

From Rent-Seeking Activities to Economic Activities: The Strategic Transformation of the Deregulated Firm

by

JEAN-PHILIPPE BONARDI
BERTRAND V. QUELIN

April 1999

Do not quote without authors' authorization

HEC School of Management
Strategic Management Department
78351 Jouy en Josas
FRANCE
Tel: +33.(0)1.39.67.72.70
Fax: +33.(0)1.39.67.70.84
E-mail: quelin@hec.fr

Summary:

The political theory of regulation holds that deregulation of utilities obliges the former monopoly to abandon its rent-seeking activities to concentrate upon economic activities. However, the arguments presented by scholars to explain this strategic transformation are not entirely convincing. We argue in this paper that the role and of the nature of the firm during the deregulation process have been underestimated in previous works. After describing the main steps of this process, we thus propose a dynamic explanation of the strategic transformation of the deregulated firm based on the concepts of firm capabilities, access to rents and transaction costs.

1. Introduction

Regulation is an integral part of institutional change. There are several general theories of economic regulation. Challenging the public interest view of regulation, the political theory of regulation (PTR)¹ rejects the argument that “ *the normative goal of curing market failures animates the choice of regulatory policies* ” [Noll, 1989]. Instead, the PTR argues that regulation is produced by the capture of public institutions by interest groups, in order to acquire monopoly rents or redistribute wealth to themselves [Stigler, 1971]. Since all interests affected by regulation decisions are not represented with equal effectiveness, circumstances favor an inefficient outcome where rent is dissipated among a few interest groups [Peltzman, 1976].

Regulation sets the rules of the economic and social game and thereby the incentives faced by the different actors. By attempting to analyze regulation and deregulation, economists have in general aimed at restraints on market firms’ behavior or new rules that have originated in law [Priest, 1993]. Different attempts have been made to discriminate between different types of regulation [Hägg, 1997]. In this article, we widen the concept ‘economic regulation’, usually reserved for administrative control of prices, production, taxes, and market restrictions, to include new aspects of legislation and administrative control. Moreover, we do not limit the meaning to price fixing and we exclude social regulation as consumer or environmental protection. However, important aspects of public and regulatory governance are included.

¹ / We use here the term “ political theory of regulation ” to gather all the approaches that challenge the “ public interest theory of regulation ”, i.e. the view according to which regulators are fully-informed representatives of the public interest. Other terms are also frequent in the literature to talk about this political theory of regulation, as capture theory [Stigler, 1971], private interest theory [Noll, 1989], interest group theory [Noll, 1989] or even economic theory of regulation [Kaserman, Mayo and Pacey, 1993] [Hägg, 1997].

In the particular case of utilities², one effectively organized interest group is given a monopoly covered by regulators [Stigler, 1971]. The regulated business and its employees are then participants in the formation and execution of regulatory policy, and share the rent that is thereby attained. The firm involved in utilities is primarily concerned with rent-seeking rather than being concerned with economic questions. One prediction from this analysis is thus that a relaxation of regulation, i.e. deregulation, ought to cause harder times for the former monopoly. Deregulation would enhance efficiency because the former monopoly is not insulated from actual competition anymore, particularly the competition of new entrants [Winston, 1993]. Facing this new competition, the firm would give up its rent seeking activities to concentrate on economic ones. This is what we call in this article the “ strategic transformation of the deregulated firm ”.

The evolution of British Telecom illustrates this strategic transformation. In 1982, when the deregulation of telecommunications in Britain began, BT took strong positions in the regulatory debate against wide and rapid deregulation. Presently however BT is one of the main defenders of deregulation in Europe. How can we explain such a strategic transformation?

After two decades of deregulation in the United States and one decade in Europe, this strategic transformation seems to take a longer time than provided by the PTR [Viotor, 1994], and there are even sectors in which it has never been completed [Teske et al., 1994]. We think that this comes from a misunderstanding of this phenomena. The purpose of this article is thus to provide a theoretical framework to explain more precisely this strategic transformation, and to identify the conditions under which it may occur.

We will show in part one of this work that, within the PTR, neither the public choice view nor the New Institutional Economics (NIE) view can offer a fully satisfactory

^{2/} We refer here to all kinds of utility markets that have been (or that could be) deregulated around the world, and whose former stage of regulation had created the monopoly of one firm (or public organization): electricity, gas,

explanation to the strategic transformation of deregulated monopolies. Far from renouncing to the view conveyed by the PTR, we will show that this explanatory problem does not emanate from the seminal hypothesis of the PTR, but from the lack of taking into account of the complex mechanisms affecting the deregulated firm involved in utilities. In part two, we will then introduce these mechanisms through a conception of the firm in which the development of new competencies requires time and investment. In a part three, we will integrate this approach of the firm into a theoretical framework consistent with the seminal insights of the PTR. In part four, we analyze two kinds of influences that design the strategic transformation of the firm along the deregulation process.

