors to be assessed in the bidding process for the authorization.</li> </ul>
ANP	<ul style="list-style-type: none"> <li>– In the oil and natural gas sector, a period (until August 2000) was set for liberation of prices of all basic byproducts for refineries and processing units.</li> <li>– In the piped gas sector, privatized companies are subject to price-caps, obtained by grouping several items included in the cost of the service. These prices are subject to variations in the IGP-M (wholesale prices) indicator and to review procedures every five years.</li> </ul>
ANTT	<ul style="list-style-type: none"> <li>– Tariff regulation for the highway network works on the federal or state level. The basic tariff for highway tolls is set by the concession holder itself, in agreement with the criterion of more supply and lower tariffs. There are some state concessions where the initial tariff is preset by the concessionary power. Since there is no set methodology, higher costs due to inflation, or to additional works and works or services completed in advance are often passed on to users.</li> <li>– Railroads set maximum and minimum tariffs for services, depending on distance, product type and geographical region, and there is not necessarily a precise definition of the method used to set them.</li> <li>– In the case of air transport: <ul style="list-style-type: none"> <li>The Civil Aviation Department (local acronym DAC) sets tariffs for using airport infrastructure and cargo or passenger transport, although administrators may reduce prices;</li> <li>Tariffs charged by airlines for use of this infrastructure must be reduced in the same proportion as discounts in promotional flights;</li> <li>Charter fares were decontrolled;</li> <li>Monitored liberalization of domestic air fares was introduced within limits stipulated by the DAC Readjustments are annual and must be approved by the DAC.</li> </ul> </li> <li>– In the case of urban passengers transport, setting, review and readjustment of tariffs are based on cost spreadsheets submitted by companies to the concessionary power. In interstate and international passenger transport the criteria for tariff readjustment must follow changes in service costs, and there is no provision for a reduction factor for consumers in relation to productivity gains.</li> </ul>
ANTAQ	<ul style="list-style-type: none"> <li>– In the case of freight transport, tariffs are set by each of the port authorities.</li> </ul>

#### 4.3.4. Tariffs and incentive mechanisms

There is much heterogeneity in relation to tariff regimes for infrastructure sectors, and there is no clear methodology for setting, readjusting or reviewing tariffs. In general, the cost of service or internal rate of return is taken into account. In some cases, it was sought to use the price-cap rule to encourage productivity gains, but not always pass-through to consumers. Yardstick competition mechanisms that would tend to reduce asymmetries of information favouring companies have not so far been introduced in infrastructure sectors. Chart 6 presents the agencies tariff settings.

**Chart 7: Monitoring concession contracts**

Agency Regulatory	Monitoring concession contracts
ANEEL	– Although not standardized, concession contracts provide for fines and penalties for non-fulfillment of service quality levels. These contracts did not set universalization targets. There were plans for construction works aimed at expansion and enlargement of the electricity system, and the difference between costing of the works and the limits for investment allowed under the duties of concession holders was to be offset by state governments.
ANATEL	– The concession contracts stipulate obligations such as universalization of services and their quality levels for wireline telephony concession holders. The contracts set targets for expanding facilities and service financed, in the short term, by own revenue.
ANP	– Concession contracts for exploring and producing oil set periods for exploration and production development projects. Concession holders assumed an obligation to adopt technical standards for rationalizing output and controlling the depletion of reserves; – Technical requirements for modernization and capacity enlargement were established for the activities of oil refining and natural gas processing; – In the case of oil products, controls prioritize fuel quality. In the distribution of natural gas, the privatized companies' concession contracts set targets for universalization of services and quality standards, and concession holders may be penalized for non-fulfillment of contracts.
ANTT	– Concession contracts for the exploitation of highways are standardized; there are schedules and targets for investments in conservation and modernization. Concession holders are subject to a fine for not meeting deadlines or for defective conservation of highways; – In the case of the railroads, the contracts set rules for: a) evaluating quality of services (provision and security), setting minimum levels of production and annual reduction in accident indexes, b) stipulating three-year investment plans. Concession holders may be fined for non fulfillment of contractual targets; – In airports, local administrations exercise control over and inspection of contracts for use of infrastructure. In relation to operating passengers routes, monitoring is performed by the DAC through periodic inspection of aircraft and companies; – In the case of urban passengers transport, monitoring of investment plans and quality of services is up to the concessionary power.
ANTAQ	– In the case of the ports, there are several specificities in the concession contracts stipulating fines for non-fulfillment of investment obligations and enlargement of operational capacity - supervised by port authorities.

#### **4.3.5. Monitoring concession contracts**

Monitoring of concession contracts has made most progress in the segments where the privatization process has advanced most and where more direct and frequent consumption of services by most of the population is a feature, as is the case of use of telephony, electricity and highways or turnpikes. Chart 7 summarizes the monitoring contracts system.

#### **4.4. Regulatory agency independence**

In relation to regulatory agencies specifically, we shall examine characteristics indicating the extent of their independence, which shall be reflected in the results for the index of independence (II) reported in the subsequent section.

##### **4.4.1. Secure tenure and delineation of functions**

Precise delineation of the functions of agencies is provided by the rules determining the ministerial connection of the agency, its attributions and the influence of other institutions in the decision-making process.

Chart 8: Regulatory agency independence

<b>Regulatory agency</b>	<b>Ministry related to the agency</b>
ANEEL	<b>Mines and Energy.</b>
ANATEL	<b>Communications.</b>
ANP	<b>Mines and Energy.</b>
ANTT	<b>Transport.</b>
ANTAQ	<b>Transport.</b>

As shown in Chart 8, ministerial connections of agencies were conceived on the lines of the legal form of a quasi-independent government agency (*autarquia*)<sup>13</sup> under a special regime, connected to a Ministry, but not hierarchically subordinated to it.

The creation of the regulatory agencies as quasi-independent agencies under a special regime was important to ensure financial and structural independence, and to avoid subordination to any particular Ministry. This enabled these agencies to enjoy political and decision-making independence, and to take decisions on the basis of technical rather than political criteria, as is frequently the case in Ministries and bodies subordinated to them. Under this approach, the regulatory agencies have the status of State entity. Agencies assume specific functions, and especially that of the concessionary power, which may be delegated to other authorities, as noted in Chart 9.

The action of an agency will not necessarily be connected only with the sector it is part of. In cases involving more than one sector, decision making requires coordi-

Chart 9: Rights Granted by Agencies

Regulatory Agency	Rights "granted"	Power to delegate the agency's power to grant concession
ANEEL	<ul style="list-style-type: none"> <li>– Authorization for execution and exploitation of electricity services and facilities.</li> <li>– Authorization for thermoelectric generating stations.</li> </ul>	ANEEL may sign agreements, to decentralize activities, with States or the Federal District.
ANATEL	<ul style="list-style-type: none"> <li>– Concession and authorization for the exploitation of telecommunications services under public or private regime.</li> </ul>	No.
ANP	<ul style="list-style-type: none"> <li>– All rights regarding activities of exploitation, development and production of oil and natural gas on Brazilian territory.</li> <li>– The collection of technical material consisting of data and information on Brazilian sedimentary basins is also considered an integral part of the nation's oil resources and ANP is charged with collecting, maintaining and managing the latter.</li> <li>– Authorization for the construction of refineries and gas processing units and for expanding capacity.</li> <li>– Authorization for the construction of facilities and transporting oil, oil products and natural gas.</li> <li>– Authorization to exercise the activity of importing or exporting oil, oil products, natural gas and condensed gas.</li> </ul>	No.
ANTT	<ul style="list-style-type: none"> <li>– Concession to exploit railroads, highways, freight and passenger transport.</li> <li>– Authorization for passenger transports by road under the charter or hire regime.</li> </ul>	Yes
ANTAQ	<ul style="list-style-type: none"> <li>– Concession to exploit navigable waterways and organized ports.</li> <li>– Authorization for the construction and operation of private port terminals.</li> </ul>	Yes

(In cases of companies holding authorizations or concessions for generating electricity for public services the right to use water resources is granted for the period coinciding with the duration of the authorization or concession contracts granted by ANEEL).

nation across agencies. However, there is no overall legal provision governing relations among agencies or their relations with the other entities of the Government, in particular with the competition authorities.

An agency may delegate concessionary powers to another agency or work together with it in the decision-making process, without this constituting interference in the delineation of its functions, or in the extent of its independence from these other agencies. Institutional cooperation is important not only to avoid the duality of regu-

latory power, but also to ensure enforcement and credibility of regulation and to harmonize procedures and procedural rules as in the case of defence of competition and consumer rights. This is the case with ANATEL, ANEEL and ANP, for example.

ANATEL legislation charges the agency with overseeing competition policy and exercising legal competences in relation to control, prevention and repression of infractions against the economic order. Its work is conducted jointly with that of CADE, CVM and the Consumer Defence Commission.

ANEEL legislation charges the agency with overseeing competition policy, making rules to curb market concentration and provides for joint action with state agencies and the Secretariat of Economic Law.

The legislation creating the ANP merely enjoins that CADE must be notified of matters involving infraction against the economic order. Note that there is an institutional vacuum in the basic sanitation sector due to the controversy over who has the power to grant concessions for these services in metropolitan regions. The issue is whether states or municipalities have concessionary powers.

The level of independence of agencies is only affected when other organs of the direct administration influence the decision-making process. Moreover, the degree of independence of agencies is reduced when they enjoy less autonomy to apply sanctions – this occurs when the sanctions they apply may be reviewed by administrative instances of the Executive.

#### **4.4.2. Decision-making autonomy**

Its decision-making autonomy is a mark of the independence of a regulatory agency in relation to government. This requires security of tenure for directors, so that they may make decisions even in situations where they may disagree with government regulatory policies. It is therefore important to note the following points: i) appointments procedures, ii) duration of mandates, iii) possibility of dismissal, and iv) decision-making mechanisms.

In relation to the first aspect, the designation of directors, as shown in Chart 10, is established by a centralized process, in which the President proposes regulatory agency directors to be approved by the Senate.

In relation to the second aspect, a fixed mandate for agency directors helped to prevent them from being influenced by political pressures and to fulfil the objectives set by the legislation that created the regulatory agency. Mandates are fixed and, in general, the period is the same or less than the term of office of the President. More specifically, regulatory agency director mandates may be 4 years (ANEEL, ANP, ANTT and ANTAQ) or 5 years (ANATEL) without there being any apparent reason for the differences. It is argued that the possibility of repeated mandates for ANTT and ANTAQ directors would affect their independence, since there might be an incentive to a director to be conciliatory in relation to the government to obtain another mandate.

But even with a fixed mandate, directors can be under pressure to make decisions if the government can easily dismiss them. In the case of Brazil, the grounds for dismissal of a director are limited and explicitly set by law. This ensures that directors enjoy technical autonomy and reinforces the characteristics of the mandate.

