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The Role of

REGULATORY AGENCIES

in the Brazilian Privatization Process:

A Conceptual Approach for the Public Utility Companies

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Chapter 1

INTRODUCTION

1.1 OBJECTIVES

Market economies face the same problem throughout the world: how to deal with technologies that complicate the smooth functioning of competition. Telecommunication, oil, electricity, railroad and others are samples of services with these characteristics. The firms that provide these kinds of services are called public utility, a title traceable to their nineteenth-century origin. They are seen as providing goods or services in which the general public has a great interest (Sherman,1989). The public regulatory agencies that oversee them have commonly operated at the state level.

Within the framework of regulatory agencies, this study suggests some aspects which the Brazilian government must confront, in reference to the privatization of public utility companies. Important issues related to the participation of the regulatory agencies arise, namely: (1) investments; (2) competition environment; (3) organizational models; (4) valuation and sale mechanisms; and (5) price regulation.

1.2 PRIVATIZATION AND REGULATION

Governments around the world are privatizing state-owned enterprises in an effort to improve their efficiency and lessen the financial burden they often represent for taxpayers (Kikeri, Nellis and Shirley, 1992). The World

Bank Group supports privatization in the context of its broader goals of economical development and poverty reduction. An efficient private sector makes essential contributions to the attainment of these goals, and privatization is one of the means available for promoting private sector development. Privatization, when correctly conceived and implemented, fosters efficiency, encourages investment and thus new growth and employment, and frees public resources for infrastructure and social programs.

The "Brazilian Denationalization Program" (PND) was created by the Brazilian government (Law 8.031, April, 1990) in order to promote: (1) strategic reorganization of the State; (2) public debt reduction; (3) increase of investments; (4) industrial modernization; and (5) capital markets strengthening.

When privatization involves enterprises in noncompetitive markets - usually large state owned enterprises operating as natural monopolies in such areas as power, water supply, and telecommunications- a legal regulatory system must be in place. Good regulation provides producers with incentives to reduce their costs and with a stable environment in which to expand and, simultaneously, safeguard against potential exploitation of consumers. It is also important to resolve constitutional and other legal impediments to privatization outset (Holden and Rajapatirana, 1995).

Contemporary discussions of regulation often charge that there is excessive state intervention in markets and in corporate affairs. The term *regulation* describes much of what the government does but it should not do (Eisner,1993). Such a characterization would have come as surprise to Brazilian citizens in past decades. Campos (1996) refers to the Brazilian scheme that worked until the late 1980's: "...when the state was at the same time the producer and the regulator, it established regulatory standards that generated many distortions in the economical and administrative levels."

We can best understand a regulatory regime as a historically specific configuration of policies and institutions that structures the relationship between social interest, the state, and economic actor in multiple sectors of the economy (Eisner,1993).

Successful privatization of natural monopolies requires a regulatory framework that separates potentially competitive activities, establishes the tariff regime, clarifies service goal, develops cost minimization targets, and creates or strengthens an agency to supervise the process (Kikeri *et al.*,1992).

It is useful to regard the problem as a game between the government (or its agency) and the firm. With this perspective, we need to specify the players' possible strategies, their objectives, the move order, and the information conditions of the game. As regards "possible strategies", the firm has to make decisions about prices, outputs, capital investment, product quality, investment in cost reduction, and product innovation. The government might seek to regulate some of these variables but, unless it is well informed about industry conditions and behavior, it is unlikely to be able to regulate other aspects of the firm's activities. This information problem is crucial because the government can condition its policy only on what it knows (Vickers and Yarrow,1988).

In terms of regulatory process, the Brazilian government sent to Congress the so called "Minimum Law" of telecommunications, without specific proposals about the regulator. On the other hand, in the beginning of 1996, Congress received a proposed bill about electrical energy regarding the creation of a regulatory agency - ANEEL (Electric Energy National Agency). According to Campos (1996), there is an "original sin". ANEEL, as conceived, should be subordinated to the Energy Ministry. In this sense, it should not be an independent entity. At the same time, the Minister should create an Electric Energy Council whose members are nominated by the President. In the absence of mandates, both members of the agency and the council will be public service employees of the Ministry. Thus, the Ministry would be at the same time producer and regulator.

There are currently two more agencies in the Brazilian agenda: Oil National Agency and National Communications Commission.

As it will be exposed in the following sections, the independence of the regulatory agency is the chief question to be observed by authorities in order to grant credibility to the investors and guarantee the success of privatization process as a whole.

It is also important to notice the way in which Brazilian natural monopolies, in particular utilities, will be regulated and to determine how attractive they will be to private sector investment. The arbitrariness that has characterized the Brazilian government can be controlled by restraining the discretion of regulators and limiting their ability to change the regulatory system. A key challenge of the Brazilian privatization process will be an appropriate design of a regulatory framework for increasing the participation of the private sector. It is important to notice that utilities industries usually work better when subject to a modern regulatory framework. A related issue is that of promoting and maintaining effective competition. Another important aspect to be noticed is that privatization leads directly to foreign investment. Thus, it improves the regulatory environment for other foreign investors and leads to better returns on investment by reducing market distortions and by transferring state-owned enterprises to the private sector. This effect is especially relevant in sectors which provide services crucial for the profitability of other sectors in the economy, including infrastructure services as energy, telecommunications, and transportation (Holden and Rajapatirana, 1995).

Chapter 2

REGULATORY AGENCY

2.1 REGULATORY FRAMEWORK - CONCEPTS

Increasingly around the world, infrastructure companies that have traditionally been run by government because they were perceived to feature aspects of natural monopoly are being opened up to the private sector - partly through entry, but also through privatization. In such sectors - electricity, telephones, etc. - the art of privatization requires not only transfer ownership and control to the private sector, but the design of contractual or regulatory measures to enhance competition and ensure the absence of monopoly rents (IFC, 1995). Investors will need *flexible but clear guidelines* backed by explicit laws governing foreign investments and privatization and a *clear and open policy-making process*.

Fowler and Pisciotta (1992) reinforce that before specific regulatory policies can be adopted with respect to particular services, an overall regulatory framework should be devised. There is no perfect way to design a regulatory framework. In a market that is partially monopolistic and partially competitive, continual adjustments of the demarcation between classes of services are inevitable. Some options for classifying services are more adaptable to continued technical growth than others. Examples of telecommunication systems, in industrialized countries, include:

- United States makes a distinction is made between common carriers and non-common carriers. An additional distinction is made between basic services and enhanced services;
- Japan makes a distinction between facilities-based carriers and resale carriers. It also has two different classifications of value added service providers;
- Germany classifies services as mandatory (monopoly), permissive, and competitive;
- France generally makes a distinction between open networks and closed networks;
- United Kingdom maintains a classification for public telecommunications operators and several classes of special service providers.

McBeth (1996) emphasizes that the need to draw up radically new regulation stems from the basic notion that the public sector ceases to have hierarchical control over company decisions. According to the author, it is clear that with private investors in a company the objectives of this company change. Management concentrates on achieving the largest return on capital for its shareholders. Consequently, the new legal framework needs to establish the necessary incentives for the company to make sound economic decisions. Experience has shown that those drawing up new regulations have to take into account the fact that the fewer regulatory limitations imposed upon the company the greater will be its profits and consequently the higher the selling price received by the public sector. A subsequent change towards stricter regulations may be subject to legal claims and complaints from the shareholders who witness a change in the conditions under which they made their investment in the company.

Mody, *et al* (1995) argue that the role of political instruments in the development of regulatory systems for restructured infrastructure sectors will be constrained, in part, by the legal and constitutional framework of each country. The authors emphasize that "the ability to allocate authority and options for structuring the regulatory system varies according to the constitutionally determined horizontal and vertical distribution of jurisdiction and authority in a country. Horizontally, the constitutional framework will determine the formal relationships between political institutions like the executive, legislature and judiciary. It will also determine whether the country's legal system is one based on common law, civil law, or dictatorial fiat. Vertically, the constitutional framework will delineate the power and jurisdictions of central, regional, state, and local authorities and the mechanisms by which disputes between them can be resolved".

In all cases, effective regulation of privatized utility sectors, specifically in Brazil, requires the establishment of a comprehensive framework of laws, rules, and regulations that clearly identify the contractual obligations and property rights of both governments and private actors. This framework should be both transparent and enforceable. Levit (1996) criticizes the current situation of the Brazilian regulatory privatization process. The author considers that, despite government fanfare regarding telecommunication liberalization, Brazil is just beginning the reform in this area. The Telecommunication Ministry's current focus on B-band cellular auctions and other delays in finalizing Brazil's regulatory framework have left some sectors, such as paging, virtually unregulated. Investors face a regulatory framework shaped both by the shifting political environment and the considerable regulatory ambiguity.