2. PTR and Deregulation

Inside the PTR, two parallel views can be used to explain the strategic transformation of the deregulated utility firm: the “public choice view”, and the “neo-institutional view”. The former has formalized political market behaviors through neo-classical models of supply and demand, where votes play the same role as prices in traditional economic models [Buchanan and Tullock, 1962]. The latter takes more into account the institutional aspects of regulation focusing on incentives, informational problems and transaction costs, demonstrating the existence of structure-induced equilibria [Shepsle and Weingast, 1981]. Both views help to understand the strategic transformation of the deregulated firm, but neither explains it adequately.

2.1. The Public Choice View of Regulation

Seminal hypothesis. Stigler’s work [1971] was one of the most influential contributions from the public choice view of regulation, even if he drew his thoughts from many previous examinations of the political process [Downs, 1950, Buchanan and Tullock, 1962]. Stigler described government regulation as a supply and demand process, with interest

groups (firms, influential customers, tax payers, etc.) on the demand side and legislative representatives and political parties on the supply side. This proposition suggests that regulation is created on a political market, where interest groups demand a transfer of wealth (challenging the existing property rights structures). The political market distributes regulation rules favorable to the interest groups that can convince the state to use its power of coercion.

The essence of deregulation. Peltzman [1976] later formalized the Stigler's analysis. He assumed that the utility-maximizing behavior of politicians (congressmen, local administrators, etc.) could be predicted by viewing them as majority maximizers. The legislators' behavior is driven by their desire to remain in office. The public choice theory implies that legislators attempt to allocate efficiently political favors. The result is that the political efficiency desired by legislators is not equivalent to economic efficiency: regulation is likely to be biased towards benefiting interest groups that are better organized, since they are more effective at delivering political support and gain more from favorable legislation, and since that they are willing to invest resources in acquiring political support [Olson, 1965]. That is why the theory predicts that only deregulation can restore economic efficiency. The politicians decide to deregulate when the marginal opposition to redistribution is greater than the marginal political support, and regulate when the reverse is true [Jarrell, 1984]³.

Regulatory monopolies and the political market. As suggested by Jarrell [1978] or Schleifer and Vishny [1994], state-owned and regulated firms are highly inefficient and their inefficiency is the result of political pressures from politicians. To keep high monopoly rents, regulated utility firms are, for example, encouraged by politicians to employ too many people, to produce goods desired by politicians rather than by consumers, or to locate their production

³ / There is a controversy in economic analysis about real costs and benefits of deregulation [Lott and Reynolds, 1989; Poitras and Sutter, 1997]. Some authors, furthering Stigler [1971] or Peltzman [1976] assume that a symmetry exists between regulation and deregulation. Some others [Crew and Rowley, 1988], on the contrary, argue that the recoverable part of the monopoly deadweight loss is reduced to the extent that the costs of obtaining the regulations (through rent-seeking) are sunk. Somehow, in both cases, the decision to deregulate is based on the assumption that costs and benefits of deregulation can be assessed precisely *ex-ante*.

in politically desirable rather than economically attractive regions. All these inefficiencies are produced by the rent-seeking game between politicians, firm managers and voters.

According to the public choice view of regulation, what would incite the firm involved in utilities to give up to rent-seeking activities? In the public choice view firm decisions result from a rational cost-benefit analysis. On the benefit side, deregulation limits the rent obtainable on the political market and create new sources of rents on the economic market. Then it incites utility firms to stop these rent-seeking activities to focus on economic activities [Noll and Owen, 1983]. On the cost side, the public choice view of regulation shows that rent-seeking activities generate some costs that limit its attractiveness for firms and interest groups. For Stigler [1971], two costs are involved. The first is the cost of information [Laffont and Tirole, 1991]. Pressuring legislative representatives is infrequent and usually concerned with a package of issues, so interest groups must incur costs to become informed about particular issues and politicians. The second cost is that of organizing. Interest groups and firms must organize to express their interest to politicians and bureaucrats. Posner [1974] considers these costs of organizing in more details, referring to the theory of cartels [costs of arriving to an agreement and enforcing this agreement) and the free-rider problem⁴ [Olson, 1965]. These costs due to political action, if they become greater than potential benefits, may trigger the strategic transformation of the deregulated firm.