**Chart 10 Agency Directors**

<b>Regulatory Agency</b>	<b>Procedure for designating agency directors</b>	<b>Director's mandate</b>	<b>Repeated mandates</b>	<b>Dismissal of directors</b>
ANEEL	Proposed by the President and appointed by the President after Senate approval.	4 years.	No.	For any reason in the first 4 months of the mandate. After that period only if there is (i) administrative improbity, (ii) a final conviction for a penal offence or (iii) unjustified non-compliance with the management contract.
ANATEL	Proposed by the President and appointed by the President after Senate approval.	5 years.	No.	Only if there is (i) administrative improbity, (ii) a final conviction for a penal offence or (iii) unjustified non-compliance with the management contract
ANP	Proposed by the President and appointed by the President after Senate approval.	4 years.	No.	Only if there is (i) administrative improbity, (ii) a final conviction for a penal offence or (iii) unjustified non-compliance with the management contract
ANTT	Proposed by the President and appointed by the President after Senate approval.	4 years.	One re-appointment.	Only if there is (i) final conviction by a court, (ii) definitive decision in an administrative disciplinary procedure or (iii) obvious non-compliance with the attributions of the position.
ANTAQ	Proposed by the President and appointed by the President after Senate approval.	4 years.	One re-appointment.	Only if there is (i) final conviction by a court, (ii) definitive decision in an administrative disciplinary procedure or (iii) obvious non-compliance with the attributions of the position.

The legislation that created each regulatory agency did not provide for a mandate for the Attorney General of each agency. Since regulatory agencies have their own corporate entity, the Attorney General heads the attorneys in each regulatory agency body. These are responsible for defending the regulatory agency in lawsuits; internally they analyse cases under way in the regulatory agency – from internal agency issues, such as sale processes, to issuing legal opinions on new regulations and their application to cases. Since the Attorney General has the function of being counsel for the agency, he must enjoy the confidence of his “clients” – the agency’s directors – and be attuned with their interests. Otherwise, there may be a fatal clash of aims in the agency’s operations and in defending its positions. Chart 10 presents characteristics and rules for directors’ mandate.

**Chart 11: Management Structure of Agencies**

<b>Regulatory Agency</b>	<b>Board</b>	<b>Decisions</b>
ANEEL	<ul style="list-style-type: none"> <li>– Collegiate regime, board composed of a Director General and four Directors.</li> <li>– There is an Attorney General as part of the organizational structure.</li> </ul>	Majority.
ANATEL	<ul style="list-style-type: none"> <li>– Collegiate regime, executive board consisting of a President and 4 board members.</li> <li>– The organizational structure includes Consultative Council, an Attorney and an Ombudsman.</li> </ul>	Majority.
ANP	<ul style="list-style-type: none"> <li>– Collegiate regime, board consisting of a Director General and four Directors.</li> <li>– There is an Attorney General as part of the organizational structure.</li> </ul>	Majority.
ANTT	<ul style="list-style-type: none"> <li>– Collegiate regime, board consisting of a Director General and 4 Directors. The organizational structure includes an Attorney, an Ombudsman and an Inspector General (whose duty is to supervise the functional activities of the agency and conduction of administrative and disciplinary proceedings).</li> </ul>	Majority, Director General has casting vote.
ANTAQ	<ul style="list-style-type: none"> <li>Collegiate regime, board consisting of a Director General and 2 Directors;</li> <li>The organizational structure includes an Attorney, an Ombudsman and an Inspector General (whose duty is to supervise the functional activities of the agency and conduction of administrative and disciplinary proceedings)</li> </ul>	Majority, Director General has casting vote.

Chart 11 shows the management structure of the regulatory agencies and their means of deliberation. In the case of Brazil, as part of the process of establishing regulatory agencies, there was awareness of the importance of having a collegiate management body, which lends a pluripersonal character to decision making and obstructs attempts to “capture” the agency.

#### 4.4.3. Financial autonomy

Even when regulatory agencies enjoy functional independence, ensured by the mandate granted their directors, there must be financial independence – otherwise regulatory agencies will inevitably be subjugated to the will of the controller of the budget. In the case of Brazil, although Congress may have some influence on the performance of the regulatory agencies through approval of the federal budget, the latter is strongly influenced by the Presidency. Some degree of financial autonomy is indispensable, particularly in relation to the Executive Power, otherwise the performance of an agency will be totally undermined by political motivations or it will act exclusively in response to pressure from lobbies.

Chart 12 shows regulatory agency budgets since 1998 and the 2004 budget forecast with values deflated by IPCA-IBGE indicators. Note that the agencies' budget is quite constant.

**Chart 12: Budget of selected Brazilian Agencies (in R\$ '000, at 2004 values using average IGP-M each year)**

Regulatory agency	1998	1999	2000	2001	2002	2003	2004
ANP	422,183	318,851	434,870	874,917	1,420,919	1,680,931	2,189,439
ANATEL	1,058,991	839,396	825,389	1,032,965	1,228,723	754,665	823,483
ANEEL	406,102	322,381	323,602	393,247	303,129	240,076	219,041
ANTT	--	--	--	--	188,659	109,403	108,720
ANTAQ	--	--	--	--	44,340	35,549	35,892

Source: Budget Execution 1998–2002. <sup>14 15</sup>

#### 4.4.4. Technical specialization

Technical specialization is important in selecting management staff for the agency. Obviously, there also has to be capable staff for the technical work related to regulatory problems in each sector.

In relation to staff, the legislation stipulates the constitution of an effective team and the recruiting of specialized technicians for a certain period, with no requirement for a bidding procedure. However, certain operational difficulties and some judicial orders have prevented the formation of a permanent staff of employees in each regulatory agency. This situation leads to a high turnover of employees, which makes



members of staff even more vulnerable to capture. This prevents the regulatory agency from institutional building.

Given that situation, the solution was to recruit temporary, requisition civil servants from other bodies and fill commissioned (non-tenure) positions.

Chart 13 shows in decreasing order, the numbers employed in each regulatory agency.

**Chart 13: Number of Employees of the Agencies**

<b>Agency</b>	<b>Employees</b>
ANATEL	1,486
ANP	657
ANTT	483
ANEEL	325
ANTAQ	143

#### **4.4.5. Transparency**

Having presented the mechanisms aimed at ensuring the necessary independence of regulatory agencies, one must now analyse the means of providing transparency and participation of society in regulatory agencies. As noted above, these are elements of *accountability* for regulatory agencies which contribute to their effectiveness by overriding the different conflicting interests for the sake of the public interest. Transparency in the administration of agencies helps to reduce the risk of capture and provides social legitimacy for their initiatives (Chart 14).

The role of the *ombudsman*, as instituted in certain regulatory agencies, was created with the aim of facilitating communication between society and regulatory agencies, and also functions as an inspector. This position too has a mandate.

Finally, Chart 15 shows how the issue of quarantine arrangements was dealt with in the legislative initiatives that created each of the regulatory agencies.

### **5. Results**

#### **5.1. Independence index (II)**

Section 2 described the II as the sum of seven agency attributes. The first one, the decision process (DP), measures the institutional format of the decision process. Three different formats are observed for this attribute in Brazil. When the decision process is individual the agency obtains 0. If the decision is collective 0.5 point is attributed. Finally, the maximum value is obtained when the board contains a civil society representative.

Budget Autonomy (BA) is the second attribute. The objective is to distinguish the agencies that possess own resources and the ones that do not. It is supposed that the existence of own resources reduces the degree of subordination of the agency in

Chart 14: Instruments for Transparency and Participation in Agencies

Agency Regulatory	Organized participation of society	Transparency / Accountability
ANEEL	<p>– Any decision making process that may affect the rights of the economic agents in the electricity sector or those of consumers, arising from administrative action of the Agency or from draft legislation proposed by ANEEL, will be preceded by a public hearing.</p>	<p>– Meetings of the ANEEL board for the purpose of settling disputes among economic agents of the electricity sector or between the latter and consumers, or to rule on infractions committed against the law or regulations, may be held in public, at the board's discretion, and be electronically recorded, with the interested parties having the right to obtaining transcriptions.</p> <p>– ANEEL management will be hired through a management contract negotiated and entered into between the Management and the Executive Power within ninety days of the appointment of the Director General, and a copy of the instrument must be forwarded for registration at the Court of Accounts, where it will be used as reference material for operational auditing.</p>
ANATEL	<p>– The Agency has the competence to implement, within its sphere of attributions, the nation's telecommunications policy, issue rules on the licensing, provision and usage of telecommunications services under the public regime, with prior public consultation for proposals to be submitted to the President.</p>	<p>– Deliberative board sessions for settling disputes between economic agents, or between the latter and consumers and users of telecommunications goods and services, will be held in public; sessions may be electronically recorded and interested parties have the right to obtain transcriptions.</p>
ANP	<p>– Initiatives concerning draft legislation or alterations of administrative rules that may affect economic agents' rights or those of consumers and users of oil industry goods and services will be preceded by a public hearing summoned and directed by ANP.</p>	<p>– Deliberative sessions of the ANP board held for the purpose of settling disputes between economic agents and between the latter and consumers and users of oil industry goods and services will be held in public.</p>

	<ul style="list-style-type: none"> <li>– The internal regulation of ANP will rule on the procedures to be adopted to settle conflicts between economic agents and between the latter and users or consumers, with the emphasis on conciliation and arbitration.</li> </ul>	
ANTT	<ul style="list-style-type: none"> <li>– Draft legislation initiatives, alterations of administrative rules and the board's decisions when settling disputes that affect the rights of economic agents or users of transport services will be preceded by a public hearing.</li> <li>– Any interested party is entitled to submit petition or appeal against actions of the agency, within 30 days of their becoming official.</li> </ul>	<ul style="list-style-type: none"> <li>– Decisions taken by the agency's board will be recorded in publicly available minutes together with relevant documents whenever publicity does not endanger the security of the Country or violate confidentiality.</li> </ul>
ANTAQ	<ul style="list-style-type: none"> <li>– Draft legislation initiatives, alterations of administrative rules and the board's decisions when settling disputes that affect the rights of economic agents or users of transport services will be preceded by a public hearing.</li> <li>– Any interested party will be entitled to submit a petition or appeal actions of the agency within 30 days of their becoming official.</li> </ul>	<ul style="list-style-type: none"> <li>– Decisions taken by the agency's board will be recorded in publicly available minutes together with relevant documents whenever publicity does not endanger the security of the Country or violate confidentiality.</li> </ul>

relation to the direct administration. Thus, the agency which is financially dependent upon the State is attributed the value 0, while the independent agency obtains the value 1.

The nomination process (NP) attribute differentiates between individual and collective decision making. The latter received a higher value (1), while the former received a lower value (0).

The fourth attribute is the leader's technical specialization (TS). In this case, the higher value is obtained for leaders with reputation and knowledge in the field. Domah, Pollitt and Stern (2002) stress the importance of the requirement for professionally trained staff in regulation in order to decrease the corruption level in developing countries.

Stability in the position means that the regulators are protected from political and other pressures. The leader stability (LS) evaluates the existence of a fixed mandate, its duration and the degree of freedom of the Executive to fire the regulator. The higher value is obtained with the presence of this characteristic.