2.2 BASIC CHARACTERISTICS OF AN AGENCY

The ultimate objective in establishing an effective regulatory entity is to give it sufficient powers for effective, quick decision making while also requiring that regulatory intervention in market relationships be minimized to the greatest extent possible (Fowler and Pisciotta, 1993). This balancing begins with goals that are clearly set out in the enabling legal documents, whether they are presidential decrees, statutes, or ministry regulations. According to the authors, certain key features can be identified. First, the goals that are established to guide the entity should include availability of affordable basic service to all citizens, fair and equitable technical and market circumstances to encourage competitive entry (without penalizing efficiency), and technical innovation.

Second, the regulatory entity should function as independently as the country's legal framework will allow. In this sense, as mentioned by Campos(1996), the new regulatory agencies in Brazil are being conceived with a great deal of dependence within the federal government. This should be regarded as a harmful aspect that may allow government action in issues directly related to future owners. Independence of decision making leads to policies that best serve public utility services rather than unwise or shortsighted political concerns. Part of the independence of the regulatory agency also is derived from mechanisms established to ensure continued and adequate funding. The regulatory entity should have its own budget.

The regulatory body must also establish internal decision-making procedures that produce, to the extent possible, fair and consistent decisions. These procedures should include delegation of routine decision making

to staff personnel. Some independent judicial or ministerial review of major decisions may be desirable to ensure that the regulatory agency is held accountable to established goals and objectives and to prior decisions.

Third, the entity should be organized internally along functional lines to permit maximum flexibility to adjust to market developments. Ideally, the agency should be able to establish and to restructure its own internal organization as circumstances require. Human resource policies should be aimed at attracting qualified and expert personnel. These personnel should be challenged with substantial responsibility and given incentives to contribute individually to the overall objectives of the agency.

Sanchez, *et al.* (1993) emphasize the importance of regulatory agencies in the privatization processes of Chile, Mexico, Colombia and Argentina. Updating the regulatory framework tended to precede privatization and was more effective the longer it was in place. Chile represented the positive extreme in this respect, and Argentina, the negative. Moreover, effective supervision depended on the presence of an authority to exercise adequate control, thus avoiding conflicts with the objectives of other government agencies.

Privatization in Mexico was accompanied by measures to promote openness and regulations to prevent an explosion of monopolies. Similarly, all of the privatized enterprises had to deal with deregulating prices and public services rates that formed part of the economic stabilization program. The most important aspect of sugar regulation was the elimination of the tax on marketing the commodity. This removed the disincentive to producers to integrate vertically and linked the price of sugarcane to the price of sugar. To regulate the monopoly power of TELMEX, the government opted for a rate system that implied keeping basic phone services constant in real terms. It should be mentioned that although the increases in the cost of basic telephone service provided for in the Title of Concession transfer a larger share of resources to the monopoly, they put the quantity of services provided in a position much closer to competition.

Darlington(1995) illustrates the functioning of a Mexican regulatory agency. "Comisión Federal de Competencia (CFC)", in Mexico, is responsible for: "Petróleos Mexicanos"(oil), "Telefonos de Mexico" (telecommunication) and "Grupo Serfin". A personnel interview with Fernando Sánchez Ugarte, president of the Commission, raised some aspects to be defined within the creation of a regulatory agency. Ugarte argues that the commission's work can be divided into three aspects:

"...In general, we can act as an advisor and a consultant, on competition. Our advice is often solicited. We also have to participate in notifications, authorizing mergers. The third aspect has to do with investigations. We have to investigate complaints brought to our attention by the affected party to see if the law is being violated. And we also do our own ex-officio investigations - not solicited by another party - if we detect inappropriate behavior. Sometimes, businesses will accuse other companies of violating the law. For example, Canel's Gum recently accused Adams Gun of practicing predatory pricing, and we're carrying out an investigation.

A different case we discovered through our own investigations: the freight sector was fixing prices, a monopolistic practice prohibited by law. We proceeded against it based on our discoveries.

More recently, Pemex was selling ethylene oxide at a more expensive price to some companies than to others. It was a relative monopoly. We asked Pemex to stop this practice.

We act as a referee and try to determine who's right."

Referring to the question of penalties' imposition, Ugarte considered:

*"... We can act by making recommendations, but we can't oblige companies to respond. We emit opinions that serve as **indicators** and can serve as **the basis of legal charges.***

If I tell Pemex, "Don't sell your products at different prices to different companies," it's a suggestion. If Pemex continues doing it, a company can file charges and use my recommendation as evidence for the case. We can also fine companies based on the gravity of the violation of the law.

*The commission can act by demanding the suspension of a practice or by asking that a monopolistic merger be separated. And like I said, our recommendations are used **to set the price for the damages and losses**. For example, if we decide against Adams Gum, we can say that the predatory pricing cost such and such and set the value of losses. This can serve as evidence for filing for damages. **A court will decide the case, but the commission's calculations do serve as a basis.**"*

In Argentina, the agencies responsible for supervising and regulating state services were not modified with the privatization, and they were weak and lacked autonomy. Calls for bidding partially compensated for the lack of a clear and comprehensive regulatory regime. In the majority of cases, the sales contracts established quantitative and qualitative goals for service improvements that implied high levels of investment to recapitalize the enterprise. Nevertheless, virtually all the contractual regulations were modified after the privatization to lower the price of the services. For example, in the cases of ENTEL (*Empresa Nacional de Telecomunicaciones*) and SV (*Servicios Viales*), the guidelines of the sale established that rates would be set by the government on the basis of inflation and exchange rate. However, the convertibility law provided for indexation of rates to U.S. consumer price index. Moreover, in SV, the government eliminated the royalty that it collected, lowered taxes, and granted subsidies. Together with the privatization of oil reserves and oil refining, the obstacles in importing or exporting crude oil were removed. Fuel taxes were also modified. In the case of petrochemical companies, subsidies and the legal barriers to imports were eliminated. Financed with a royalty from telephone revenue, the National Commission for Telecommunications was created to monitor compliance with the quantitative and qualitative goals of ENTEL (*Empresa Nacional de Telecomunicaciones*). This commission also establishes technical and service standards, standardizes equipment installation, and resolves conflicts that may arise between enterprises and users.

In Chile, the modifications in the legal framework to foster competitiveness included eliminating controls on credit market (i.e., ceilings on loans, interest rates, external bank debt, and reserve requirements) and standardizing the activities of the various types of banks (Sanchez, *et al.*, 1993). Despite efforts to construct an adequate legal framework to stimulate and monitor the operation of financial institutions within a market economy, the final outcome was negative because the free-market scheme existed side by side with the free regulation of the system. In the late 1970's, it became obvious that financial institutions could not be allowed to operate in a free market unless some prudent minimal controls were established over them.

During the second round of privatizations, the government decided to regulate certain privatized enterprises more rigorously and intensify price liberalization. The legal framework for banking institutions was modified to correct the errors of the first round, with limits imposed on transactions with enterprises connected with the bank's owners. For ENDESA, a new Comprehensive Electricity Services Law was enacted that takes the market, competition, and marginal costs into account when establishing rates. The law regulates the price of services to final users with low level of consumption and includes the freedom to negotiate rates with large industrial clients.

In neither of the rounds were new institutions responsible for supervising the enterprises created, although in some cases, existing agencies were strengthened. In the electricity sector, the National Energy Commission is responsible for planning and coordinating state investments, developing large electricity generation and transmission projects, and carrying out prices studies that are used by the Ministry of the Economy to determine electricity rates. In the second round of privatizations, mechanisms were established to enable the Office of the Superintendent of Bank to discharge its duties more efficiently, endowing office with the authority and financial resources to monitor compliance with the additional restrictions imposed on the banks.

In Colombia, the privatization process was accompanied by price liberalization, particularly in the automotive sector. Furthermore, in 1990, the financial, exchange, and investment laws were modified. The new legislation grants greater freedom and a more active role to commercial banks in the negotiation of foreign exchange and reduces the share of the Central Bank in that market. Moreover, it permits up to a 100 percent share of foreign investment, eliminates entry and exit barriers (maintaining minimal levels of capital), and promotes the dissemination of information, such as the publication of interest rates and risk indicators. The Office of the

Superintendent of Banks is responsible for supervising and monitoring compliance with the general norms that govern the entire sector and complementing the protection provided by deposit insurance.

It is important to remark that the three circumstances that can most often be improved by government regulation are natural monopolies, anti-competitive markets, and inadequate consumer environmental safety. Each requires a different regulatory treatment (Holden and Rajapatirana, 1995). The Brazilian government should not yield to the temptation to go beyond the prescribed solutions and attempt further regulatory action. Furthermore, previous state failure should be kept firmly in mind in designing and implementing any programs. Respect for property rights will help to protect the private sector from the haphazard and uneven effects of regulation that has characterized the past.