2.2. Limits of the Public Choice View

2.2.1. Costs of rent-seeking can not explain the strategic transformation of firms involved in utilities

One criticism of the public choice explanation of the strategic transformation of the deregulated firm is that the former monopoly is considered as a normal political actor, bearing all the costs of rent-seeking. However, it is not really exposed to the traditional costs of the

^{4/} Each member of an interest group has the natural incentive to avoid paying his full share of the burden either monetarily or in terms of time.

political action since it can act alone on the political market. The political action is not therefore a collective action [Olson, 1965] for the former monopoly in the period of deregulation, and does not incur the increased costs of collaboration.

First, the deregulated firm can get the relevant information at a lower cost than can new entrants, since the deregulated firm has much more experience of where it may find information and what it must do to obtain it. Secondly, the deregulated firm does not have to face the free-rider problem since it has enough political impact, thanks to its size or the financial amounts at stake, to singlehandedly influence politicians and bureaucrats that make decisions regarding deregulation. Third, the deregulated firm has a lot to gain from a stopping of the deregulation process. It could thus keep its monopoly rents if it so chooses.

Thus, the deregulated firm seems to retain a significant incentive to bet on rent-seeking activities even when deregulation has started. Why would the deregulated firm try to pursue uncertain rents on the economic market when it can choose to keep its monopoly rent on the political market? Costs of rent-seeking can not fully explain the strategic transformation of the deregulated firm.

2.2.2. Benefits of a firm's action can not be easily assessed during deregulation

The public choice view does not take into account the complexity of deregulation.

One of the limitations of the public choice view is that it models politicians as simple brokers choosing among competing private demand for regulation [McChesney, 1987]. Since politicians are assumed to be the interface between the State and private interests, institutional structures that drive to the creation of regulation are also assumed to be standardized political markets. As noticed by Viscusi et al. [1995]:

*“ an important assumption in the model of Stigler and Peltzman is that interest groups directly influence the regulatory policies. However, when one thinks about the process by which regulation is determined, one realizes there are numerous actors ”*⁵.

⁵/ page 339.

Political markets are sometimes considered to work the same way everywhere, with the same kind of actors. However, this is not an acceptable assumption since regulated activities are different in terms of political importance, and also since institutional mechanisms governing political exchanges are different everywhere. Institutional structures are thus often far more complex than described by the public choice view. On political markets, actors have an imperfect understanding of the issues affecting them, and thus face high costs of transacting [Krueger, 1988]. This complexity renders a straightforward cost-benefit analysis very difficult.

Nobody knows what the final result of deregulation will be. Changes in regulation inevitably involve uncertainty concerning the ultimate impacts, and frequently surprises as well [Kahn, 1988; Crandall, 1988]. Deregulation is not a simple decision that occurs at a moment of time, but is an evolving sequence of decisions. The costs and benefits of a strategy during deregulation are thus very hard to assess [Rizzo and O’Driscoll, 1985]. As explained by North [1990],

“ a theory of institutions demands a relaxation of the rationality assumptions of the neo-classical theory ” (...) [It must be built on] *“ the assumptions of costly information, of subjective models on the part of the actors to explain their environment and of imperfect enforcement of agreements ”*⁶.

A cost-benefit analysis can therefore not be the only rule that drives the strategic transformation of the deregulated firm. Benefits of one kind of strategy or the other are so uncertain and difficult to assess that few firms would bold enough to implement a radical change in strategy, such as one from rent-seeking activities to economic activities. Even if regulation and competition evolve through time, the firm can not give up its political know-how overnight. For instance, one could imagine that the firm will try to continue rent-seeking activities to put a brake on deregulation, while investing in economic activities to prepare to face new competitors. Empirically, there are markets in which firms continue to capture most

state regulators, sustaining monopoly rents even after many years of deregulation. This is the case for trucking deregulation in the United States [Teske et al., 1994]. The public choice view does not provide any explanation of this strategic articulation of political and economic strategies during deregulation. This is because the existence of a deregulation process, involving complex institutional mechanisms, is not taken into account. Inside the PTR, the New Institutional Economics propositions overcome some of these critics.

2.3. The Neo-Institutional View of Regulation

The New Institutional Economics (NIE) has made important contributions to the PTR, allowing it to coexist with the public-interest theory. These contributions are based on the introduction into interest-group models of imperfect information and transaction costs. This leads to an approach based on political processes to explain the making of economic policy.

Uncertainty. In political markets, complexity and uncertainty are more pronounced than in economic markets [North, 1990; Dixit, 1996]. Political contracts are even less complete (informal substitutes can emerge, information asymmetries and moral hazard are often prevalent, etc.). To cope with these high transaction costs in politics, the New Institutional Economics stresses the role of credible commitments, that is to say commitments that are clear and observable to all actors *ex-ante*, and irreversible *ex-post* [Levy and Spiller, 1994]. The role of institutions is to reduce uncertainty and transaction costs, and thus to enable people to make decisions. These institutions are developed through time, and are specific to each area.