**Chart 15: Quarantine arrangements for the agencies**

Agency Regulatory	Quarantine
ANEEL	12 months before direct or indirectly providing services to companies under regulation of or overseen by the agency, including controlled companies, affiliates or subsidiaries, under penalty of conducting administrative advocacy. During the impediment period, a former-director may continue to provide services to ANEEL or any other organ of the direct public federal administration with remuneration equivalent to that of the position previously held.
ANATEL	For 1 year after leaving a position, a former-board member may not represent any person or interest before the agency.
ANP	12 months before providing services to a company in the oil industry or distribution under penalty of committing administrative advocacy. – During impediment, any former-director not dismissed under the terms of Article 12 may continue to provide services to ANP or to any body of the Direct Administration, for remuneration equivalent to that of the director's position held.
ANTT	– For 1 year after leaving the position a former-director may not represent any person or interest before the agency.
ANTAQ	For 1 year after leaving the position a former- director may not represent any person or interest before the agency

The possibility of interference on the part of the direct administration in the procedures of the agency is evaluated by the PI attribute. In this case, the existence of an intermediary level is observed between the higher and lower value.

**Chart 16: Regulatory Agencies Rank**

Agency	DP	BA	NP	TS	LS	PI	EC	Score
ANATEL	collective	yes	centralized	yes	yes	uncertain	high	5,5
	1	1	0	1	1	0,5	1	
ANEEL	collective	yes	centralized	yes	yes	uncertain	high	5
	0,5	1	0	1	1	0,5	1	
ANP	collective	yes	centralized	yes	yes	yes	high	5
	1	1	0	1	1	0	1	
ANTAQ	collective	yes	centralized	yes	yes	yes	medium	4,5
	1	1	0	1	1	0	0,5	
ANTT	collective	yes	centralized	yes	yes	yes	medium	4,5
	1	1	0	1	1	0	0,5	

Finally, the enforcement capability (EC) evaluates the sanctions instruments to guarantee the execution of the law. In this case, the same values were given. The value of 1 is obtained for regulatory agencies with high punishment capacity. Chart 16 shows a rank of infrastructure regulatory agencies.

**Chart 17: Data Series (1995–2003)**

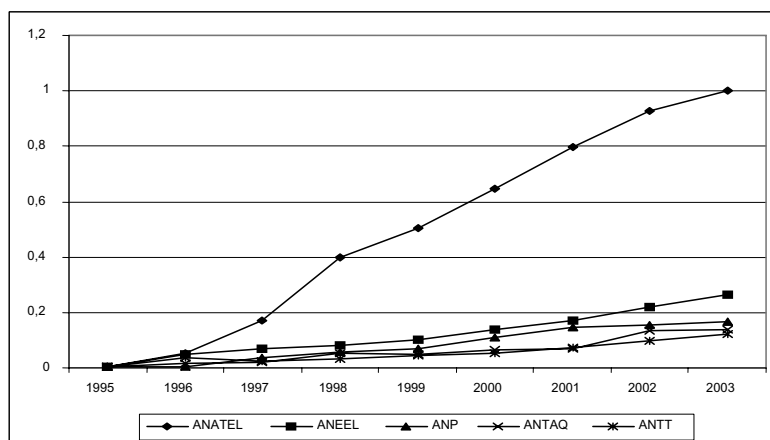
Agency	Price	Investment
ANATEL	Phone Price Index**	Phone Lines Availability
ANP	Fuel Price Index*	Brazil Oil Production
ANEEL	Residential Electric Tariff	Installed Capacity
ANTT	Transport Price Index**	Investment
ANTAQ	Port Tariff	Load Volume

\* IGP-DI (Getúlio Vargas Foundation) \*\* IPCA (Statistic and Geographl Brazilian Institute)

## 5.2. Effectiveness index estimation

The methodology to estimate the effectiveness index (EI) of the infrastructure of regulatory agencies follows a similar methodology to that developed by the United Nations to create the Human Development Index (HDI). The main difference consists of the utilization of the “Main Component Method” (MCM) for the estimation of the parameter weights.

**Chart 18 indicates the annual EI estimation for the five agencies.**



**Chart 18: Effectiveness Index (1995–2003)**

In general, investment data are considered strategic by firms and, therefore, subject to restricted access. The adopted procedure chose a group of proxy variables that allow inferring the behaviour of investment over time. Chart 17 indicates the series used in the EI estimation:

Three aspects of the results shown in Chart 18 are noteworthy. First, the significantly higher level of EI for the telecommunications sector. Second, the increasing EI for all sectors. Lastly, the identical ranking between EI and II previously calculated for the regulatory agencies. The appendix contains the EI values obtained for each agency.

**6. Conclusion**

The results of the last section suggest a positive relationship between the level of independence of the Brazilian regulatory agencies and the performance of their respective regulated sectors as measured by the effectiveness index.

We think this result is not a coincidence. As stated in the introduction, the effectiveness index is the result of the regulators' action and reflects the success in promoting a more competitive environment. This in turn will lead to greater competitiveness.

This suggests that the reform of the Brazilian regulatory system, which is presently under discussion in Congress, should strengthen the mechanisms for independence of the regulatory agencies.<sup>16</sup>

A natural extension of this work will be to verify whether the result obtained for Brazil holds for a large sample of countries and sectors at different points in time.

**Appendix**

Index numbers used for the calculation of the effectiveness index

<b>Agency</b>	<b>Year</b>	<b>Price Index</b>	<b>Investment Index</b>	<b>EI Index</b>
ANATEL	1995	0,0119	0,0000	<b>0,0061</b>
ANATEL	1996	0,0606	0,0474	<b>0,0554</b>
ANATEL	1997	0,2279	0,1099	<b>0,1733</b>
ANATEL	1998	0,5945	0,1996	<b>0,4074</b>
ANATEL	1999	0,6100	0,3952	<b>0,5157</b>
ANATEL	2000	0,6978	0,5970	<b>0,6642</b>
ANATEL	2001	0,8011	0,7914	<b>0,8170</b>
ANATEL	2002	0,8768	0,9816	<b>0,9533</b>
ANATEL	2003	1,0000	1,0000	<b>1,0260</b>
ANEEL	1995	0,0119	0,0000	<b>0,0061</b>
ANEEL	1996	0,0888	0,0118	<b>0,0516</b>
ANEEL	1997	0,1222	0,0163	<b>0,0710</b>
ANEEL	1998	0,1383	0,0254	<b>0,0840</b>
ANEEL	1999	0,1706	0,0368	<b>0,1064</b>
ANEEL	2000	0,2211	0,0544	<b>0,1413</b>
ANEEL	2001	0,2740	0,0648	<b>0,1738</b>
ANEEL	2002	0,3499	0,0868	<b>0,2240</b>
ANEEL	2003	0,4247	0,1026	<b>0,2705</b>
ANP	1995	0,0119	0,0000	<b>0,0061</b>
ANP	1996	0,0000	0,0088	<b>0,0045</b>
ANP	1997	0,0433	0,0272	<b>0,0362</b>
ANP	1998	0,0448	0,0684	<b>0,0581</b>
ANP	1999	0,0272	0,1074	<b>0,0690</b>
ANP	2000	0,0691	0,1498	<b>0,1123</b>
ANP	2001	0,1227	0,1697	<b>0,1500</b>
ANP	2002	0,0927	0,2197	<b>0,1603</b>
ANP	2003	0,0912	0,2414	<b>0,1706</b>
ANTAQ	1995	0,0119	0,0000	<b>0,0061</b>
ANTAQ	1996	0,0263	0,0082	<b>0,0177</b>
ANTAQ	1997	0,0316	0,0104	<b>0,0215</b>
ANTAQ	1998	0,0741	0,0276	<b>0,0522</b>
ANTAQ	1999	0,0741	0,0232	<b>0,0499</b>
ANTAQ	2000	0,0741	0,0526	<b>0,0650</b>
ANTAQ	2001	0,0741	0,0655	<b>0,0716</b>
ANTAQ	2002	0,1864	0,0792	<b>0,1363</b>
ANTAQ	2003	0,1864	0,0925	<b>0,1431</b>
ANTT	1995	0,0119	0,0000	<b>0,0061</b>
ANTT	1996	0,0294	0,0463	<b>0,0388</b>
ANTT	1997	0,0474	0,0001	<b>0,0244</b>
ANTT	1998	0,0660	0,0018	<b>0,0348</b>
ANTT	1999	0,0818	0,0099	<b>0,0471</b>
ANTT	2000	0,0921	0,0096	<b>0,0522</b>
ANTT	2001	0,1349	0,0155	<b>0,0772</b>
ANTT	2002	0,1783	0,0137	<b>0,0985</b>
ANTT	2003	0,2345	0,0130	<b>0,1270</b>

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## Notes

- <sup>1</sup> We excluded a few institutions such as ANCINE in the movie industry because they do not fit the typical pattern for a regulatory agency.
- <sup>2</sup> “Own funds” are not necessarily those raised from fees charged to supervised companies, but may be revenues that do not depend directly on a higher administrative body.
- <sup>3</sup> The existence of fixed-term mandates, for a reasonable period of delegation (at least as long as the presidential mandate) and where removal may take place only in situations stipulated by law, enables agencies to ensure continuity of policies in relation to alterations in the political environment.
- <sup>4</sup> The work of the regulatory agencies is disciplined by the legislation; it was the complexity of the subjects involved that prompted the Legislative Power to delegate the power to regulate certain sectors of economic activity to specialized bodies. Congress has the competence to alter the legislation and thus of disciplining the work of regulatory agencies. One criticism heard in the current debate refers to the fact that the actions of the regulatory agencies are not being appraised by the Legislative Power. In this sense, the agencies may in fact be occupying functions that should be assumed by elected representatives.
- <sup>5</sup> Trade liberalization, reflected in the reduction of basic import taxes from 33.4 per cent in 1990 to 13.9 per cent in 1998, exposed domestic companies to foreign products, thus curbing price increases despite growing demand, and leading to the restructuring of certain



sectors of the Brazilian economy.

- <sup>6</sup> The monthly index was taken for June; base 100 was the monthly average for 1991.
- <sup>7</sup> According to Baumann (1996), one result of capital account liberalization was that inflows of foreign portfolio investments rose from US\$ 800 million in 1992 to US\$ 7 billion in 1993. Published April 12, 1990.
- <sup>8</sup> Such as the Central Bank (BACEN), created by Law No. 4595, of 31 December 1964, or the Superintendence of Private Insurance (SUSEP), created by Law No. 73, of 21 November 1966, or the Securities and Exchange Commission (CVM), created by Law No. 6385 of 7 December 1976.
- <sup>9</sup> This point is raised by Gheventer (2003: 180–189) on the basis of observing a correlation between autonomy and economic liberalization.
- <sup>10</sup> For a more detailed discussion of this point, see Pires and Piccinini (1999) for instance.
- <sup>11</sup> The characterization used in this section is based on the work of Pires and Piccinini (1999).
- <sup>12</sup> The first Brazilian legal enactment to introduce this quasi-independent government agency status was Law No. 6016 (November 22, 1943). Nevertheless, the Federal Savings Bank, which was constituted in 1861, is seen by many as Brazil's first quasi-independent agency (*autarquia*).
- <sup>13</sup> Budget provided by Budgetary Law – 2003.
- <sup>14</sup> Budget provided by Budgetary Bill – 2004.
- <sup>15</sup> A complete analysis of the proposal sent to Congress by the Executive would transcend the scope of this paper. But a short technical note about the subject is enclosed.
- <sup>16</sup>

## II.2. COMPETITION POLICIES, MARKETS COMPETITIVENESS AND BUSINESS EFFICIENCY: LESSONS FROM THE BEER SECTOR IN LATIN AMERICA

*Alfredo Bullard*

### 1. Introduction

The purpose of this paper is to shed some light on the possible relationship between the different approaches to competition policy in a number of Latin American countries in connection with developments within a specific industry, namely the beer industry. This study purports to evaluate what would be the best policy to be adopted based on the characteristics of the industry in Latin America.