Currently, BNDES ("*Banco Nacional de Desenvolvimento Econômico*") represents the main Brazilian regulatory agency within the privatization process. In order to conduct the Brazilian Denationalization Program ("*Plano Nacional de Desestatização - PND*"), the Brazilian government adopted an institutional model. BNDES must provide administrative and operational support to the program, as well as administrate the so called Brazilian Denationalization Fund ("*Fundo Nacional de Desestatização*"). The fund accumulates the stocks owned by the federal government related to the companies selected as potentially participants of the privatization process.

Alencar (1996) refers to the two great enterprises that are to be privatized by 1997 in the city of Rio de Janeiro (Brazil): The Electric Company of Rio de Janeiro (Cerj- *Companhia de Eletricidade do Rio de Janeiro*) and The State Gas Company (CEG- *Companhia Estadual de Gás*). The author argues that by 1997, private enterprise will certainly be managing both of these companies, and will have to meet production and distribution goals set by an independent organization, the Regulating Agency of Public Service Concessions ("*Agência Reguladora de Serviços Públicos Concedidos*").

Referring to the public utility services in Brazil, the current situation of regulatory agencies may be summarized as follows. Referring to oil, the so called "National Oil Agency (ANP)" will substitute the Oil National Department ("*Departamento Nacional de Combustíveis*"). ANP will be conducted by six directors nominated by the President and without mandate. According to Rocha (1996), the proposed regulation pending in the Brazilian Congress would maintain the government's ownership of the oil, natural gas and hydrocarbon reserves. However, it would allow the government to contract with private companies for the exploitation of such reserves. All reserves not yet explored would belong to ANP. Petrobrás would be allowed to continue exploring, for three years, all the areas it currently services. For new reserves, ANP would be allowed to enter into concession contracts, through a bidding process, with companies formed under Brazilian law and based in Brazil. Foreign companies would be allowed to participate in the bidding process as long as they form a Brazilian company in order to operate any concession they are granted. When Petrobrás and any other company offer equivalent bids for a concession, the law would require ANP to assign the concession to Petrobrás. The proposed regulation states also that the government's participation in Petrobrás' voting capital is 50% plus one share, thereby preventing the privatization of the company.

In terms of Electrical Energy the "Electrical Energy National Agency" (ANEEL) will substitute the current "*Departamento Nacional de Águas e Energia Elétrica*". The proposed regulation pending in the Brazilian Congress establishes that: (1) the agency would be conducted by six directors indicated by the President and without mandate; (2) questions on chief executive director' decisions could be questioned to the Minister through an appeal; (3) companies would pay the agency a fee accounting for 0.5% of the total service's revenue; and (4) ANEEL could contract consultants in order to accomplish planning and supervision services.

In the telecommunication area, there is not currently an effective project for the implementation of the so-called "Communication National Commission-CNC". As far as CNC has not been completely defined and institutionalized, BNDES- "*Banco Nacional de Desenvolvimento Econômico*"- is currently the agency responsible for the regulatory framework to be adopted.

2.3 COLLUSION BETWEEN REGULATOR AND COMPANY

Regarding the relationship between the regulator and company, it is useful to mention some concepts. Vickers and Yarrow (1988) argue that *Public interest theories of regulation* take it as given that the purpose of regulation is the enhancement of economic welfare via improved efficiency in resource allocation, and that the established agencies faithfully pursue the implied objectives. On the other hand, *Economic theory of regulation* has focused heavily upon the income-distribution consequences of regulatory processes and the incentives faced by the regulators themselves. The theories are intended to be non-normative, and seek to explain how particular forms of regulation emerge and change by evaluating the gains and losses implied by alternative institutional arrangements for the various interest groups involved.

Some of the interest group pressures on regulators fixing the prices of monopolistic firms are clear enough: consumers benefit from lower prices and producers favor higher prices (up to the unconstrained monopoly level). There are other potentially important aspects of the problem, however, that may be relevant: trade unions may align themselves with management on the pricing issue, hoping to appropriate some of the monopoly returns in the form of higher wages or better working conditions; consumers tend to be less well organized as a lobby group than management and regulators could, over a period, make the latter more receptive to the firm's arguments; regulators may be influenced by the prospect of remunerative employment in the industry once their public days are over.

The effect of such lobbying will also depend upon the terms of appointment of the commissioners. In the United States, for instance, factors such as length of service, whether commissioners are appointed or elected vary considerably from agency to agency, illustrating the range of alternatives that have been considered appropriate in different circumstances.

A theoretical perspective on the possibility of collusion between regulator and firm is provided by work on *hierarchies*, i.e. principal-agent relationships consisting of several levels (Vickers and Yarrow, 1988). Examining the principal-agent relationship (regulator® firm), one suppose that the regulator had the public interest at heart. A generalization is the scheme:

government® regulator ® firm.

If members of the regulatory agency have interests that do not coincide with the public interest, we should consider the first link in this chain as well as the second. A further generalization might be appropriate if it was felt that members of government are not necessarily fervent champions of the public interest. Then we might have:

voters® government® regulator® firm.

As far as Brazilian citizens are not familiar with the regulatory culture as an independent feature from the government, it would be very important to be aware of this kind of problem which involves the main actors of the post-privatization process.

Chapter 3

ASPECTS OF REGULATION

3.1 HOW TO FOSTER INVESTMENTS?

Investment poses fundamental problems for regulators in many industries (Vickers and Yarrow,1988). Investment - whether in capacity, R&D, or whatever- is less easily quantified and typically cannot be altered in the short run because sunk costs are involved. The magnitude of welfare effects is illustrated by investment in industries such as telecommunications (e.g., on network development and digital exchanges) and electricity (power stations, transmissions' grids, etc.). It is important to remark that the government, through well designed regulatory contracts, must demonstrate their commitment with safeguards to protect the producers against opportunistic behavior by future regimes so that owners will be able to make investments necessary to upgrade and extend service.

There are two main aspects to be considered: (1) the quest for privatization financing and (2) the financing process in the post-privatization period. The second aspect has more to do with the regulatory agency action.

Kikeri, *et al.* (1992) clarify the position of some countries in overcoming financing constraints in the privatization process. In many developing countries, financing constraints stem from a weak financial system. Government decisions further worsen these constraints. A number of governments (for example, Argentina, Jamaica, and the Philipines) have put state-owned enterprises (SOE) on the market while simultaneously offering high-yield, low-risk, tax-free government bonds. In these cases, poor timing of sales dampened the market for some SOE shares. Prior restrictions on foreign involvement in many countries formerly averse to the concept, such as India and Mexico, have consequently been eased; in country after country the rules are being relaxed, and competition to obtain foreign investment is growing intense. With foreign as well as domestic investors, success largely depends on having a stable economic and regulatory environment in place, as is illustrated by the examples of Chile and Mexico. Regulation of weak financial systems is clearly a legitimate function of government, but this should not preclude institutional investors from playing a positive catalytic role in privatization.

In order to soak up excess liquidity and provide equity to SOEs, Brazil compelled financial institutions and pension funds to convert a portion of their assets to "privatization certificates" for the purchase of SOE shares. Not surprisingly, the financial institutions initially opposed the idea. Brazilian insurance companies and pension funds argued that they could not invest in privatized firms because their regulations prevented them from investing in high-risk ventures (although they have participated in some recent large privatizations - in steel and petrochemicals, for example). Banks have reportedly purchased only a small portion of shares they were expected to buy in the preliminary auctions. Brazilian regulatory agencies must avoid forced acquisition schemes. These schemes run counter fiduciary obligations and reliable business practices.

In reference to the post-privatization period, several questions arise. Do incentives exist for investment? Does Capital investment minimize the cost of producing the output(s) supplied? Is the scale of investment and production appropriate to the conditions of demand and technology?

In many ways, achieving a sale represents success in privatization. The mere fact that private investors have been found who are prepared to risk their own money on the companies, indicates that they believe they can make it work, and creates an incentive for them to do so (IFC,1995).

In the case of TELMEX, the Telecommunications Regulation was created, and the Title of Concession, which established the investment commitments of TELMEX, was extended by 30 years. To make these commitments feasible, rate and tax structures were redefined to allow profits to be reinvested, and some distortions in prices and rates were corrected.

In Brazil, the telecommunication system demands a great deal of investment in order to upgrade several regional areas' webs. There is a strong demand for digital system implementation in many geographic areas. Electricity also stands in for intense investment. Harrel (1993) considers that the foreign investors are guided in their decisions by the existence of certain political conditions. Foremost among these is the *stability of government*. The investor must have confidence that the government can formulate realistic goals and follow through on its

promises. Perhaps most important to foreign investors is belief in the government's commitment to privatization as part of a permanent restructuring of the economy. Perception of risk is greatly increased if privatization is pursued only to raise revenue. This is a significant problem in Latin America. Suárez-Mier has stated that Mexico's privatization programs have been pursued as part of the "macroeconomic and structural reform effort undertaken by the Mexican authorities to confront the economic crisis which resulted from the abrupt termination of the country's international credit flows". Such a statement would give much more confidence to the foreign investor than the Brazilian objective to "raise revenue in order to retire part of the budget deficit and to turn away needed investment expenditures in state-owned enterprises, in order to avoid further deficit financing".