“Institutions are regularities in competitive interactions among individuals. They provide a framework within which people have some confidence as to how outcomes will be determined” [North, 1986, pp. 231].

Being regularities, institutions create periods of stability in regulation.

The stability of regulation. Reducing transaction costs on the political market, the credible commitment also generates stability in the regulatory governance [Levy and Spiller, 1994], and so in the allocation of property rights. The regulatory governance is constituted of institutional arrangements that tend to yield stable outcomes. To explain this stability, NIE scholars have turned their attention from simple majority rule institutions to the study of more complex institutions with specific rules governing agenda control. Shepsle and Weingast [1981] refer here to "*structure-induced equilibrium*". Reaching such a structure-induced equilibrium means that the set of decision makers is partitioned, for example, into parliamentary committees, and the set of alternatives is divided, for example, into jurisdictions. Committees are thus given exclusive property rights over specific jurisdictions, and have a monopoly of agenda control for instituting change⁷.

What is an equilibrium on the political market for the NIE? An equilibrium is reached when the process of readjustment is completed and there are no further change in the constraints [property rights structure, transaction costs, etc.). The system is then in a state of rest where individuals are unable or unwilling to make further adjustments. This equilibrium is a bit different from the well-known long-term equilibrium outcome of a competitive industry⁸. Indeed, this long-run equilibrium is not sought by individual firms, but is rather an unintended outcome of a sequence of decisions by firms that adjust to change in their constraints. In the New Institutional Economics' perspective, actors try only to reach a short-run equilibrium [Eggertsson, 1993].

The deregulation process is a great cause of uncertainty. The existence of these structure-induced equilibrium situations does not mean that regulation is always stable. This is what Weingast [1981] expresses in the case of regulation in the United States. Taking various

^{7/} See Spiller and Vogelsang [1996] for a similar theoretical framework applied to the deregulation of British Telecom. See also Steunenbergh [1996] for a study of institutional mechanisms in Europe.

examples, he shows that policy remains stable and beneficial to congressional-agency clientele only as long as the relevant variable of public opinion, balance of power of interest groups, presidential initiative, and judiciary decisions are stable. As long as these variables remain constant, the political rewards from various alternatives remain constant too. These actors play the same role in political markets as entrepreneurs do in economic markets [Ricketts, 1987]. They are vectors of change through their short-term decisions.

Deregulation alternates between periods of equilibrium and periods of disequilibrium. The most important point to stress is the existence of a deregulation process. Economic policymaking is thus a dynamic game, whose conditions are uncertain and changing, and whose rules are at least partially made by participants as they go along. Each participant will try to manipulate the operation of the subsequent game to try to achieve an outcome that favors his or her own interest. The political process of economic policymaking is constantly influenced by the legislature or its agencies, the courts, various special-interest lobbies, the media, and so on. This gives particular importance to the actors who control the political agenda [Weingast, 1981].

In this process, the degrees of freedom of each actor mostly consist of opportunities to make various strategic moves. These strategic moves then often trigger regulatory changes, making the political market evolve from equilibrium to disequilibrium. Disequilibrium in the political market occurs when a debate is opened concerning the adoption of a new regulation (or the evolution of the former regulation). If proponents of the new regulation have enough political influence, this new regulation will be adopted, and the political market will reach a new equilibrium. If it is not the case, the period of disequilibrium results in a return to the *status quo*. Thus, each period of disequilibrium does not necessarily lead to the definition of a new equilibrium. In many cases, *status quo* prevails over all other propositions. In this way, it

^{8/} Equilibrium in a competitive industry generally refers to a situation where each firm operates in the lowest point of the average cost curve for a factory of an optimum size, and where each firm receives only the normal

can not be denied that there are institutional forces of selection that incite the firm to the strategic transformation of the deregulated firm.

2.4. Limits of The Neo-Institutional View of Regulation

The weak role given to firms in the deregulation process. In the NIE' approach, strategic decisions of firms are taken for granted, or even wiped out of the model. In Weingast's [1981] view of deregulation of airlines, strategies of airline carriers, for instance, are taken for granted. It means that they play a role in deregulation, lobbying the Commerce Committee to brake the deregulation movement, but one never knows precisely why they adopt this strategy and in what extent it can evolve. Weingast considers forces that question policy equilibrium, thus leading to regulatory change, but not the effect of this regulatory change on the strategic transformation of the firm. In Levy and Spiller's [1994] approach, the focus is on the effects of the institutional governance of countries on private investment, but they do not address the question of the effects of this governance on the strategies.