Latin America presents a range of situations that vary from countries with no competition legislation<sup>1</sup> to countries whose legislation includes not only anti-competitive behavioural control<sup>2</sup> but also market structure control (mergers and acquisitions control). In addition, there is Peru, whose legislation contains behavioural but no structural control. Table 1 shows the different competition policy options adopted in a selected number of Latin American countries (see Table 1).

As we can see, Guatemala, Ecuador and Bolivia are countries that have no competition legislation at all, Peru has competition legislation focused only on behavioural controls, while the legislation of Argentina, Brazil and Mexico includes both behavioural and structural controls.

Are these different approaches to competition policy related to the concentrations of the industry within these countries? And even if we find such a relationship, will it be due to the competition legislation in each country, or will it simply be the result of regional trends arising from market forces? In the case of the beer industry, the latter seems to be the answer, as we will see below.

Little can be done from the point of view of structural controls in small, fragmented markets such as those found in many Latin American countries that are allied to the regional trends of the industries, and where structural controls may even prevent the efficiencies that some concentrations would bring to the markets. In this case, we may argue that a competition policy without structural (merger) controls would allow concentrations to bring efficiencies to particular markets, provided that we enforce a vigorous antitrust behavioural policy oriented to facilitate access for new entrants to these markets.

The conclusions of this report are subject to several limitations. The first, and probably the most obvious, is that it is difficult to draw conclusions for the overall economy on the basis of the analysis of only one industry. Although the beer industry has some interesting characteristics, it cannot be considered as a representative market from which to make general policy recommendations.

The second limitation concerns the availability of information. Unfortunately, in Latin America, it is not easy to find sufficient reliable information that may allow the preparation of a detailed and complete study. Sometimes, the prices or production figures are not available or, if so, the information is unofficial. Nevertheless, examining the evolution of regional markets can provide important information to be considered as guidance for policy implementation.

Therefore, this study must be considered as a preliminary comparison of the status of the beer industry in seven countries (Peru, Argentina, Venezuela, Panama, Bolivia, Ecuador and Guatemala) that have different competition laws and policies. The comparison allows the tracking of the industry's evolution and, interestingly, a view on the transformation of a fragmented market in various countries into a regional market in which the players start moving in another dimension. In this sense, the most important information might be that gleaned from the history of each of the analysed markets and that relates to the competitiveness of its companies.

As will be seen later, there is no clear evidence showing that the different approaches to competition legislation have had clearly different impacts on the form and structure of the investment. However, as already mentioned, these conclusions are only preliminary due to the lack of adequate information.

Without prejudice to the above mentioned, and although the analysis of the beer market cannot be used to make generalizations across all economies, we have selected this market for the following reasons:

1. It is a market that has been shown to be particularly dynamic in the last decade, with continuous changes in company ownerships, newcomers entering the different national markets and others exiting, structural changes through mergers and acquisitions, strategic alliances, etc.
2. These changes are occurring in countries that show very different approaches to competition policies. In some countries, there is no competition policy, in others, there is competition legislation without merger control and, in others, there is control of concentrations in competition law.
3. Thus, virtually all Latin American competition authorities have encountered one or more cases related to the beer industry.
4. Finally, there exist some general data that, although incomplete, allow us to arrive at some interesting conclusions.

## **2. Analytical background: distinguishing between competition policies that may enhance industry and those that may hinder competitiveness and efficiency**

The beer industry has been subjected to radical structural changes worldwide. Until the end of the past decade, in many Latin American countries, the sector had more than one manufacturer; however, since 1994, the trend toward horizontal concentrations has increased. This phenomenon has given rise to several changes with re-

spect to the type of regulation and the application of competition policies. Discussion has focused on the effect of these concentrations transcending national spheres, as well as on the behaviour of the market players and the role performed by the regulators in this context. On this last point, and due to the lack of competition law in some countries, it is worthwhile to weigh up whether to opt for a behavioural or a structure control approach.

It is important to analyse the relationships that exist between competition policies, market competitiveness and business efficiency. Although competition policies and competitiveness are closely related they are not the same thing. The existence of competition policies does not guarantee competitiveness, which depends on several other factors, such as business supply capacity, appropriate infrastructure, the existence of a level of transaction costs in the economy, the effects of taxation systems, etc.

It must be admitted, however, that properly designed and implemented competition rules can create an atmosphere conducive to greater competitiveness. Just as when one football team is encouraged to play against a much better one, and its ability to compete improves, the elimination of cartels puts companies under such competitive pressure that it encourages them to become either more competitive or to exit the market, leaving room for new entrants. The same may happen with the elimination of anti-competitive practices, which delay the entry of new companies into the market and leave the few existing players with poor incentives to improve their competitiveness. The development of legal monopolies weakens the ability of companies to compete efficiently against new entrants into the domestic market, or to becoming competitive at an international level.

On the other hand, some competition policies might discourage competitiveness. For example, a competition policy preventing companies from achieving economies of scale could reduce competitiveness; the same could happen where innovation or new investment might be discouraged if the competition authority rejects the pooling of R&D resources. The application of such policies without clear guidance might discourage investment or innovation thereby affecting industry competitiveness

Although high levels of monopoly may have negative consequences for consumers, its prohibition without a clear approach may also affect them. The competitive process is nurtured by the aspiration of every entrepreneur to increase his/her market share. Their efforts to reduce costs and prices, as well as to improve quality and service, are precisely oriented to increase their firms' market shares. It is because companies desire to become the largest that they can compete and give optimal service.

If a company invests so as to improve its production by producing better quality, cheaper and safer products for consumers with the purpose of pushing out its competitors and then is deprived of its right to grow, it will stop investing. Thus, consumers will be deprived of the benefits of such investment.

Irving Kaufman, the famous North American judge who resolved the *United States v. Alcoa*<sup>3</sup> case used to say: "...the successful competitor, having been urged to compete, must not be frowned upon when he wins".

Similarly, Viscusi, Vernon and Harrington (1997: 266) noted that the intentional acquisition of market power by using undue strategies must be treated differently from those cases in which market power is achieved by internal growth or development arising from entrepreneurial effort, product superiority or by a simple historical accident.

When commenting on North American legislation, these same authors note: "given the existence of monopoly power, the second part of the rule of reason test is to determine whether the monopoly was acquired and/or maintained by practices that cannot qualify as superior efficiency or historical accident. That is, a monopoly over widgets because of superior efficiency in producing widgets is not in violation of the Sherman Act" (Viscusi, Vernon and Harrington 1997: 266).

It is important not to lose sight of the invisible impact of prohibiting monopoly. Usually, we only look at the consequences of such a monopoly when the incumbent takes advantage of it by increasing prices and limiting consumer options, but we do not see how much society would lose if competition incentives were reduced by means of growth penalization or business reorganization.

If market concentration responds to consumer preferences, then such a concentration is legitimate. This does not mean that only internal growth is justified. It could come from other channels, such as a mergers and acquisitions. Under this hypothesis, although the initial concentration may be the consequence of a business action, if it generates efficiencies from which the consumers benefit and if no entry barriers exist, consumer preference for the products and services of the new monopoly is a signal of approval that the legal systems must respect. It also must be added that there are no clear incentives for companies to merge, if such a merger is not going to generate efficiencies that may reduce costs and improve the functioning of the productive process. If the merger is not efficient it will increase production costs and affect not only consumers but also the company itself.

Bork (1993) comments in respect of internal growth efficiencies and corporate mergers as follows: "...both internal growth and horizontal merger eliminate rivalry, and they do so more permanently than do cartel agreements. Prices are fixed and markets allocated within firms. The reason we do not make these eliminations of rivalry illegal per se is that they involve integration of productive activities and therefore have the capacity to create efficiency. Contract integrations (including those integrations involving price-fixing and market-division agreements) are also capable of producing efficiency. The law of contract integration and of ownership integration should, therefore, be made symmetrical. There is no justification for suspending the per se rule in one area and not the other" (Bork, 1993: 264).

Similarly, Ross (1993) when commenting on the works<sup>4</sup> of Ronald Coase and Oliver Williamson<sup>5</sup> says: "Thus, the implications of the "theory of the firm" is that antitrust law should not be sceptical of mergers, joint ventures, or contract agreements among firms, and should be wary of interfering with these ways of efficiently doing business." (Ross 1993: 4).

Therefore, the capability to achieve consumer preferences must not be penalized, except for those practices that may distort such preferences or obtain results that may conflict with such preferences. This is the role of competition policies, if we do not want to see competitiveness affected.

And the truth is that monopoly cannot be questioned in itself, as it was established in the European common system when resolving the famous Michelin case: "To state that a company has a dominant position is not a reproach in itself, it only means that regardless of the reasons that has placed it in a dominant position, the concerned company has a special responsibility for not permitting that its conduct may prevent the Common Market from a genuine and not distorted competition".<sup>6</sup>

Therefore, we should suggest a more cautious analysis, with a special emphasis on behavioural controls with respect to merger control rules for developing countries.

It is pertinent to differentiate from the beginning between the concepts of competition law and those of competition policy, the latter being a wider concept referring to all those government measures that influence the intensity of competition in local markets or affect the freedom of economic enterprises to trade.<sup>7</sup>

Having in mind this concept of competition policy, it is worth questioning which role the growing competition law should accomplish within this context. As already seen, the growing wave of transnational mergers and acquisitions has aroused a new interest in analysing the necessity to promote competition laws in developing or emerging economies, considering the effects that concentrations of international scope might have not only in the countries' domestic markets but also at a regional level.

Hence, it is convenient to define the different options likely to be adopted by the governments within the framework of their competition policies. A first political option could be to give priority to market deregulation and to fight against existing access barriers (bureaucratic and logistic), and to leave the solution of dominant position and unfair competition problems to the private sector through the judiciary (no behavioural or structural controls).

A second government policy option, which would involve greater State participation, is the creation of a competition agency to intervene *ex post* in the control of specific anti-competitive behaviour by sanctioning such practices and abuses of dominant position in the market.

A more interventionist third option would consider, in addition to the behavioural control, a structural control framework with the purpose of granting authorizations *ex*

ante to mergers and acquisitions which may affect the competitiveness and efficiency of domestic markets.

There is also the possibility of creating specific regulations for certain sectors characterized as natural monopolies or network industries. This is a fourth option that could run parallel to those previously mentioned. Finally, there is a fifth option that goes beyond national boundaries which seeks to establish at a sub-regional level the same kinds of controls as already mentioned (CAN, MERCOSUR, etc.).