Considering all the aspects mentioned above, it is very important to remark that the ability of the regulator should provide an adequate environment for incentive the private investors in the period post-privatization. The role of well regulated capital markets should also be crucial for an adequate capitalization of the privatized companies.

Referring to the regulation, it is valid to notice that it does not occur in a continuous fashion. Typically, prices are set for an interval of time, during which the firm is free to choose whatever input combination it wishes, until the next price review occurs. Regulatory lag allows the firm to appropriate the benefits of improved cost efficiency until the next review occurs. A longer lag increases the firm's incentives to reduce its costs by innovation or superior organization of factor of production, but it delays the time at which consumers benefit from this greater efficiency. On the other hand, a shorter lag means that consumers benefit sooner, but the incentive to cut cost is reduced. This trade-off between static and dynamic efficiency has a close analogy in the literature on optimal patent life.

It is important to notice that the incentives to investment, arising out of price policies undertaken by the regulator, are susceptible to some important details. As regarded by Vickers and Yarrow (1988), first, the incentive effects of regulatory lags are not necessarily always benign. Strategic behavior designed to influence regulatory review could involve substantial losses in terms of allocative and productive efficiency, which would be offset against the initial incentive to innovation provided by regulatory lag. Secondly, the potential losses from strategic behavior are reduced when regulatory review is less sensitive to current cost conditions. This points to the importance of the information that is independent of the firm's decisions. It is useful to remark the dangers of the firm's having a "monopoly of information". Thirdly, the timing of regulatory reviews is important - not only in terms of the length of regulatory lag, but also whether regulatory review occurs at regular intervals or stochastically.

Hachette and Lüders (1993) argue that capital market and privatization processes are interconnected. In later sections, the ways in which capital markets should improve the privatization process are pointed out. It is important to notice that the question of investment problems in the post-privatization period may benefit from the dynamism of a strong capital market. In Chile, divestiture of public firms increased opportunities for private sector investment. The divested firms were equipped with better and more information than usual.

Moreover, it is remarkable the role to be played by the global markets providing a boundless capital resource for the "new" companies. Foreign capital usually is very sensitive to information disclosure and efficiency provided by a profit-driven market system. Further, the stock markets' level of liquidity is another important issue.

Mody, *et al.* (1995) emphasize the limits the regional Bell operating companies (RBOCs) are facing in the United States as a result of government regulations and saturation of their domestic markets. RBOCs are investing abroad to expand their markets. As a result of the current phenomenon of privatization in the telecommunications sector, the RBOCs have been able to enter new markets.

The authors cite Mexico as an example. In this country, telecommunications were privatized in order to deal with the rising debt of \$105 billion. The country only had 4.9 telephone lines per 100 population. The

consortium (including investment) has doubled and is worth US\$ 2.5 billion. In 1991, the number of telephone lines in Mexico increased by 12,5% (Southwestern Bell Annual Report, 1992).

IFC ("International Finance Corporation") investments in privatized companies are likely to continue to arise as a part of IFC's regular investment program in countries that are newcomers to privatization elsewhere in the world. In Eastern Europe and Latin America and Caribbean, where the process is maturing, these are most likely to be in infrastructure, and in capital market's development.

Portfolio investments are typically carried out by purchasing equity instruments traded in international security markets. The most commonly used instruments are the so-called American Depository Receipts (ADRs) and Global Depository Receipts (GDRs). These instruments have been used extensively in the sale of telecommunications in Latin America countries. In July 1990, Chile became the first country to use ADRs for the sale of the remaining part of Telefonos de Chile.

Petrazzini (1993) adduce an important example of foreign capital participation in the post-privatization period. After the purchase of ENTEL ("*Empresa Nacional de Telecomunicaciones*") south by the Telefónica consortium, the participation and diversification of foreign capital quickly expanded. The company offered preferred shares in the international stock market, through Citicorp, which were bought by various foreign corporations.

Brazilian steel industry's experience provides a hard evidence on post-privatization efficiency improvements. Since 1993, after the privatization process, the steel sector companies have achieved unprecedented performances. Thus, it was granted credibility to the process and the private investments have been made in a large scale. Table 3.1 presents the evolution of five great steel companies' annual production during the period 1990-1993.

Table 3.1 - Evolution of the annual steel production (thousands ton)

Companies	1990	1991	1992	1993
CSN	2,848	3,524	4,363	4,337
Usiminas	3,464	4,135	4,033	4,132
CST	1,986	3,296	3,179	3,571
Cosipa	2,901	2,765	2,960	2,952
Açominas	1,933	2,086	2,127	2,375
Total	13,132	15,806	16,662	17,367

Source: IBS.

Brazil has some important developed stock markets. Nowadays, "Bovespa" (The São Paulo Stock Exchange) has the greater liquidity (more than 70% of the total amount are negotiated in this market). There are some important samples of ADR's issued by Brazilian companies, related to stocks or bonds (e.g., "Aracruz Celulose", "Usiminas") in the post-privatization period.

On the one hand, specific regulatory agencies must be able to conduct the endogenous process, fostering private owner's investment. On the other hand, Brazilian securities agency must be able to avoid obstacles, improving the exogenous environment for foreigners' investors. Reaching these aims should provide favoring investments in the post-privatization period.

Summing up, an appropriate definition of the regulator in the price system (as it will be developed in later section) will play an important role by spurring public utility companies' investments. Otherwise, Brazil must develop regional stock markets and expand its participation in the global markets. Brazilian securities agency ("*Comissão de Valores Mobiliários*") must address a more flexible legislation in order to foster companies' opening of capital. A

flexible and integrated system, including all institutional investors (mutual funds, pension funds, etc.) will work out in the right way.

3.2 COMPETITION AND REGULATION

Sherman (1989) argues that the free entry of competition can put any supplier to a test of efficiency and thereby force behavior that serves economic welfare. In special circumstances in which sunk costs are unimportant, free entry can serve to discipline even a single monopoly supplier effectively. And the sustainable prices that will result can serve economic welfare. But often sunk costs are great and economies of scale or scope hinder competition, free entry is abandoned for other forms of regulation.

Usually, a single enterprise is franchised to provide service and is supervised by a regulatory agency. Without the force of competition, it is difficult for the regulator to induce welfare-maximizing behavior from the monopoly enterprise. Incentive schemes have inherent flaws in this situation, which political institutions are unable to remedy. Much as the economic institution of market competition may stress efficiency and ignore income distribution by accepting the status quo, political institutions tend to focus on income distribution and may choose inefficient economic outcomes. Thus, designing institutions that will reliably pursue economic welfare is a difficult task to be assumed by an appropriate regulatory agency.

Referring to privatized enterprises, Vickers and Yarrow (1988) suggest that **yardstick competition** is a method of promoting competition between regulated units indirectly via the regulatory mechanism. Sherman (1989) defines **yardstick competition** as a condition of setting prices or evaluating performance by reference to other firms' contemporaneous costs. The author argues that it is adequate to motivate socially efficient input choices, free of the bias that is possible under rate-of-return regulation when allowed profit is based on the firm's capital input. As referred by Hachette and Lüders (1993), this option illustrates the following proposition. Given an asymmetric information, when a principal has many agents under control, the optimal incentive scheme involves the creation of circumstances in which the rewards of each agent are contingent upon the performance of other agents, as well as his own. Thus, the price that one agent can charge depends on costs incurred by others. Incentives for allocative and internal efficiency exist, provided agents face similar circumstances (in the absence of collusion). Internal efficiency exists because each retains the benefits of its cost-reducing activities, and allocative efficiency is obtained because industry prices are kept in line with industry costs.

World Bank (1995) reinforces the importance of competition. In telecommunications, once a textbook case of a natural monopoly, recent advances in computers, switching devices, fiber optics, and wireless communications have greatly increased the potential for competition. For example, it is now possible for several interconnected suppliers to compete in providing such services as long distance phone calls, and a variety of value added services (e.g., data transmission, paging, private circuits). Most countries have been taking advantage of these advances in technology to inject competition into their regulatory contracts.

The World Bank research report (1995) argues that where technology does not permit competitive markets (because of the economies of scale, for example, in laying the cable and wires for local networks), there are other ways to introduce competition. Contracting with several suppliers in one country (even if each supplier is a regional monopoly) enables the regulator to compare performance across firms. Barring collusion between firms, such so-called **yardstick competition** gives the regulator a mechanism to verify information by individual firms and to gather information about the impact of common environmental factors (e.g., weather) on relative performance.