The neo-institutional view of regulation overcomes only a part of the criticisms we raise about the public choice view. The fundamental limit of the NIE approach to explain the strategic transformation is that there is still no proposition concerning the set of criteria on which a firm bases its strategic decisions [especially those concerning the arbitrage or the articulation between rent-seeking and economic activities). These criteria are even less present in the neo-institutional literature than it is in the literature of public choice, where strategic decisions were assumed to be based on cost-benefit analysis. In the NIE view of regulation, the strategic decision made by the firm seem to be determined by its environment. This leads to the idea that all the firms would adopt the same strategic decisions if their institutional

rate of return on its capital, where returns are equalized across all industries.

environment were the same. However, strategies of firms remain different even when deregulation has begun. Teske [1991] compares the strategies of seven firms created after the AT&T's divestiture, and shows a wide range of differences between them. The institutional environment can thus not be the unique factor determining the strategies of firms.

This means that the neo-institutional approach does not provide a fully satisfactory answer to the question of the strategic transformation of the deregulated firm, from rent seeking strategies to market activities. We know that the evolution of regulatory governance plays a part in this strategic transformation, but we do not currently know how it affects the strategic behavior of the deregulated firm. Put another way, we lack a theory of the firm compatible with neo-institutional insights i.e. a theoretical framework that explains why a firm adopts one kind of strategy over another during the deregulation process. Recent developments of the theory of the firm, especially the competence-based theory, provide new insights in terms of internal knowledge, skills and know-how. The purpose of part three will be to establish a good connection between NIE propositions and these recent approaches to the nature of the firm.

3. Rent, Capabilities, and Strategic Choices in a Deregulated Firm

We first show that recent works addressing the theory of the firm can aid in explaining how a firm adopts strategic decisions in real time. Then, we determine the particular decision function of a deregulated firm. Finally, we identify the various strategies that a former monopoly can adopt during the deregulation process.

3.1. Insights From the Modern Theory of the Firm

Economists studying business and industrial organization have long recognized the inadequacy of the neoclassical view of the firm and have developed richer paradigms and models based on the concepts of various kinds of transaction costs and on capabilities that are specific to the firm. Furthering the work of these scholars, we argue here that proposed

dynamic and institutional arguments to understand political processes must also be used to analyze the firm. We simply propose a readjustment of assumptions, to render theories of the institutional environment consistent with theories of the firm.

Firms are also institutional choices whose purpose is to reduce uncertainty. In the modern theory of the firm, the creation of a firm implies a comparative choice between one kind of organization and another [Coase, 1937; Williamson, 1975]. The proposed structure aims to minimize combined transaction costs and production costs. It does so in two ways. First, it provides a contracting response to the moral-hazard or hold-up costs that may arise in the short run [Alchian and Woodward, 1988]. Second, it allows organizational learning to take place within the framework of the firm [Langlois, 1992]. When one focuses on economic change, this second point is particularly important.

Strategic decisions first emanate from the capabilities of the firm. Since the firm has to face the huge uncertainty created by competitive forces, the vast majority of the decisions that are made by individuals within the firm are routine [Nelson and Winter, 1982]. These decisions use the cumulative experience of individuals, i.e. the experience that has passed the test of time and is embodied in *savoir-faire* and technologies. Organizations possess a pool of embodied knowledge useful for particular classes of activities. Further to Langlois [1992], we will use the term *capabilities* to characterize this knowledge. Capabilities are selected throughout the history of the firm: knowledge that is no longer useful nor reliable, is eventually given up by people inside the firm [Dosi, Teece, and Winter, 1990]. Therefore, strategic decisions of the firm largely depend on the past states through which the organization has traveled, which are synthesized within its existing capabilities.

Strategic decisions are also constrained by the expected rent criteria. Most of the strategic decisions, since they are based on routines, can be accomplished within the existing contracting framework of the firm. But there are also circumstances that are not spelled out in this existing contract framework, and which require a decision engaging the firm in one

strategic direction or another. Organizations act as an entity, because some people in these organizations own the residual rights⁹ and take those strategic decisions. These people behave as entrepreneurs, which means that they try to forecast the future and engage the firm in projects hoping for future returns [Mises, 1949]. One of the direct impacts their decisions have is on the selection of the capabilities that the firm will develop. Because of the nature of specialization and the limit to cognition, organizations as well as individuals are limited in what they know how to do effectively [Langlois, 1992]. The role of those who own the residual rights is to try to select the capabilities that will enable the firm to secure profits and rents in the future [Foss, 1994]. Consequently, the strategic decisions of the firm are also determined by the level of rent that the firm can expect, taking into account economic markets, competitors, regulations, etc.