A local market could be efficient and competitive if it has few access barriers and high substitutability on the supply and demand sides, in case of price increases. However, some markets may face greater access barriers, because the specific industry requires large investments in production and/or distribution, due to lack of an adequate infrastructure or due to market characteristics, as in the case of network industries.

Let us now analyse the beer industry and become familiar with the access barriers existing in the countries under analysis, thus allowing us to see how this market is similar to a network industry, where the control of an appropriate distribution channel may determine the success of a penetration strategy performed by potential competitors.

### **3. Production and commercialization of beer**

At this point, we will describe how the beer industry is structured, and later we will list the characteristics of this market in each of the countries under analysis.

#### **3.1. The product**

Beer has a short consumption period that forces brewers to:

- make large investments in the infrastructure necessary for its conservation in storehouses and for its transport;
- carry out strong advertisement campaigns that promote the consumption of the product and
- develop a distribution network that reaches distant locations quickly.

Therefore, the short consumption period of beer represents a market access barrier for new competitors. The time and the investment needed for entry is considerable; thus, when beginning the production process, the new enterprise must sell the product within the following 6 months, causing the initial investment to become a sunk cost. Also, due to the short consumption period, beer is a product that requires a marketing strategy and its constant distribution to ensure loyalty to the specific brand.

A network of intensive distribution is necessary to place the beer in the majority of localities where consumers exist. This is another access barrier because the distribution network can be limited due to existing vertical agreements between competitors and their distributors, who will not easily accept a new entrant.

### **3.2. Industry structure**

As we have seen, beer is a massive consumption product that demands a presence in a large variety of sale points. In this sense, the distribution of beer requires a specific infrastructure, such as a large fleet of trucks, strategically placed distribution centres and adequate logistic planning of shifts and routes. On the other hand, the efficiency of the distribution chain depends on whether effective commercialization means are available, its ability to support large volumes of beer and its geographical reach, which thus demonstrates the importance of the traditional distribution channel.

The inability to access a distribution chain already controlled by one or more incumbent enterprise represents an entry barrier. In this case, the need for the distribution chain and the production of beer to complement each other makes access to the chain, when dealing with the only form of commercialization,<sup>8</sup> absolutely necessary. The lack of access to a distribution network can occur in two forms: when vertical integration exists, where access to the network is impeded because of the absolute control by the enterprise that currently uses the network, or, when vertical relationships between the distribution agents exist, where access may be denied establishing determined conditions in each contract relationship, which is the case in exclusivity conditions of zones and brands.

Finally, depending on the distribution channels mentioned previously, the retail outlets include "open bottle" localities, supermarkets, gas stations and other modern stores, in addition to liquor shops and bars, as well as small neighbourhood shops located nationwide, which are termed traditional channels. These small shops are difficult to reach, increasing the investments in distribution.

## **4. The beer market in Latin America**

### **4.1. Characterization of Latin American markets**

Latin America<sup>9</sup> is the world's fourth largest beer producer (211 million hectolitres annually). It is widely surpassed by the production in Europe (478 million hectolitres) and other countries of the Americas (260 millions hectolitres mainly due to the United States and Canada with 232 and 23 millions of hectolitres, respectively). In Latin America, Brazil and Mexico are the largest beer-producing countries, with annual outputs of 83 and 58 million hectolitres, respectively, followed by Venezuela (19 million hectolitres), Colombia (14 million hectolitres), Argentina (12 million hectolitres) and Peru (6 million hectolitres).

Although certain differences exist in the beer markets that are related not only to demand but also to production level, nevertheless, they do have some similar characteristics.

1. Access barriers: The differentiation of products generates an important barrier to the entry of new players, as their penetration into the market would be difficult if



they are not aware of consumers' preferences. There are also barriers imposed by consumers who identify with specific trademarks, such as Corona in Mexico, Brahma in Brazil, Quilmes in Argentina and Cristal in Peru, that are very well positioned in their respective markets.

On the other hand, Latin American beer companies have had a tendency towards upward and downward vertical integration, concentrating not only on supplier companies (i.e. bottle or can suppliers) but also on distribution systems (i.e. wholesalers). This significantly reduces the capability of new entrants to penetrate the market, thus narrowing the supply and distribution channels.

In addition, the cost of moving from other beverage industries to beer and vice versa is very expensive, given the high capital requirements that are incurred in the installation and starting up of beer companies. As a result, the incumbent companies use the presence of economies of scale to the detriment of potential competitors (Carrillo and Kocnim, 1993: 35).<sup>10</sup>

2. Exit barriers: The beer industry is highly specialized and this constitutes not only a problem for the potential entrant but also a significant exit barrier for the companies already positioned in the market. In addition, the strategic interrelations existing in this industry make it difficult for companies to withdraw from it.<sup>11</sup>

3. There are large beer companies at regional level that have positioned their products in their respective local markets and have succeeded in expanding their presence in Latin America, for example the Bavaria Group in Colombia, the AmBev Group in Brazil and the Modelo Group in Mexico. Broadly, there are eight main beer producers in the region holding approximately an 85 per cent market share of the Latin American market. This is an important characteristic of the industry, because market rivalry depends on a small number of competitors with great economic power. Therefore, although one can see barriers to entering a national market, there are important players with resources and "broad-shoulders" at regional level ready to undertake entry into national markets.

Below, we will analyse a group of countries, Argentina, Bolivia, Peru, Ecuador, Venezuela, Panama and Guatemala, to characterize the markets at the Latin American level. Table 3 shows the typical concentration levels of the industry in the region. We will briefly describe the market status and its relevant characteristics in each country, noting the similarities and differences.

#### **4.1.1. Argentina**

Argentina's per capita beer consumption is seventh in all of Latin America. The main players in the Argentine beer industry are the AmBev/Quinsa Group which has an 84 per cent market share and its main brands are Quilmes Cristal, Heineken, Imperial, Iguana, Quilmes Light, Bierckert, Andes, Norte, Liberty, Quilmes, Bock, Palermo, Brahma Chopp and Brahma Bock.

Next, there is the CCU Group (Compañía Cervecerías Unidas) with a 13 per cent interest, and whose trademarks are Budweiser, Schneider, Santa Fe, Rosario, Córdoba, Río Segundo and Salta, and finally the Isenbeck Group with a 3 per cent interest with the Isenbeck (5.6 per cent), Warsteiner and La Diosa brands.

Argentina's most representative sales unit is the returnable 1-litre bottle. In 2001, the Quilmes Cristal trademark was in the premier sales position (46.1 per cent), followed by Brahma Chopp (14 per cent), Palermo (5.8 per cent) and Andes (5.1 per cent). Argentina's beer imports have been decreasing over the last 10 years, with an import volume in 2002 of only 1.7 per cent approximately of the apparent consumption measured per volume.<sup>12</sup>

Thirty per cent of Argentine sales are in the opened bottle sector, while the closed bottle channel accounts for 70 per cent. Within the closed bottle channel, which is the main channel, most of the sales are through traditional retail units (54 per cent), followed by self-service stores (20 per cent), hyper and supermarkets (15 per cent) and finally kiosks and mini-markets (11 per cent). Beer transportation is practically all done by trucks, and the freights per box represent 20 per cent over output price.<sup>13</sup>

#### *Evolution in recent years*

The entry of international companies into Argentina's market during the 1990s (Isenbeck, AmBev and CCU Groups) gave rise to two sales groups: high-profile trademarks (comprising the leader companies' premier trademarks, such as Quilmes, Brahma, Isenbeck, Budweiser and Heineken) and low-profile trademarks (comprising the leader companies' less prestigious trademarks, such as Bieckert, Palermo, Schneider, Diosa and all the regional trademarks, as well).

Over the last number of years, it was observed that Argentina's regional and national trademarks were absorbed by leader companies, which extended their trademarks portfolio and maintained their traditional beers by using niche or segment strategies or as secondary trademarks, with the purpose of not diminishing first class trademarks in price wars. This happened in the case of CCU with Schneider, Santa Fe, Salta, Córdoba and Río Segundo trademarks and in the case of CMQ (Quilmes before being acquired by AmBev) with the Bieckert, Palermo, Norte and Andes trademarks.<sup>14</sup>

In 2002, AmBev obtained authorization to acquire abroad 230.92 million shares which represented 36.05 per cent of the voting shares and 37.5 per cent of the value of Quilmes Industrial Société Anonyme, a company that controlled Cervecería y Maltería Quilmes. However, the authorities subordinated the transaction to comply with a series of disinvestments and commitments established for the purpose of ensuring competitive conditions.

According to the transaction terms, Quilmes' shareholders could choose to convert their securities into shares in AmBev once a year over a 7-year period, in such a manner that if all shareholders opted for the change, AmBev might assume the com-

pany's majority control, and would be able to demand total merger in 2009. Likewise, under this transaction AmBev agreed to distribute Quilmes' products in Brazil.

#### **4.1.2. Bolivia**

Bolivia is one of the countries with lower beer consumption per capita in the region. Among its most representative trademarks are Paceña, Ducal and Taquiña. It is mostly presented in a 620-ml glass bottle. The group formed by Cervecería Quilmes and AmBev controls 98 per cent of the Bolivian market. Recently, the Quilmes Group from Argentina purchased the shareholding of Cervecería Boliviana Nacional from Santa Cruz, Cervecería Boliviana Nacional of La Paz and Taquiña from Cochabamba. In May 2002, AmBev acquired an interest in this group through its strategic association with Quilmes.

#### **4.1.3. Peru**

In Peru, the per capita consumption of beer is low, apart from in Lima, where 59 per cent of the population consumes beer and it is the third most popular product for personal consumption.<sup>15</sup>

The Backus Corporation is the country's only beer group, controlling more than 99 per cent of the national market through three manufacturing companies: Unión de Cervecerías Peruanas Backus y Johnston S.A.A. (83 per cent), Cervesur (15.2 per cent) and San Juan (1.8 per cent). The leading trademarks are Cristal (56.5 per cent), Pilsen Callao (20.4 per cent) and Cusqueña (9.1 per cent). The remaining 1 per cent of the market is supplied by imported beers such as Heineken, Holsten, Dressler and Corona.<sup>16</sup>

Beer is mostly sold in returnable 620-ml glass bottles, followed by boxes of 1.1-litre bottles (12 bottles per box). At this point, it is worth mentioning that the main difference between the popularly consumed beers and the imported varieties is their packaging and presentation, as the imported beers are distributed in cans or small glass bottles (330 ml) whose participation in the channels of distribution of typical closed bottles is virtually zero.

Chart 1 shows the most popular beer brands by socio-economic class. What emerges from the chart is that Cristal is the most popular (71 per cent), followed by Pilsen Callao (16 per cent). This difference is due to the fact that socio-economic classes B, C, D and E prefer Cristal while the highest class (A) prefers Pilsen Callao and Cusqueña (see Chart 1).

With respect to places of purchase, grocery stores are the most popular (74 per cent), followed by supermarkets (11 per cent). As Chart 2 shows, grocery stores or corner shops are the most commonly used by socio-economic classes B, C, D and E, while supermarkets tend to be used by class A. Therefore, Peru's main retail points are grocery stores or corner shops (see Chart 2).