ENTEL (*Empresa Nacional de Telecomunicaciones*) privatization process illustrates the establishing of a yardstick competition model. The firm was reorganized into two separate enterprises, each of which acquires the concession to provide service in a certain geographical area (northern and southern areas), thereby probably trying to stimulate a sort of "competition by comparison" between natural monopolies. Once the two areas of telephone service had been awarded to the winning bidders, the new enterprises were set up to provide Argentine telecommunications. They were called *Telefónica Argentina, S.A.* and *Telecom Argentina, S.A.*, and in both cases their equity was made up of contributions from the enterprises operating the service, international banks, and Argentine entrepreneurial groups.

Finally, it is important to notice that regulation is not only called for when competition is absent. Regulation designated to maintain freedom of *entry* is sometimes essential if threats of potential competition are to have force. The regulatory agency is supposed to have greater knowledge and expertise regarding industry conditions than a generalist competition authority can have. In sum, the task of "regulation" to promote and maintain competition in industries with dominant privatized firms should belong to the regulatory authority for that industry (Vickers and Yarrow, 1988).

3.3 ORGANIZATIONAL MODELS

In many cases, changes in the legal status and structure of the state-owned enterprise (SOE) need to be effected prior to sale (Kikeri *et al.*, 1992). Campos (1996) reinforces this point of view: "...the modern models adopted by the United Kingdom and Argentina are based on the horizontality and non-verticality. According to these models, the electricity companies, for instance, are accounting or legally dismembered. As consequence, generation, transmission and distribution can be separated. As this occurs, benefits and efficiency can be accomplished, avoiding crossing subsidies that inhibit the system expansion and deteriorate the service quality...".

Restructuring might also involve the breakup of large firms and monopolies into viable and nonviable units, the separation of competitive from noncompetitive activities, and the identification of peripheral assets (such as real estate holdings) that can be sold as separate concerns. The extreme case is in Eastern Europe: in June 1990 the former German Democratic Republic had about 10,000 large and medium-size enterprises to divest; by November 1991 it had sold 4,500 - but it still had about 8,000 firms to deal with because of the breakup of giant conglomerates into smaller units.

The method of reorganization into component parts involves the breaking-up or reorganization of an SOE into several separate entities or into a holding company and several subsidiaries. Vuylsteke (1988) observes that there are several possible ways to proceed that will depend on the legal form of the enterprise. The options include:

- break up into several legal entities, as in the case of ENDESA, the state-owned power generating and distributing company in Chile;
- transformation of the state-owned enterprise into a holding company that acquires the shares of the subsidiary companies which have taken over the assets and liabilities of the original SOE. This method permits a gradual spin-off of some or all of the now smaller entities as purchasers are found. A purchaser can buy several subsidiaries, but this method typically looks to a wider market for the transfer of ownership;
- gathering some activities, with the government retaining others (e.g., the non-commercial ones). Such hiving off often amounts a simple sale of assets;
- the sale of productive facilities in single or groups of units rather than as a whole.

The chief aim to be pursued in these cases is encouraging competition after privatization. Once one of the above steps is taken, privatization of the individuals components may be carried out through any of the other methods.

The method of fragmentation permits piecemeal privatization. It further permits different methods of privatization to be applied to different component parts, thereby possibly maximizing the overall process. If an SOE incorporates too many activities that, in the aggregate, are not attractive to potential investors, whereas individual units would be, fragmentation is a possible alternative.

In Brazil, Luis Carlos Mendonça de Barros reinforces the conditions for Eletrobrás and Telebrás : "...The holdings will be extinguished and the new firms will be sold separately. The minority shareholders' group will keep the participation in the new firms to be created in a original book-value proportional basis. Each firm will carry on the assets and liabilities corresponding to the former holding...".

The main idea is to gather units with different geographical situations. The 27 companies components of Telebrás system should be reorganized in four groups. As conceived, each new group should gather most lucrative units with less attractive units. Economist Márcio Wohlers argues that this model should follow the so called American "*baby bells*". According to Wohlers, this scheme represented by the beginning of 1996 a kind of regional private-monopolies.

On the other hand, the project already sent to the Brazilian congress, related to the so called band B's services (cellular phones) would be distributed in ten different geographical areas. The ten areas will be gathered in two main groups. The first group will include the most "noble" and worthy areas (São Paulo, Rio de Janeiro, Espirito Santo, Minas Gerais, Santa Catarina e Rio Grande do Sul). The second group will include the least "attractive" areas. Each winner group will be able to explore one area in each group. The referred procedure will permit the regulator to perform successive comparisons among the performances accomplished by the future entrepreneurs. As a result it will be established a yardstick competition regime. It is important to notice that the investors are supposed to invest in both companies (one of each group) in order to achieve best results. Therefore, this will be a great source of investment fostering.

The effectiveness of such arrangements will depend on the creation of a strong and independent regulatory agency. It should be able to: (1) evaluate the performances of each corporation, (2) impose the rules contractually established and (3) accomplish an adequate benchmark between the "new" companies, fostering investments and favoring consumers.

Summing up, the appropriate definition of the organizational model will be responsible for the attainment of the two principal post-privatization objectives: **internal** and **allocative efficiency**. The challenge for decision makers will be to identify the specific needs and to adopt solutions and approaches to the individual circumstances.

Chapter 4

THE PRIVATIZATION PROCESS

4.1 VALUATION

The valuation of enterprises should be adapted for privatization objectives of the privatization. If the goal is to sell the company, the main criterion should be a sale price based on the firm's potential for generating profits in the future (Sánchez and Corona,1993). This would include the post-privatization regulatory regime and the geographical and labor situation.

Kikeri, *et al.* (1992) consider that letting the market decide the sales price through competitive bidding procedure is critical for speed and transparency. At the same time, asset valuation can be essential for setting a benchmark for sales and ensuring a fair above-board process.

Campos (1996a) considers two main kinds of public utility companies to be privatized. The first one is that company which is listed in the stock market and with a substantial volume of negotiations. The second one is not listed. For the first type, Campos(1996a) considers that the market, represented by the firms' shareholders, is the best evaluator. In spite of consultants being well informed about the conditions of the companies and some perspectives, they do not run the business risk. Thus, it should be better if the shareholders and their respective representatives (e.g., investment banks, mutual funds, pension funds, etc.) evaluate the enterprise in a public offering of the block of control previously announced. As regarded by IFC (1995), in privatization, past is not prologue. In a large number of instances the balance sheet of the state-owned enterprises (SOEs) features book values of assets (and often, the debt incurred to finance them) which exceed their practical value to any potential purchaser. Having invested, the least governments want is to recoup their outlays, particularly if they are going to absorb most or all the corresponding debt. This is often unrealistic. More generally, many governments lack the experience to value enterprises themselves and most are nervous about the risk of selling-off the crown jewels too cheaply, or being perceived to do so by the public. An independent valuation that is subsequently exceeded by the sale price suggests that the country has gotten a good deal. The perceived need for this independent measuring stick is particularly strong when the country risks involved mean that investor demand may not be high and competition may be limited.

An overemphasis on valuation can prove problematic. Valuation is thus one of the most politically charged elements of privatization. This is not helped by the fact that it is an art rather than a science (IFC,1995). Even in countries with sophisticated capital markets, technical appraisals seldom estimate correctly the market price of assets that have never been traded before. In developing countries, SOE valuation are all the more tricky: the macroeconomic and operating environment is changing rapidly; financial data are of poor quality and reliability; existing accounts do not conform to acceptable commercial standards; comparable are few; and the market is thin. Moreover, overvaluation and unrealistic expectations on the part of government create serious delays. Many divesting governments have chosen to set asking prices on the basis of historical book value - on the seemingly reasonable grounds that they wish to recover at least what they put in- but this has often led to valuations of eroded assets that bear little resemblance to what any buyer will offer (Kikeri, *et al.*, 1992).

Bishop *et al.* (1994) argue that, at first sight, it may appear that a major economic gain from privatization is the revenue accruing to the government from asset sale. Further reflection suggests that this gain is illusory. If the sale value of the firm to be privatized is equal to the present value of its expected public ownership profit stream, then the public sector has not altered its net worth through the privatization process . On this view, real economic gains remain confined to productive efficiency improvements. On the other hand, the authors also remark that the UK experience suggests that the risks of setting the share price too high, so that underwriters are left with large quantities of unsold shares, are perceived to be greater than the risks of setting the price too low so that the issue is oversubscribed.

In Brazil, BNDES ("*Banco Nacional de Desenvolvimento Econômico*") is currently the regulatory agency responsible for contracting two consultants. They are supposed to perform, respectively, two classes of services - "A" and "B"- for the privatization program. Service "A" comprises an economical evaluation of the company, a competitiveness and investment analysis, and the indication of a minimal price for the shares. Service "B" comprises besides of a second economical evaluation and a indication of a minimal price for the shares, the suggestion of a selling model to be adopted. This model strengthened the BNDES decision power, since the public opinion became more favorable to the process.

One may conclude that this institutional model adopted, excluded Congress from the process and prevented the active participation of the state bureaucracy from the decisions. Thus, BNDES became the leader within the

conduction of the program. At the same time, the consultants assumed a very important role in financial-economic evaluations, as well as in financial model definition.