***Ex-ante* strategic decisions** are thus determined by two features of organizations: first, the existing capabilities that reflect what the firm knows how to do effectively and the types of knowledge it accumulates; second, the expected rent that people owning residual rights hope to receive after analyzing markets and competitors, calculating costs, and estimating future profits. The strategic decision within the firm springs from the interaction between these two features.

3.2. The Strategic Decision Function of a Deregulated Firm

For a deregulated firm, we assume that there are two kinds of rent:

- Political rent, which is rent derived of the former regulatory governance (rent from the incumbent firm). This rent is linked to the monopoly position that has been granted to the firm on the utility market.

⁹/ We refer here to the literature on incomplete contracts, which assumes that a contractual framework cannot anticipate all the contingencies that might occur. It differentiates specific rights spelled out in contracts, and residual rights that can not be spelled out [Grossman and Hart, 1986]. In unanticipated circumstances, decisions are taken by those owning the residual rights.

- Economic rent, which is rent created by the new economic opportunities that occur during the deregulation process (created by innovation, first mover advantage, differentiation, opening new markets, declining frontiers between activities, international arbitrage on prices, etc.).

Deregulated firms have two kinds of existing capabilities:

- Political capabilities, which allow the firm to influence the creation of new regulations. They are accumulated knowledge concerning regulatory agencies, ministries or legislatures. Thanks to these capabilities, the firm knows how it can use its institutional environment to get favorable regulation or how it should strategically react to an unfavorable regulation.
- Economic capabilities, i.e. accumulated knowledge concerning the function of economic markets, the way to organize to improve productivity, the level of prices, the strategic behaviors of competitors, etc.

The strategic decision function of a deregulated firm. Existing capabilities and expected rents, in either the political realm or the market, are thus the variables that we can take into account here to explain strategic decisions made by a deregulated firm. Furthering Weingast 's [1981] work, we will consider the strategic direction of the deregulated firm with regard to its position in the debate for the creation of regulation. The decision function of a typical deregulated firm, for a given insitutional environment, can be written as:

$$x_F = f [R_e, C_e, R_p, C_p], \text{ where:}$$

- x_F is the position that the firm will choose in the regulation debate¹⁰. It may be equal to the status x_0 or differ from it.
- R_e represents the economic rents that the firm can expect after each regulatory evolution
- C_e represents the economic capabilities of the firm
- R_p represents the political rent that the firm can expect after each regulatory evolution
- C_p represents the political capabilities of the firm.

^{10/} We refer here to Weingast and Schepsle's [1981] model, where they assume an m -dimensional policy space, X , of feasible outcomes. The *status quo* is x_0 and actors of the political process make proposals to alter this *status quo*.

3.3. Four Types of Strategies

Following our argument, x_F , the position chosen by the firm in the deregulation debate, also expresses the overall strategy of the firm, integrating political and economic strategies. In some cases, economic and political actions are substitutes, while in others they are complementary [Taylor, 1996; Vietor, 1994]. In the case of substitution, the firm adopts pure strategies, either political or economic. In the case of complementarity, the firm adopts mixed strategies. Political and economic actions are complementary if political and economic capabilities inside the firm are complementary [Teece, 1986].

3.3.1. Pure Political Strategies

The firm defends the *status quo* position ($x_F \leq x_0$). This is the typical behavior of a regulated firm engaged in utilities before the beginning of the deregulation process. Before deregulation, the firm has a monopoly on the market of utilities and develop political capabilities. It is not encouraged to develop economic capabilities: people who are part of the the regulated firm are assumed to be focused on acquiring rents through political markets, and on continually investing in political capabilities. Those assumptions are consistent with results obtained by Averch and Johnson [1962] when they show that a regulated firm may select a more capital-intensive technology than an unregulated firm does. As Alchian and Kessel [1962] have pointed out, professional managers will prefer decisions inflating certain costs that increase their on-the-job consumption. De Alessi [1980] shows that these effects are even more flagrant in what he calls “*political firms*”, i.e. any organization owned by a local or national political unit that employs labor services and material inputs to produce commodities. This is the case for many regulated firms involved in utilities, particularly in Europe. Political capabilities are predominant within the firm. Economic capabilities still exist, but they are devoted to the pursuit of political rents. For instance, such economic capabilities may play a role in the creation of a politically powerful innovation that does not correspond to a true

demand of the market. Economic capabilities in such a firm are therefore totally dependent on political capabilities¹¹.