In Peru, beer is distributed through direct or indirect distribution channels. The direct channel is via the Backus sales force, with 29 distribution plants that operate 63 per cent of the entire distribution chain; indirect distribution is through contracts with wholesalers under specific terms. This channel comprises 800 wholesalers, i.e. 37 per cent of the entire distribution channel. This means that the industry is integrated vertically downstream and controls production distribution directly. This trend has been maintained during the last number of years, since the number of intermediary distributors has been decreasing.<sup>17</sup>

#### *Evolution in recent years*

The Backus Corporation (Cervecería Backus y Johnston S.A), started its acquisition process in 1994 with the purchase of 62 per cent of the common shares of Compañía Nacional de Cerveza SA, which gave it controlling power over Sociedad Cervecera de Trujillo S.A, as well as of the remaining 50 per cent of Maltería Lima S.A capital stock. In 1996, Cervecería Backus y Johnston S.A. merged with several companies (Compañía Nacional de Cerveza S.A, Cervecería del Norte S.A and Sociedad Cervecera de Trujillo S.A.) to create the Unión de Cervecerías Peruanas Backus y Johnston S.A.A, which obtained an 80 per cent share of the local beer market.

In 2000, Backus launched a takeover bid (OPA) for the acquisition of the common shares of its competitor, Compañía Cervecera del Sur del Perú S.A.A. ("Cervesur"), acquiring 97.85 per cent of the aforementioned company's capital. This transaction is said to have occurred because Cervesur required a capital injection in the production and distribution of its products.<sup>18</sup>

In 2001, the Chilean brewing company UCC sold its 6.71 per cent Backus interest. This transaction implied the transfer of 5,391,424 Series "A" Common Shares. Afterwards, Lince Netherlands B.V., part of the Polar Group of Venezuela, purchased Backus' 10,684,831 Series "A" shares, increasing its shareholding by 18.34 per cent.

After a controversial purchasing deal on the stock exchange, the Colombian Bavaria Group is now in control of Backus with 74.38 per cent voting shares and 38 per cent investment shares. The Venezuelan Cisneros Group has 22.3 per cent and the Peruvian Bentin Group 18 per cent, and smaller Peruvian shareholders hold the remaining shares.<sup>19</sup>

In March 2003, AmBev announced that it would be opening a new brewery in Peru.<sup>20</sup>

At present, the incumbent (Backus) and the new entrant (AmBev) are involved in many legal procedures before the competition, trademark and judicial authorities. These processes are related to the interchangeability of bottles, and vertical restraints on the distribution channels.

#### **4.1.4. Ecuador**

Ecuador also has a lower per capita level of beer consumption. Ecuador's main trademarks are Pilsner, Club, Dorada and Biela. The 578-ml glass bottle is the most popular size. In 2002, the Bavaria Group purchased Cervezas Nacionales de Ecuador, giving it 85 per cent of the market. However, at the end of 2003, AmBev also entered Ecuador's market through the acquisition of Cerveceria Suramericana giving it 13 per cent of the market.

At present, the incumbent company and the new entrant are involved in a legal wrangle before the trademark authority. Cervezas Nacionales has claimed ownership over the design of the bottles of beer, and is demanding that AmBev does not use similar bottles in the production and distribution of its products.

#### **4.1.5. Venezuela**

Venezuela's beer industry is one of Latin America's main markets due its high per capita consumption level. The main player in the Venezuelan market is C.A. Cerveceria Polar, present since 1941, which holds 70 per cent of the market. Second, is Cerveceria Regional, incorporated in 1927, holding 20 per cent of the market. This Company maintains a strategic association with the transnational Interbrew since 1977, with whom it developed new packaging of its trademark, Regional Light. The third company is C.A. Cerveceria Nacional, which entered the Venezuelan market in 1995 and is associated with the Brahma trademark since 1994. C.A. Cerveceria Nacional controls 10 per cent of the Venezuelan beer market.

Most of Venezuela's beer is sold in returnable glass bottles (77 per cent during 2002), followed by cans (15 per cent), non-returnable bottles (8 per cent) and barrels.<sup>21</sup> However, it is important to note that the current trend is mainly for cans and non-returnable bottles. On the other hand, the companies fix routes for exclusive distribution to their wholesalers, as well as a maximum price for them to sell their products to retailers (such as C.A. Cerveceria Polar).

#### **4.1.6. Panama**

Panama is one of the countries with greater relevance in per capita beer consumption. The main player in this market is Cerveceria Baru Panama, which started its operations in 1958. This company holds 35 per cent of the market, having Soberana, Panama and Cristal among its main trademarks. However, Cerveceria Nacional has been purchased by the Bavaria group. This company holds 65 per cent of the market, with its main trademarks being Atlas, Balboa, Balboa Ice, Lowenbrau and HB.

Panama's beer sales are mainly through returnable glass bottles. The participant companies are in charge of distributing the products by using their own truck fleets to transport the product from the factory to the storehouse, as well as to the points of retail. They establish commercialization strategies, which include the execution of exclusive contracts to the detriment of competitive products.

With respect to its recent history, in May 2001, the Bavaria group purchased 45 per cent of Cerveceria Leona from Colombia. This concentration allowed the consolidation of the Bavaria market in Colombia. The Bavaria Group also owned Cervezas Nacionales de Ecuador, through which Bavaria acquired control of Cerveceria Nacional of Panama.

In December 2001, the Commission for Free Competition and Consumer Affairs of Panama – CLICAC – was requested to authorize the economic concentration between Cerveceria Baru Panama S.A. and its subsidiaries, with the Bavaria Group S.A., which had acquired control of Cerveceria Nacional and subsidiaries. After analysing the corresponding transaction documentation, the Commission determined that the entity arising from the economic concentration in question would acquire a dominant position sufficient to fix prices and apply anti-competitive practices to the detriment of importers who would be unable to effectively react to or counteract such market power. Therefore, the Commission rejected the authorization for the economic concentration on the grounds that it undermined, restricted, damaged and prevented free competition in an unreasonable manner.

#### **4.1.7. Guatemala**

The Beer market is important for Guatemala's economy, as it represents more than US\$ 400 million per year, i.e. 1.7 per cent of Gross National Product (GNP). However, unlike Panama, its per capita beer consumption is one of the lowest in the Region and in all Latin America.

Until September 2003, Guatemala had only one beer company, Cerveceria Centro Americana, which was vertically integrated and distributed eight national trademarks and four imported brands. The main brands are Gallo, Monte Carlo, Gabrito, Pozada Draft, Moza and Victoria. However, in September 2003, AmBev entered the Venezuelan market with an installed capacity of 1.1 million hectolitres per year. Finally, a third beer company, which will produce one national trademark and distribute one imported trademark, is about to enter the market. Before the entry of the new competitors, the local brewery controlled 95 per cent of the market.

At present, AmBev and Cerveceria Centro Americana (represented by the Gallo trademark) are involved in a legal process. Cerveceria Centro Americana has declared the hypothetical existence of a "system for the protection" of its bottles, and is demanding that AmBev does not use the same kind of bottles in the production and distribution of its products (the typical amber-coloured bottle is used).

#### **4.2. Concentration processes and problems associated with access to national markets**

As can be seen, different countries in Latin America have, in the last number of years, been involved in mergers and acquisitions in the beer market, which can be explained not only by a decrease in domestic consumption that has affected weak companies, but also by the expansion process of larger beer companies in the re-

gion within a framework of progressive elimination of protectionist policies against foreign competitors.

Also, the level of per capita beer consumption in Latin American countries is quite low in comparison with other countries (for example European countries). Therefore, everything points to the significant growth prospects of this market. However, as already explained, the existence of access barriers has made the entry of new competitors difficult.

In effect, the beer industry encounters notable structural access barriers in every Latin American country. Beer production is a very specialized industry, therefore a factory in the business of producing juices or refreshments could hardly be transformed into a brewery, if the latter would be more lucrative. Also, the cost of the processing and packaging plants, supplies and logistic chains are so expensive that national investors would be very wary of financing the launching of a project of such magnitude in this class of market.

Therefore, the alternative is that the competition level in Latin American countries may be determined by the modernization and expansion of those companies that are already in situ, or by the progressive penetration by larger regional beer companies into each country. This process has been developing in the last number of years, where national markets led by one or more long-standing manufacturers have been purchased by larger regional business groups in the process of expansion, such as the Bavaria Group from Colombia and AmBev from Brazil.

However, the access of regional beer industries to local markets is difficult due to the lack of adequate distribution networks to allow easy access to consumers, in view of the "traditional" form of distribution that these markets have. In other words, a market in which distribution and consumption is carried out through modern methods, i.e. small cans and non-returnable bottles distributed by independent wholesalers would make vertical integration with the distributor unnecessary and may result in a more open channel in terms of the presence of imports; the "traditional" distribution mechanisms involve the sale of large returnable bottles from very small grocery stores located in each neighbourhood. In this last case, the specialized knowledge and logistic demands imposed by traditional distribution channels make vertical integration with the distribution area necessary.

An example of this is Peru's case, where the greatest difficulty to be faced by the new competitor will be at the grocery store or corner shop where beer is acquired by the public. In addition, the competitor must use large returnable bottles that are sold in boxes of 12 units, and, therefore, the delivery trucks used must be specially adapted to these circumstances. This adds new difficulties for the entry of new competitors into the market.

On the other hand, the predominance of traditional distribution channels explains the few incidences of market imports, such as in Peruvian case, as its packaging and

distribution system requirements differ from those traditionally used to reach the public.

As already seen, an indicator of these access difficulties to national markets is the fact that new competitors tend to penetrate markets through the acquisition or establishment of alliances with already existing beer companies, with the purpose of using their existing logistic networks. This is the only way to guarantee success regarding market penetration, and must be well supported by marketing strategies and strong advertising campaigns.

In addition, the access barriers already described could be even stronger if the company controlling national sales is a monopoly. This does not mean that the entry of a new competitor in such cases is impossible, but it will obviously be more difficult as it will require larger investments and more time to arrive at an adequate way of accessing certain classes of market. Local companies are aware of this fact, and it would also be possible that one of the processes involving local mergers and acquisitions at local level is bound up with a defensive strategy against the potential entry of foreign competitors.

Considering the structural barriers existing in the beer market, it is possible to suggest as a hypothesis that the existence or not of legislation establishing concentration control may be useful to speed up or slow down the process of access by new competitors to large, structurally complex markets in which companies with monopolistic power can strategically use the economies of scale and scope obtained through market concentration and integration to impede access to potential competitors.

Such a strategy, however, would not be applicable to small markets that would be individually unattractive to new competitors, unless they were highly concentrated, had high prices and low per capita consumption indicating significant opportunities for expansion. In such a case, behavioural control by itself would be enough to uphold the market dynamics, and the structural control could be reserved for regional markets when integrating two or more countries with smaller markets.

#### ***4.3. Causes and reasons for regional integration***

The same entry barriers affecting companies involved in industries such as the beer industry, also generate incentives for local companies, whether middle- or small-sized, already participating in the market, to form strategic alliances or concentrate operations so as to create efficiencies and manage to survive within a context of constant threat from larger regional companies.