4.2 SALE MECHANISMS

There are mainly six kinds of sale methods within the scope of this work, namely: (1) public offering of shares or open auctions; (2) private sale of shares or controlled auctions; (3) new private investment in an SOE or gradual sale of the firm; (4) sale of SOE assets; (5) reorganization (or break-up) into component parts; and (6) management-employee buyout.

As considered by Vuylsteke (1988), under **public offering of shares** or **open auctions**, the state sells to the general public all or large blocks of stock it holds in a wholly or partly owned SOE. Technically, this transaction amounts to a secondary distribution of shares.

IFC (1995) considers the importance of **private sale of shares** or **controlled auctions** where buyers must make substantial business investigations ("due diligence") in order to understand the value of the business for sale, and the numbers of finalists is likely to be limited. Excluding public offerings, most major corporate sales and privatizations proceed in this manner. Controlled auctions may begin with a public request for bidders to submit their qualifications, including background and financial capability. Once these are established, the seller may also wish to hold a preliminary bidding round in which "indicative" financial proposals are made in order to identify serious bidders likely to be finalists. Following this winnowing procedure, the finalists are given much greater access to make a fully-binding bid. This permits immediate closure following the final auction. This process of bidder pre-qualification limits the damage which can be done to the seller's business from disclosure of proprietary information concerning its cost, margins, customers, and so on. Disclosure is limited only to "serious" and capable bidders. Knowledge is power in such circumstances, and its control enables the seller and its agents to use their superior information to work the process to their advantage, by, for example, maximizing the appearance of the bidding interest.

New private investment in an SOE or **gradually sale of the firm** generally occurs when a government may wish to add more capital to an SOE (mostly for rehabilitation and for expansion) and achieve this by a capital increase opening equity ownership to the private sector. In many instances the SOE will be transformed into a mixed economy (state-private) company. An example of this method is the capital increase of Rhône-Poulenc (chemicals) in France. In addition, it should be considered where the sudden sale of government holdings in several SOEs may be politically difficult to authorize and carry through.

Under the previous three methods of sale, the private sector purchased shares in an SOE that was a going concern. The **sale of SOE assets** refers to assets rather than shares in a going concern. A government may sell the assets directly; the SOE may dispose of major assets. In the case of *Compagnie Générale de Constructions Téléphoniques* in France, this was the preferred method (following dissolution) for a variety of reasons, principally the need to fragment the enterprise (Vuylsteke, 1988).

The **reorganization into component parts** method involves the breaking-up of an SOE into several separate entities or into a holding company and several subsidiaries. This technique can be regarded simply as a form of restructuring prior to privatization (as previously mentioned in section 3.3 - "Organizational Models"). However, as regarded by Vuylsteke (1988), since it is found to be a distinct action with many applications in developing countries, it is dealt with as a separate form of privatization.

The **leveraged management-employee buyout** involves the use of credit to finance the acquisition, with the assets of the acquired company generally used as security. The special characteristic of the financing arrangements for these kinds of buy-outs is that the financiers provide the bulk of the funds but take a disproportionately small portion of equity; on the other hand, the buy-out team obtains a large share of the equity but provides a small proportion of the funding.

Considering the privatization process in Argentina, Chile, Mexico and Colombia, Sánchez *et al.*(1993) argue that, in some cases, speed has meant sacrificing price, as in the Argentine government's failure to set even minimum requirements in the adjudication. Moreover, the urgent need for liquidity paradoxically may impede attainment of a maximum level of resources and even unnecessarily prolong the period of sale, as it did in the case of Aerolíneas Argentinas. According to the authors, the experience of Chile and Mexico show that concentrating decision-making capacity in the hands of a single entity that had the authority to act was crucial for ensuring that the privatization process was consistent with the rest of the economic policy. In Colombia, the lack of an agency responsible for the privatizations caused some of the sales to proceed without clear objectives (and in some cases with conflicting objectives), as in the first attempt at privatizing "*Banco de los Trabajadores*". Closed bidding appeared to be the most appropriate mechanism for privatization when the aim is to transfer control of the enterprise or to supervise the source of financing. In Argentina, the government's obvious unwillingness to declare the bidding and collusion among the bidders to distribute the road concessions among themselves limited bidding credibility.

In Brazil, the privatization process is more likely to join: auctions, public offerings and employees offerings. Two important processes have occurred in the public utility companies privatization process: Excelsa and Light - both companies responsible for electricity distribution. As for ANEEL (National Agency for Electric Energy), the agency has not been completely defined and institutionalized. Thus, BNDES- "*Banco Nacional de Desenvolvimento Econômico*" - is currently the agency responsible for the regulatory framework to be adopted.

4.3 THE "GOLDEN SHARE"

Several techniques exist whereby a government can retain powers of approval over key actions by an enterprise after it has become a minority shareholder or even after total privatization. It should be stressed, however, that these techniques are not a substitute for government control over the management and operations of enterprise. Where a government wants to retain the rights of an ordinary shareholder, it should retain majority or equivalent control (Vuylsteke, 1988).

One technique is the "golden share". In preparing or amending the charter of an enterprise as part of the readying process, a special share is created that can only be held by the government and that entitles it to special rights as described in the company charter. This technique was used in several of the United Kingdom privatizations through public offerings. The French privatization law provides for the use of this technique (*action spécifique*) in cases where national interest so requires, and it was also applied in several public offerings of SOEs, namely: *Elf Aquitaine* (petroleum), *Havas* (media), *Bull* (electronics), and *Matra* (includes armaments). The Malaysian government retained a golden share in the privatization of Malaysian Airlines System (MAS) and Malaysian International Shipping Corporation (MISC). This technique has not been used exclusively with public offerings, and it was applied in the privatization of Sealink in the United Kingdom, a private sale, on the basis of bidding, to a foreign company (which intends to offer Sealink publicly within a few years).

Vuylsteke (1988) argues that the golden share normally enables the government to ensure that certain major decisions affecting the operation of the enterprise are consistent with its policies. It typically entitles the government to receive notice of, and attend and speak at, shareholder's meet **but not to vote at such meetings**. It entitles the government, *inter alia*, to approve (or veto) specific variations of existing (strategic) provisions of the company charter such as dissolution, limitation on shareholdings, the nationality requirement of the chief executive officer, the issuance of voting shares that are not identical to the existing ordinary shares. It effectively controls takeovers.

Campos (1996a) alerts to the dangers of the golden share in the Brazilian government point of view. It is fundamental to be aware of the excesses required by the government' institutions in Brazil regarding the rights of the golden share. The investors must be protected from interventionism, that has been practiced in Brazil for the last decades.

Chapter 5

PRICE REGULATION

5.1 REGULATORY BEHAVIOR

A necessary condition for *justifying* price regulation of a firm is that the firm must be a natural monopoly. A sufficient condition for *observing* price and entry regulation is that there exist demand for the wealth transfers that such regulation can provide and that there exist a political body able to supply the wealth transfer via regulation (Berg and Tschirhart, 1988). Taken together, these statements suggest first, that where there is a natural monopoly, there will exist a demand for supply of regulation. Consumer groups will seek low prices and firms will seek high profits and protection from entrants. Moreover, in many cases of natural monopoly, some type of price and entry regulation will be justified. The exceptions are those markets in which there are no barriers to entry and the natural monopoly is sustainable. Table 5.1 suggests some policies toward natural monopolies. Second, there will exist a demand for and supply of regulation in many markets in which natural monopoly is not present. Accordingly, it would be observed regulation that is wholly unjustified by natural monopoly arguments. On the other hand, there will be cases of justified regulation. Price and entry regulation should follow guidelines that will promote efficient price and output choices. Thus, valid economic goals may be supplemented by political concerns and the agreement of groups competing for transfers.

Table 5.1 - Appropriate regulatory policies

Type of monopoly	Barriers to entry	No barriers Sustainable	to entry Not sustainable
Strong natural monopoly (marginal cost pricing creates deficits)	Regulate to deviate from marginal cost pricing to eliminate the deficit and to avoid monopolistic prices.	Do not regulate. Allow threat of entry to force break-even prices.	Regulate to deviate from marginal cost pricing both to eliminate deficits and to avoid monopolistic prices, while disallowing entry.
Weak natural monopoly (marginal cost pricing allows nonnegative profits)	Regulate to enforce marginal cost pricing and address "problem" of excess of profits.	Do not regulate. Allow threat of entry to force marginal cost prices.	Regulate to enforce marginal cost pricing and address "problem" of excess profits while disallowing entry.

Source: Berg and Tschirhart (1988).

Price regulation is the most important mechanism that governments have for rewarding or penalizing the owners of private, regulated monopolies. An ideal price regulating system will provide owners with incentives to invest and improve service and will reward improvements in efficiency; while at the same time passing on the largest possible share of the resulting savings to consumers. In short, ideal price regulation will achieve outcomes very similar to a competitive market (World Bank, 1995).