3.3.2. Pure Economic Strategy

The firm bets on its economic capabilities. It engages in competitive behavior, pursuing rents and profits through economic markets. It has given up rent-seeking monopolistic strategies. Complementarities that are concerned in this strategy are simply complementarities between economic capabilities in order to take advantage of market opportunities, and to tackle competition from new entrants and innovative firms. Political capabilities may still exist within the firm, but they are still dependent on economic capabilities. To specify this kind of strategy, we introduce x_R , the regulation that is finally adopted. With a purely economic strategy, the firm adopts the position x_F , with $x_F \geq x_R$.

3.3.3. Defensive Mixed Strategy

The firm tries to put a brake on the deregulation process, retaining the most important part of its monopoly, but also preparing actively for future competition. The firm needs time to be able to compete, and rent-seeking activities are a stalling tactic aimed at providing this time. This strategy implies complementarity between traditional political capabilities (relations with traditional industrial and regulatory authorities) and economic capabilities (product innovation capabilities, ability to lower prices, etc.). In this strategy, both types of capabilities are dependent on each other. A defensive mixed strategy is thus x_F , with $x_R > x_F \geq x_0$.

¹¹/ This idea of dependence of one set of capabilities or another has been developed by Teece [1986] in the case of innovation. Teece considers that the dependence of one asset on another is high when the first can not be converted at low cost to another activity, which does not concern the second asset. Here, we apply this idea to the particular case of political and economic capabilities.

3.3.4. Offensive Mixed Strategy

The firm tries to increase the speed of the deregulation process to get more freedom in prices fixation, diversification, or the penetration of foreign markets. Its economic capabilities increase faster than the deregulation process, which means that the firm can take advantage of all the strategic opportunities it desires. This strategy generally aims at limiting the power of regulatory authorities that have been created during the deregulation process. The current strategy of British Telecom, which claims that the regulator, the Oftel, overextends its powers, appears to be of this kind¹². The offensive mixed strategy implies another kind of complementarity: between new political capabilities, i.e. concerning the relations with institutional actors that appeared during deregulation process (independent regulator, anti-trust authorities, etc.) and new economic capabilities, i.e. capabilities that the firm tries to develop to become a competitive player. If the firm wants to develop these economic capabilities, a lobbying intervention, requiring new political capabilities, may be necessary. Here again, both kinds of capabilities are dependant on each other, but the role of political capabilities is opposite to that played in a defensive mixed strategy. An offensive mixed strategy is thus x_F , with $x_F > x_R > x_0$.

Table 1 synthesizes these various strategies of the former monopoly.

Table 1: Typologies of the Strategies of a Deregulated Firm

	IMPEDE THE DEREGULATION PROCESS	DO NOT IMPEDE THE DEREGULATION PROCESS
PURE STRATEGY	Pure political strategy $x_F \leq x_0$ <i>The strategic transformation has not begun</i>	Pure economic strategy $x_F \geq x_R$ <i>The strategic transformation is over</i>
MIXED STRATEGY	Defensive mixed strategy $x_R > x_F \geq x_0$ <i>The strategic transformation is engaged</i>	Offensive mixed strategy $x_F > x_R > x_0$ <i>The strategic transformation is completed, but the sector is still regulated. The firm tries to accelerate the deregulation process.</i>

^{12/} British Telecom has tried to enter the British TV market, but regulation created by the Oftel [British Office of Telecommunications] has rendered this move impossible.

The questions that our article addresses now become: why do political capabilities and expected political rents shrink during the deregulation process, whereas economic capabilities and expected economic rents rapidly develop? Why would deregulated firms adopt pure economic strategies when they could adopt mixed strategies?

4. External Influences and Internal Mechanisms Leading to Strategic Transformation

To answer these questions, we show that the deregulation process implies two kinds of influences, external and internal, on the decision function of the firm. First, some external influences, taking into account the particular consequences of each phase of the process, play an important role. They are constraints on economic calculus, negotiations, and degree of freedom of actors during the deregulation process. Second, some internal influences relate to the creation of capabilities, and to the evolution of complementarity between economic and political capabilities within the firm.

4.1. External Influences

External influences come from changes in regulatory governance. The overall institutional environment remains fixed, but regulatory governance and regulatory incentives evolve through time. We start by identifying the main steps of a typical deregulation process. Then, we study the influence of these main steps on the variables that constitute the decision function of the deregulated firm.