Enforcing competition in markets such as the beer industry proves to be expensive. Thus, the tendency is to establish alliances and relationships between Latin American beer companies and large globally based breweries, mainly from the United States and Europe. As there could be many causes for concentration and strategic alliances, we will mention those that can provide comparative and competitive advantages to the region.<sup>22</sup>



**Access to new technology:** Technological advances in the beer sector are essential for the processes of beer production and distribution. These advances are more appreciated in developed countries where companies generate economies of scale through more efficient processes that reduce production costs per product unit. Regarding distribution, integrated logistic systems in a wider chain of distribution help to achieve better efficiency by expanding the range of products. Integration, accordingly, may seek to obtain better technologies through alliances established between beer companies with a worldwide presence and other local or regional companies, such as the Dutch case involving Heineken, which acquired part of Quilmes by providing the technology to create more efficient productive processes in exchange for greater penetration of the European trademark into one of Latin America's largest markets.

**Optimization of productive processes:** Where relatively low-level consumption occurs, local beer companies need to optimize usage of supply capacity, and this is usually done through the process of concentration. This need to optimize production also leads to expanding of trademarks and developing new products in order to stimulate demand. This process includes the exchange of information and technology with international beer companies, as well as geographic expansion towards regional and international levels. In this way, the companies will seek to achieve economies of scale in production and economies of scope in the distribution.

**The existence of an economic niche in Latin America:** The beer companies consider the region as being promising, not only for the traditional preference for this kind of beverage, but also because of the climate. Larger beer companies, as well as local companies, support their investment policies because of the consumption potential offered by the region. Even a small business may achieve a greater market share through a strategy of expansion with already existing companies. For example, Heineken,<sup>23</sup> Miller Beer and Anheuser Busch, the first one from the Netherlands and the last two from the United States, have entered the region since 1994 in this way rather than making direct investments.

**Access to an established distribution network:** A company has several options to enter a new market, such as taking over or merging with an existing company with the purpose of rapidly achieving knowledge of a regional market (gaining years of experience) and obtaining easy access to a distribution network that is already established and operative. Similarly, strategic alliances among breweries reduce the possibility of committing errors in emerging, but yet unknown, markets of great potential. Another alternative may be starting from scratch (greenfield investment); however, this strategy needs large investment in infrastructure, as well as knowledge of the local market (involving time, research efforts and clients willing to try out new products). For example, the launching of Bara's Soberana trademark from Panama cost US\$ 15 million over 2 years without achieving local distribution, in addition to US\$ 4.2 million annually for ensuring consumer awareness of the trademark.<sup>24</sup>

Achieving international competition: The integration phenomenon as well as the mergers of regional beer leaders are in turn helped by the desire to avoid expensive rivalry with their global competitors. Integration allows commercialization and distribution of national trademarks in a foreign market, as well as the distribution of associated trademarks at local level, achieving more efficient competition against other international competitors. At the same time, it means savings in import costs, transport and tariffs. In conclusion, competition is currently considered at international level rather than at country level.

Time for market entry: Installing the infrastructure for beer production is time consuming. For example, it took 3 years for a beer in Cost Rica to achieve a 5 per cent of market share after its entry into the market. The launching of Brahma products in Brazil took 2 years after starting up production. It is not only a matter of time, but also of product quality and its acceptance by local consumers. Using the experience of a company already participating in the local market can save all this.

Strategy: Considering the fact that the entry to a market with a new trademark implies sunk costs, it is easier to do so through mergers, license concessions or joint ventures with companies already participating in the market that have established and accepted trademarks.

## **5. Latin America institutional framework**

### **5.1. General framework**

Historically, local authorities have developed two regulatory mechanisms clearly differentiated in competition matters: behavioural control and structural control.

Behavioural control applies to anti-competitive conduct after it has been observed (ex post control), with the purpose of determining its illegality and to impose sanctions and corrective measures accordingly, in order to remedy the damage caused to competition. It applies to anti-competitive agreements, such as cartels (price fixing, market sharing and the like) as well as abuse of market power by a dominant firm.

On the other hand, structural controls are ex ante controls, with the purpose of evaluating the potential anti-competitive effects of a business concentration operation (merger or takeover) before its occurrence, in order to decide whether or not it must be prohibited, or if it must be made subject to determined conditions. This mechanism for previous evaluation allows the avoidance of costs that would be generated by those companies if they were obliged to "split" after the concentration operation has been completed. It also allows balancing the efficiencies sought by the concentration against the laws of competition it would provoke.

Local authorities may also have mechanisms allowing the evaluation of restraints that would result in distribution agreements (exclusive clauses, fixing of minimum selling prices), but this may also be feasible in the framework of behavioural and structural controls.

In order to establish the possible relationships existing between the institutional frameworks of competition law and the beer market conditions in a selection of countries, we will divide them into three groups according to the regulation mechanisms developed in their respective legislation:

- Countries with behavioural and structural controls
- Countries with behavioural but no structural controls
- Countries with neither behavioural nor structural controls.

## **5.2. Countries with behavioural and structural control**

### **5.2.1. Argentina**

The Competition Law (Law 22.622) governing Argentina from 1980 to 1999 only established behavioural controls governing the National Commission for the Defence of Competition. The Law for the Defence of Competition (Law 25.156) by means of which concentration control was incorporated into Argentine legislation was promulgated in 1999, establishing the obligation to notify the appropriate authorities of any economic concentration operations with synergistic results, which exceed the size provided by law. Law 25.156 also prohibits conduct the purpose or effect of which is to limit, restrict, distort or twist competition or market access or that may constitute an abuse of market power by working against the economic public interest. The entity in charge of applying Law 25.156 is the National Tribunal for the Defence of Competition.<sup>25</sup>

### **5.2.2. Venezuela**

In Venezuela, the law for promoting and protecting the free exercising of competition has been in existence since 1992, and is enforced by the Superintendency for Promotion and Protection of Free Competition – PRO-COMPETENCIA. This law contains a general prohibition of all conduct or contracts that limit free competition, while different articles of the law specifically cover stated unlawful business practices such as collusive and exclusion practices, abuse of dominant position and the previous control of economic concentrations.

With respect to the previous concentrations control, Regulation 2 of the aforementioned law establishes the application of an authorization procedure for those economic concentration transactions exceeding a specific volume of companies, to be established by PRO-COMPETENCIA. Likewise, the said Regulations establish, in general, the principles to be considered by such an entity when evaluating the effects that a specific transaction of economic concentration may have on the market.<sup>26</sup>

### **5.2.3. Panama**

In Panama, the governing law since 1996 is Law 29 by means of which rules and other measures regarding competition defence are dictated, and the Executive De-

cree 31 of 1998, which is enforced by the Commission for Free Competition and Consumer Affairs – CLICAC. In general, this law sanctions any act, contract or practice, which limits or restricts free competition in the production, processing, distribution, supply or commercialization of products or services. In particular, it sanctions market abuse of dominant position, as well as those arranged agreements and practices that restrict free competition, by classifying the unlawful practice in antitrust, absolute and relative practices.

The law referred to above establishes a previous verification procedure for those economic concentration operations, such as mergers, control acquisition or any other grouping operation among suppliers, clients and other economic agents who compete among themselves. Likewise, it prohibits economic concentrations whose effect is or could be reducing, restricting, damaging or preventing, in an unreasonable manner free economic competition and free concurrence of equal, similar or substantially related products and services.<sup>27</sup>

### ***5.3. Countries with behavioural control but no structural control***

#### ***5.3.1. Peru***

Since 1991, Peru has a law prohibiting monopolies, controlling and restrictive practices of free competition (Legislative Decree 701 and its amendments), which establishes sanctions against arranged agreements and practices that restrict competition as well as the hypothetical abuse of dominant position in the market. Its enforcement is carried out by the Commission for Free Competition of the National Institute for the Competition Defence and Intellectual Property Protection – INDECOPI. The law is limited to the prohibition of certain anti-competitive behaviour expressly provided by law and to impose fines in those cases where a violation is verified. Except for the electricity sector, Peru has no general legislation for structural controls on mergers.

### ***5.4. Countries without behavioural or structural control***

#### ***5.4.1. Bolivia***

Although Bolivia has been discussing competition rules since 1991, when it adopted CAN Decision 285, the country has not yet adopted any competition legislation establishing either behavioural or structural controls. It only has general provisions contained in its Criminal Code and Commerce Code and sectoral rules for markets, such as electricity, sanitation, telecommunications and transport (De León).

#### ***5.4.2. Guatemala***

Guatemala has no specific law establishing either behavioural or structural controls under specialized authorities on matters of competition defence. It only has some provisions contained in the Criminal Code and Commerce Code on prohibition of monopolies, cartels and unfair acts, as well as sectoral rules for energy, bank and

telecommunications markets. However, a Competition Law Bill is now in discussion in the Guatemala Congress.

### **5.4.3. Ecuador**

Similarly to Guatemala and Bolivia, Ecuador has no specific regulation on competition defence matters. In 2002, a Competition Law passed by the Ecuadorian Congress (which included behavioural and structural controls) was challenged by the President of the Republic.

## **6. Conclusion: behavioural control, structural control, both or neither**

As mentioned earlier, it appears that no clear relationship exists between the different institutional models of application of competition legislation and how the beer industry of the countries under analysis has developed. The kind of alliances and business reorganizations that took place do not appear to be related to such legislative action.

The same can be said with respect to the level of prices in the beer industry. As shown in Table 2, although there are huge price differences among the different countries, it is not easy to identify any correlation between price and the institutional model of competition legislation in each country

However, this may not be surprising. Competitiveness depends on several factors of which only one, and probably not the most significant, is the existence of a specific model of competition legislation. It must be added that adequate application and implementation of such legislation, regardless of the model each country may adopt, could generate a greater or a lesser impact. Therefore, neither is it surprising that in some cases a merger control decision has favoured the competitiveness of one country to the detriment of another. The evaluation of the advantages and disadvantages of the analysis made in each case by the competent authority is beyond the scope of this study. The information is too scarce due to the few cases filed, although the the industry is probably the leader in the region in terms of cases filed by the competition authorities.

Nevertheless, there are several common characteristics that appear to be indicative of the kind of problems that arise and of the best policy to be adopted according to the different situation that pertains within each Latin American country.

As already mentioned, a possible public policy option would be to give priority to market deregulation and the reduction of existing access barriers (bureaucratic and logistic), leaving the resolution of cases of abuse of dominant positions and unfair competition to private actions before the courts. To have a competition law does not mean one has a magic wand that allows the creation of competitive and efficient business, but a market that encourages competitiveness, together with an efficient judiciary to solve conflicts that may arise, might suffice to discipline companies involved.

However, this is an idealistic solution and is not in accordance with the reality of Latin American markets. Justice administration is exercised under poor conditions, slow and formalistic processes, and judges who are without enough experience of competition matters, overburdened by regular proceedings, subject to corruption and suffering from limited resources.