It will actually be a big challenge for the Brazilian government to assume a regulatory behavior regarding the public utility companies. The chief institutions that must be strengthened will be the regulatory agencies. As it will be discussed in the next section, it is crucial that the executive branch of the Brazilian government resist the temptation to interfere within the agencies' actions. The regulators must be exempt from forthcoming political pressures presumably exerted by the respective Ministries. Reaching this aim, would be one of the most important features of the whole privatization process in Brazil.

5.2 PRICING SCHEMES

Schemes to regulate the price of public utility services include: rate of return, price caps, and benchmark regulations.

Under rate of return regulation, prices are set so that the firm can recover its costs and make a fair rate of return. This scheme has been criticized on the grounds that it induces a firm to inflate costs; invest excessively; and engage in cross subsidization by shifting costs from services in which it faces competition to those regulated services in which it does not (World Bank, 1995). Sherman (1989) argues that rate-of-return regulation (1) biases the firm's choice among productive inputs, (2) fails to control monopolistic reliance on price discrimination, and (3) does not encourage technological change.

Under price cap regulation, regulators impose a ceiling, often based on the retail price index, on the average tariff increase for a pre-specified basket of services in which the firm has a monopoly. The regulator can periodically change the pricing formula so that improvements in efficiency are passed to the consumers. In theory, this avoids the problems inherent in rate of return regulation, since firms are protected from inflation and have no incentive to expand their asset base inefficiently; but to the contrary, they can capture any benefits from improved efficiency that lowers costs below the price ceiling in the period between adjustments in the pricing formula.

Berg and Tschirhart (1988) consider that price cap regulation permits the firm to capture the entire cost saving, providing an incentive for adopting the innovation. Price caps are being considered by both state and federal regulatory commission in the United States as incentive-enhancing mechanisms.

Benchmark regulation works on a similar principle, except that prices are set according to the costs of a similar firm elsewhere or a hypothetical efficient firm. Again, management has an incentive to improve efficiency, because the firm reaps the benefits until prices are renegotiated. Table 5.2 shows seven countries', pricing regimes and frequency of revisions.

Table 5.2 - Price Regulation in Argentina, Chile, Jamaica, Malaysia, Mexico, Philippines and Venezuela

Country	Pricing Formula	Frequency or tariff review
Argentina	Price Caps	Semiannual
Chile	Benchmark	Every five years
Jamaica	Rate of Return	Company request
Malaysia	Price Caps	Company request
Mexico	Price Caps	Every four years after 1988
Philippines	Rate of Return	Company request
Venezuela	Price Caps	Quarterly

Source: World Bank (1995)		

Experiences have shown some results. Chile reduced reliance on the firm's information by using benchmark regulation. Argentina, Mexico, and Venezuela followed the example of the United Kingdom and set a cap on price increases that was based on the inflation rate minus an adjustment for improvements in efficiency. Chile and Mexico announced that they would wait five and four years, respectively, between price revisions; this motivated the firms to reduce the costs because they could retain the benefits in the interim. Where the United Kingdom-style, price cap formula is followed, as in Mexico, it is possible to pass some benefits from efficiency gains to consumers by setting price increases below inflation.

One can argue that Brazil will benefit from the experiences of the other countries. Again, the regulatory agencies' autonomy in imposing rules to the private owners will play a decisive role within the success of the implementation of an effective price regulation system.

5.3 ARBITRATION AND APPEALS

The World Bank (1995) emphasizes the importance for recognizing how countries have established their commitment by specifying conflict resolution mechanisms, assigning enforcement of regulation to appropriate agencies, and insulating the regulatory regime from capricious political behavior. Some worldwide illustrative samples subsidize the comprehension of different situations involving arbitration and appeals.

In the 1990's, according to McBeth (1996):

"... British Gas has increasingly faced the regulator's anger because it was privatized as a single entity and monopoly supplier. Since privatization, the regulator has tried to introduce a higher degree of competition, with the Office of Fair Trading recommending in 1991 that British Gas should separate its pipeline and marketing operations from the supply business, and that by 1995 British Gas' share of the industrial market for gas should be reduced from 90 per cent to 40 per cent. This was compounded in 1992 when the Office of Gas Supply (Ofgas) regulator compelled British Gas to maintain price rises at five per cent below inflation, with the result that in August of that year British Gas requested the Monopolies and Mergers Commission to inquire into the industry as a whole in order to show that its pricing structure was not monopolistic."

Still in the 1990's the author states:

"...the problem in the case of water was not only that it was viewed as less naturally suitable for privatization but also because by the mid-1980's environmental issues had risen significantly in importance thereby politicizing still further decision to privatize. This meant that policy issues shifted to a broader constituency not usually associated with the water industry, with the Confederation of British Industry and the environmentalists making great play on the environmental regulatory issue. The latter were able to demonstrate that the European Court could rule as illegal any post-privatization structure for the water industry that did not set up a genuinely independent environmental regulatory authority. The government therefore imposed a regulatory solution, but having done this immediately brought the industry back into the consultation process by making major concessions. In order to maintain overall support of the industry for privatization. Financial incentives were granted to cover the costs of tough European Commission pollution controls and generous cost-pass-through measures were introduced relating to water charges..."

Chile's regulation defines step-by-step procedures for arbitration and appeals. For example, disputes between the firm and regulator over pricing are resolved through a three-member arbitration committee, with one member selected by each of the two parties and the third by mutual agreement. Disputes over entry are resolved by a government appointed antitrust commission, with possible appeal to the Supreme Court. Disputes over interconnection are subject to restrictive arbitration. In contrast, although firms in Argentina have the right to bring disputes concerning pricing, entry or interconnection to the attention of the new established regulatory agency (CNT), the latter's decisions can only be appealed to the national executive (the Minister of Economy). In

Venezuela, disputes over interconnection are resolved through arbitration at the request of either party without further appeal. However, disputes regarding tariffs can only be brought to the attention of the regulatory agency (CONATEL), and it is unclear what recourse the company has beyond that (World Bank,1995).

Ginsburg *et al.* present some characteristics of American Federal Communication Commission (FCC). It is an independent, bi-partisan agency, however as a practical matter, it must be sensitive to the view of both: the Administration and the Congress. Congress oversees FCC's activities. The commissioners testify before Congress, informing legislators about communications issues and policies.

The authors consider that the Congress is not "shy" about letting commissioners know when they are making mistakes and Congress can pass laws overturning FCC actions. FCC activity is checked by the Federal Courts and the right of appeal is to Court of Appeals (not District Court). FCC is a typical administrative agency. While Courts adjudicates cases, Congress issues regulations that have the power of law and Executive enforces its regulations.

FCC's proceeding may be summarized as follows: (1) FCC gives public (stakeholders, trade associations, consumer groups, Congress) certain amount of time to respond comments; (2) FCC usually decides matters on basis of written record (comments and reply comments); and (3) majority vote decides. Commissioner votes in one of three ways: vote for the item; concur in the result (distance himself from the item, agreeing with the bottom line but not with the rationale) and dissent (separate statements in concurring and dissent items).

In sum, it is a major alert to Brazil the fact that some differences are due to the regional country characteristics that are not easily changed in the short run. One relevant example is the legislature that easily overturns law. But some countries have designed contracts that overcame such constraint. As regarded by the World Bank (1995), regulatory contracts are tough to design but not impossible; even though compromises were necessary and there were many imperfections in design, important gains were still achieved.

Chapter 6

CONCLUSIONS

Some aspects are extremely important regarding the characteristics of the regulatory agencies in the Brazilian privatization process. They are, namely: (1) independence of the regulatory agency; (2) transparency and competition in the privatization process; (3) dynamic sale mechanisms; (4) adoption of adequate procedures in order to reach the desired targets; (5) continuously concerning within the investments to be accomplished; and (6) management of the collusion between regulator and firm.

It is crucial to remark the importance of an independent regulatory agency in the success of the Brazilian privatization process. An independent regulatory agency does not imply an agency that is independent of the government. Rather, it is a government agency that is sufficiently free of the political process in order to ensure credibility and continuity in the regulatory process. The regulators should be nominated by the President with the Senate's approval. The mandates must be fixed. The government **must grant to private investors legal guarantees that the basic established parameters would be observed**.

This aspect of independence is particularly important in attracting private investment, since capital markets discount regulatory risk, financial and operating risk, in determining the required cost of capital for regulated utilities. Therefore, the creation of a regulatory agency with a technically competent staff that will create a stable and consistent regulatory environment which should attract additional private investment.