This reality leads us to point out that Latin American countries require at least a competition agency allowing them to sanction anti-competitive behaviour, i.e. restrictive agreements, abuses of dominant positions and unfair competition that may affect competition and the entry of new players into the market. This is obvious in cases filed in Venezuela and Peru, where it can be seen how the companies already in the market act strategically to make it difficult, in one way or another, for new competitors to access and remain in the market. There are several ways to make access difficult for new companies, mainly through exclusion agreements regarding distribution, as well as through the creation of obstacles in using the packaging necessary for distribution of beer to consumers. As the research on these matters is somewhat complex, it is better to leave it in the hands of specialized agencies, such as the competition agencies.

However, is it enough to have one specialized competition agency capable of sanctioning unfair and anti-competitive behaviour, or is it also necessary that the competition agency exercises a preventive control of the economic concentrations that may affect market competitiveness? The beer market is precisely one that tests this option.

Latin American markets, in general, except for Argentina, Brazil and Mexico, are small and even smaller in Central America. Local companies in these countries may reasonably initiate expansion and economic concentration processes with the purpose of achieving efficiencies by obtaining economies of scale, reach and scope. This is a factor that we must take into consideration, since survival of these local firms in increasingly competitive international markets may depend on the adoption of a concentration policy. In this case, the main thing to do is to monitor these companies, so as to avoid unfair and anti-competitive conduct, in addition to providing legal mechanisms that allow them to generate efficiencies.

Behavioural control is the most important control in these markets. As we have already seen, the beer market has great possibilities for expansion due to its low consumption at per capita level in most of the countries under study. Large regional beer companies are very interested in entering in new markets, even if they are small. Therefore, it is foreseeable that these markets will become more competitive in the coming years. This could also happen in Peru, a country that only has behavioural controls, if the entry of the AmBev Group into the market finally materializes and it manages to take a portion of the market from Backus, which is controlled by the Bavaria and Polar groups.

On the other hand, local authorities, yet inexperienced in handling structural control mechanisms, might wrongly apply them. In effect, as Rodríguez notes (1998: 17): "The potential competition doctrine, by its nature, presumes that market concentration in closely concentrated markets is related to problems of competition, while concentration which tends to be a necessary matter of concern in competition is not a sufficient condition. Brazil's beer market is an interesting example of bad use given to statistics on concentration. While Brama had 46.6 per cent of the market and Antarctic 31.9 percent in 1995, this participation has decreased from 50.3 per cent to 40.8 per cent, respectively, in 1989. During this period, the largest third beer had increased its participation from 0.2 per cent to 5.5 per cent. These changes suggest the existence of a substantive competitive threat from the existing competitors against leader companies."

It is possible for antitrust authorities to make mistakes when analysing the efficiencies that the concentration approach is looking for, as has happened in controversial cases, even in industrialized countries. Lack of experience, political pressure and regulatory agencies with little institutional framework in Latin America may multiply the possible errors.

It is not recommended to adopt merger controls in the case of those Latin American countries where markets are still small. Notwithstanding, as the tendency towards competition at large regional company level is increasing, it would be advisable to establish merger controls at regional or sub-regional level, in order to make it possible to maintain competition incentives within the regions, in addition to obtaining greater integration of the local markets of Latin American countries.

As already indicated, the available information does not suggest an alternative development of the markets, whether with concentration control or not. If we add to this, the existence of competition authorities with little experience and few resources, it probably would be advisable to have them concentrate on behavioural controls, thus releasing us from any risk of error that could make competition legislation become a delay factor for the development of competitiveness.

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**Table 1. Institutional framework: Latin American countries.**

Country	Structural control	Behavioural control	No structural/no behavioural control
Argentina	Yes	Yes	-
Bolivia	No	No	Yes
Brazil	Yes	Yes	-
Colombia	Yes	Yes	-
Costa Rica	Yes (ex post)	Yes	-
Chile	Yes	Yes	-
Ecuador	No	No	Yes
Guatemala	No	No	Yes
Mexico	Yes	Yes	-
Panama	Yes	Yes	-
Peru	No	Yes	-
Venezuela	Yes	Yes	-

*Source: Annual Reports of Quinsa, Bavaria, AC Nielsen and AmBev, and market information.*

*Own elaboration.*



**Table No. 2 Beer Prices in Several Latin American Countries (US\$)**

Country	Litre	Bottle 620 ml
Guatemala	1.380	0.8556
Honduras	0.8247	0.5113
Nicaragua	0.7725	0.4790
Panama	0.7526	0.4666
El Salvador	0.7503	0.4652
Peru	0.6700	0.4154
Colombia	0.5400	0.3348
Bolivia	0.5254	0.3257
Venezuela	0.5140	0.3187
Uruguay	0.5127	0.3179
Ecuador	0.5111	0.3169
Chile	0.5092	0.3157
Brasil	0.4140	0.2567
Paraguay	0.4065	0.2520
Argentina	0.2240	0.1389

Source: Annual Reports by Quinsa, Bavaria, AC Nielsen, AmBev and market information

Own elaboration

**Table 3. Concentration rates in selected Latin American countries.**

Country	Concentration rate (HHI)
Venezuela	5400
Panama	6025
Argentina	7234
Peru	9604
Ecuador	9801
Bolivia	9801

Source: [www.ambev.com.br](http://www.ambev.com.br), Promar International (2000).

Own elaboration.

**Chart 1. Most popular beer brands by socio-economic class.**

Favourite Beer Brand					
	Total	Socio-economic class ( per cent)			
		A	B	C	D/E
Cristal	71	22	49	75	79
Pilsen Callao	16	36	25	16	12
Cusqueña	9	34	22	7	4
Others	3	6	4	1	5
None	1	2	0	1	0
Real base	427	47	138	139	102
Weighting factor (per cent)	100	4.3	15.7	33.7	46.3

Total: 100 per cent vertical.

Base: Total of interviewees of legal age who buy beer.

Source: Apoyo Opinion y Mercado S.A.

**Chart No.2**

Beer Favourite Brand					
Answers	Total	Socioeconomic Level %			
		A	B	C	D/E
Store	74	15	54	76	84
Supermarket/self-serv.	11	64	33	8	1
Bar	5	2	2	4	7
Liquor store	5	17	5	4	4
Others	5	2	5	7	4
No opinion	0	0	1	1	0
Real Base	427	47	138	139	102
Weighting Factor	100%	4.3%	15.7%	33.7%	46.3%

Total: 100% vertical.

Base: Total of full age interviewees who buy beer

Source: Apoyo Opinion y Mercado S.A.

## Notes

- <sup>1</sup> For the purposes of this study, legislation or competition rules are understood to be those rules usually referred to as “anti-trust”. Therefore, other related rules linked to market matters, such as unfair competition, consumer protection, dumping, subsidies and the like, are not dealt with herein. On the other hand, the concept of competition policies shall be used in a wider sense when referring not only to antitrust legislation but, also, to measures adopted to create greater competition, such as economic opening, bureaucratic barriers elimination and procedures.
- <sup>2</sup> By behavioural controls, we refer to those prosecutions of anti-competitive arrangements (mainly cartels) and sanctions for the abuse of a dominant position or market power (refusal

to deal, prices and terms discrimination, binding clauses and the like), as will be seen later.

<sup>3</sup> 148 F. 2d 416 (2d Cir. 1945).

<sup>4</sup> Commenting on Ronald Coase's "The Nature of the Firm" and Oliver Williamson's "Markets and Hierarchies: Analysis and Antitrust Implications".

<sup>5</sup> Commenting on Ronald Coase's "The Nature of the Firm" and Oliver Williamson's "Markets and Hierarchies: Analysis and Antitrust Implications".

<sup>6</sup> Subject 322/81 Michelin v. Commission (1983). Rep.3461.

<sup>7</sup> One of the problems undermining internal markets competitiveness in Latin America is the deficiency and, even in some extreme cases, the non-existence of a logistic chain (ports, roads, means of transport and technology) that may allow an efficient connection of markets among themselves. This is reflected in structural access barriers that make local markets less competitive due to the lack of adequate structure for the development of production and commerce, which constitutes an important point in the countries' governments' agenda and that in our opinion is related to more general competition policies, outside the scope of this chapter.

<sup>8</sup> Given the large quantities of beer produced and the short expiry dates, efficient distribution of beer will also be able to support such conditions.

<sup>9</sup> We consider Latin America as America ALAFACE, since its members are mainly countries of the region: Brazil, Mexico, Venezuela, Colombia, Argentina, Peru, Chile, Dominican Republic, Ecuador, Bolivia, Paraguay, Guatemala, Panama, Costa Rica, Honduras, Uruguay, El Salvador and Nicaragua. American countries outside the ALAFACE sphere are the United States, Canada, Cuba, Jamaica, Guyana, Puerto Rico, Trinidad and Tobago, Haiti, Bahamas, Holland Antilles, Surinam, Santa Lucia, Belize, Barbados, Martinique, San Vincent, Granada, Antigua, San Kitts, Dominica and the Cayman Islands.

<sup>10</sup> "Likewise, a huge operation allows equipment and machinery specialization in contrast to the small-scale use of multipurpose machinery (Carrillo and Kocnim, 1993: 35)

<sup>11</sup> In Latin America, several alliances have been taking place between beer companies at regional and continental level (i.e. Bavaria from Colombia and Regional from Venezuela).

<sup>12</sup> Dictamen Con. No.376. Operación de Concentración Económica Cervecería y Maltería Quilmes y Companhia de Bebidas das Américas S.A. Buenos Aires: 2002.

<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*

<sup>15</sup> "Beer Industry in Peru (La Industria Cervecera en el Perú)" Apoyo Consultoría. Lima, 1995.

<sup>16</sup> Unión de Cervecerías Peruanas Backus y Johnston S.A.A.'s Risk Analysis of Apoyo y Asociados, 2003.

<sup>17</sup> BACKUS Memory 1999.

<sup>18</sup> Semana Económica. January 30, 2000.

<sup>19</sup> Apoyo y Asociados. Op. Cit.

<sup>20</sup> [www.ambev.com.br](http://www.ambev.com.br).

<sup>21</sup> Resolution No. SPPLC/004-2002 of 1 February 2002 PROCOMPETENCIA.

<sup>22</sup> Sources include the ALAFACE web site ([www.alaface.com](http://www.alaface.com)) and the main newspapers from Latin American countries.

<sup>23</sup> The Spain Competition Court, when the rejected Heineken and Cruz Campo concentration was being considered: "The perspective of slow demand expansion is one of the players that are conducive to a concentration process in the Spanish Beer market" File of economic concentration c 44/99 Heineken – Cruz Campo.

- <sup>24</sup> Resolution No.139-02 dated May 15, 2002. Concentration Process Bavaria Group– Cervecería Barú Panamá. CLICAC. P. 122-123.
- <sup>25</sup> National Commission for the Defence of the Competition web site – CNDC. [www.mecon.gov.ar/cndc](http://www.mecon.gov.ar/cndc).
- <sup>26</sup> Web page of PROCOMPETENCIA. [www.procompetencia.gov.ve](http://www.procompetencia.gov.ve).
- <sup>27</sup> Web site of the Commission for Free Competition and Consumer Affairs – CLICAC. [www.clicac.gob.pa](http://www.clicac.gob.pa).