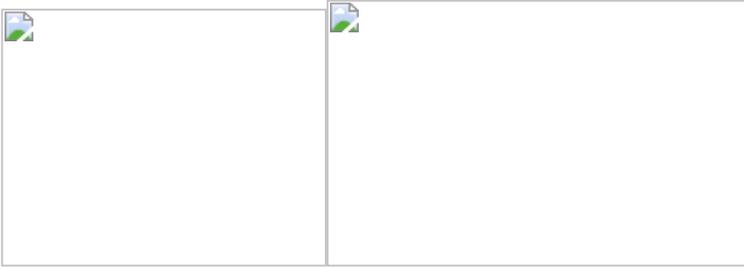
All participants in the privatization process should be concerned about the design of the regulatory framework and the function of the regulatory entity. For the seller (government), a well-designed regulatory structure will ensure the highest possible value and that reasonable public service obligations can be identified and carried out. For the potential purchaser, **the proper regulatory structure ensures stability and the protection of investment. For competitive service providers, it defines opportunity.** So, rather than bringing huge revenues from the selling process, the privatization will foster investments in the Brazilian economy as a consequence of an absolute compatibility among regulator, investors and consumers. This aspect reinforces the ideological stream that considers the privatization process as not an end in itself, but rather, a means to other, broader ends.

A regulatory agency responsible for the privatization process **must guarantee maximum transparency in order to maximize public support for privatization.** The potential buyers must be aware of the principal aspects related to the process. Kikeri *et al.*(1992), reinforcing this position, argue that transparency can be ensured through clear and simple selection criteria for evaluating bids, clearly defined competitive bidding procedures, disclosure of purchase price and buyer, well defined institutional responsibilities, and adequate monitoring and supervision of the program. Lack of transparency can lead to a political backlash and is often associated with poorly structured - and very costly- sales. The open public auction is the ultimate in transparency. As suggested by Campos (1996a), the majority of control (represented by fifty percent of the common stocks plus one) should be offered at a public auction, previously announced by the agency. The best offer should be considered *winner*, avoiding the need for previous evaluations. This procedure assumes that the investors are the best evaluators of the business, as well as the political risk. But, at least currently, this methodology - clearly more dynamic- is not possible due to the legislation. As mentioned in section 4.1 ("Valuation of Firm's Control") the auction is preceded by a previous evaluation by consultants contracted by BNDES. In the cases of companies that have a tradition of being heavily traded in the capital markets, this "ritual" is unnecessary. It hinders the agility of the process.

It is important to note that, in many cases, the Brazilian government owns more than fifty percent plus one of the state-owned enterprise's common stocks. Whenever the government owns more than the necessary to be a majority shareholder, it actually works as an "over-ownership". This scheme, as regarded by Benj3 (1996), reduce the value of the common stock relative to the preferred stock. In these cases, it seems to be useful that the government sells, previously to the privatization process, the block of shares that surpasses fifty percent. This procedure would bring the common stock value closer to its actual market value. The Brazilian Federal government decided to sell thirty one percent of its participation in Petrobr3s' control. Regulatory agencies should avoid such an ownership's concentration as government's property.

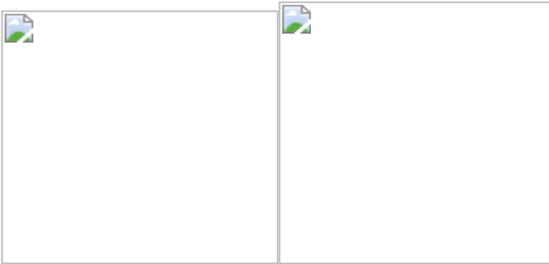
Another important issue, related to the corporate finance environment, refers to ***the possible maximization objective of privatization's revenues.*** An alternative suggestion to maximize revenues from the selling process, could be accomplished by a scheme based on auctioning, increasingly, the block of control (two or three auctions). This procedure should follow the *consumer's surplus* along the demand curve for common stocks. The consumer in this case should be considered the investor. The demand curve should represent the *locus* of the price-quantity bundles that the investor should be willing to pay in order to acquire increasing control of the firm.

As the whole block of control is divided, it seems that the investors should be willing to pay for the first share a superior value than the equilibrium price. The following picture is an attempt to describe this behavior in a roughly conceptual *proxy*. It represents a static scheme.



First hypothesis: three auctions Second hypothesis: one auction

A more dynamic scheme should consider successive "shiftings" within the demand curve as consequence of an increasing marginal attraction over the majority of control.



First hypothesis: three auctions Second hypothesis: one auction

In the two situations, the "A + B + C" area is greater than the "D" area. There is no empirical evidence supporting these assumptions, but if it occurs in anyway the revenue proceeding from the three auctions procedure is consequently greater than in the second hypothesis (one auction). Holden and Rajapatirana (1995) emphasize that in the first round of Chile privatization process, from 1974 to 1981, Chilean authorities offered **controlling-share packages** at auction and granted credit purchases. According to the authors, the primary objective of the auctions was to maximize the sale of public sector assets.

It is useful to regard this situation as a monopolistic price discrimination, where the product is "common shares". It is important to notice that this is a conceptual approach. It could be useful in ***some extraordinary and specific situations***, but it should be noted that this procedure may induce a division in the firm's ownership. Furthermore, this partition may cause some additional future problems within the relationship among owners and regulators.

Referring to investments, as suggested by Fowler and Pisciotta (1993), in the initial stages of transition, the regulatory entity must focus on strengthening the backbone infrastructure of the public utility services. This stage may require that certain basic services be provided on a monopoly basis to ensure that the proper financial incentives exist to maximize value in the privatization process and to ensure adequate development of the respective plants.

In the Brazilian implementation of telecommunications' privatization program, for instance, the implementation of pricing policies will encourage investment. Policies should seek to achieve more "rational" prices for use of the network, development of technical standards and network architecture for interconnection of competitive providers, and the establishment of subsidy mechanisms to provide service to rural and high-cost areas.

It is remarkable the aspect of regulation which has to do with the consequences on income distribution of the regulatory processes and the incentives faced by regulators themselves. As referred previously, the group pressure on regulators from interested parties is clear enough, as consumers benefit from lower prices while producers benefit from higher. These aspects imply in a collusion among regulators, companies and consumers. In order to minimize the consequences of the collusions, regulation in the UK after privatization, as referred by McBeth (1996), has evolved in the following manner:

- an informal system of rule making which operates through negotiation and bargaining in the shadow of the law;
- a system of controls in the economic regulation of industries which is clearly at odds with the original intention of privatization , granting that: (1) the regulatory regime struck at the same time of privatization would remain the basis for the future commercial operation of the privatized utilities; and (2) the regulatory system would be a rules-based one with intervention along agreed lines.

Reinforcing Fowler and Pisciotta's point of view, Brazilian regulatory environment must follow technological improvements. As previously mentioned, it is also important to maintain the commitments assumed with the private investors. The greater the chance that presidential decree can be reversed, the weaker the credibility of contract's safeguards against opportunistic behavior on the part of successive government (World Bank, 1995).

Brazilian regulatory agency must be endowed with operational autonomy, meaning independence from the other governmental institutions and from the privatized companies (Bassani, 1996). An independent budget is another important issue to be regarded. Enforcement is most effective when it is in the hands of a neutral agency with the power to enforce and the capacity to process the necessary information. Neutrality is assured when the enforcing agencies are independent of the bureaucracy or, where appeal is through the judicial system. The courts are known for their independence. The Brazilian government must reinforce the role to be played by the Judiciary branch within the process. As regarded in the previous section, the regulatory agencies must be exempt from political pressures to be exerted by the Executive branch. The conflicts between entrepreneurs and consumers must be addressed to the Courts. The documents issued by the regulators should support Courts' decisions.

Enforcement power is assumed to exist when the agencies have a clear mandate to request and verify information from the firm. The skills needed to verify this information are assumed to exist when the agency has the autonomy and financial resources to attract skilled employees or hire consultants when needed (World Bank,1995). Thus, the agencies' staff must, at the same time, be technically and administratively well prepared (Bassani,1996). It appears that the regulatory agencies have been generally at a disadvantage compared with the firms they regulate. In large measure this is because of low civil service salaries, which makes it hard to attract and keep employees with the necessary skills to process the information and negotiate their better-paid, better-informed and probably better-motivated counterparts (World Bank,1995).

The current legislation must be actualized in order to grant sufficient power to the agencies. The agencies must be legally supported in imposing penalties to the defaulted companies. On the other hand, the established rules must be stable over the time, in order to protect investments (Bassani,1996). As regarded by Campos (1996a) and Harrel (1993), investors will need *flexible regulations but clear guidelines* backed by explicit laws governing foreign investments and privatization and a *clear and open policy-making process*. A public process that is structured and follows clear regulations and that is not arbitrary, secretive, or personalized is important to maintain confidence and competition in individual transactions.

As far as the privatized enterprises are established and the relationships among owners, regulators and customers are consolidated, the big challenge for the Brazilian government would be the preservation of the conditions that could: (1) increasingly include the market competition; (2) augment the intensity of the investments in productivity; and (3) raise up the quality of the public services. As long as this new environment is to be reached, consequently the interventions of the regulatory agencies would be minimized and the privatization process as a whole would have achieved its chief objective.

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