4.1.1. Assumptions About the Deregulation Process

The institutional environment in which the deregulation occurs. We do not focus here on the institutional environment, but on the strategic behavior of the deregulated firm and on its ability to pressure public authorities to influence the evolution of the deregulation process. Therefore, we assume that the overall institutional environment is fixed during this process. The distribution of property rights may change due to evolutions in regulation, but

the mode of distribution remains unchanged. Moreover, this institutional environment is assumed to eventually allow for the creation of a structure-induced equilibrium when a regulation debate is opened. It is this ability to reach a structure-induced equilibrium that guarantees the stability of the institutional environment [Weingast and Shepsle, 1981].

Some general steps of the deregulation process. The first task is to define the process we will study. Since the institutional environment is different in each country, there are multiple designs for political processes. However, most of the time, some common steps can be found in all utilities deregulation. During these common steps, an important question about deregulation is treated. We thus consider that decisions adopted at these general steps are idiosyncrasic ones, but that the steps themselves are valid for all processes. **Depending on a full achievement,** these main steps of the deregulation process **can** be:

- Dismantling
- **Partial opening of the market**
- Privatization¹³
- **Partial opening of the market**
- Creation of an independent authority
- **Wide opening of the market**¹⁴

At each step, an equilibrium is reached. Each step creates a debate and trade-off among actors on the political market. Debates lead either to a new state of equilibrium or a return to the *status quo*. Nonetheless, a new equilibrium doesn't mean that the regulation which has been proposed is fully adopted. There are various degree of adoption, and each actor in the political market may adopt a different position, more or less far from the *status quo* position. For example, in a privatization debate, some actors may propose to privatize more than 50% of the former monopoly, some others 30% and others 0%. The structure-induced equilibrium

^{13/} Privatization was not a part of the deregulation process of utilities in the United States, since most of the firms were private or public. Nonetheless, we introduce it into the theoretical framework because it is an important part of this process in Europe and in many developing countries [Levy and Spiller, 1996].

^{14/} We devote special attention to the opening of markets to competitors since, after a period of regulation, a strong competition and long-run growth can only be achieved if innovative competitive entry is vigorous [Eliasson, 1991].

framework then determines which solution is the equilibrium, taking into account the position and the relative political influence of each actor.

As we expressed before, x_0 is the *status quo* policy for the regulation of this sector, x_R , the regulation adopted and x_F , the regulation that the firm would have liked to be adopted.

Decisions are taken one after another, step by step. The process has the following features:

- If $x_R = x_0$, the process of deregulation does not evolve. Regulation remains unchanged.
- If $x_R > x_0$, the process of deregulation evolves towards more competition.
- If $x_R = x_F$, the process of deregulation evolves as wishes the deregulated firm. Its political capabilities are truly effective.
- If $x_R > x_F$, the process of deregulation evolves more rapidly than the deregulated firm wishes. This indicates that the firm's political capabilities are not as efficient as it would have liked it to be. In this case, the firm loses some part of the political rent guaranteed by regulation.
- If $x_F = x_0$, the deregulated firm wishes that the deregulation process does not evolve, and thus lobbies politicians and bureaucrats to try to keep its current rents (political strategy or defensive mixed strategy).
- The more x_F is superior to x_R , the more the firm tries to accelerate the deregulation process (offensive mixed strategy).

4.1.2. External Influences on Both Types of Expected Rents and Existing Capabilities

The purpose of this part is to assess the particular impact of each general step of the deregulation process on the decision function of the firm, and thus on the type of strategy chosen (either purely political, defensive mixed, offensive mixed, or purely economic). These impacts are considered independently, i.e. the order in which they occur is assumed to be of little importance.

Dismantling. Political capabilities of the firm, which are related to its size¹⁵ strongly decrease. The firm becomes a more normal actor on the political market, which means that it has to constitute an interest-group to be able to enter the political market. Political action becomes very hard to manage, because of free-rider problems, and difficulty in organizing

^{15/} This proposition that political capabilities of a firm are linked to its size has been supported by many scholars. For instance, see Posner [1974] when he wrote: “*I used to think that there was one case in which the theory yielded an unequivocal and testable prediction. That is where the number of firms in the industry is small,*

with other political actors. The rent that the firm can expect on the political market becomes lower. This reduces the incentive for the firm to adopt political strategies. Furthermore, the economic capabilities of the firm are also lower. Indeed, the dismantling has questioned the existing organization. All the parts of the former monopoly have lost some capabilities.

Privatization. The political capabilities of the firm become less effective. Indeed, many of these capabilities are based on the particular relationships between the former monopoly and the Treasury or the Ministry of Finance. Privatization of state-owned firm is a major political objective, and the government can not neglect it. Particularly, it can not afford to reduce profitability for private investors. Perspectives of deregulation must be favorable to the former monopoly. This is a great opportunity for defensive mixed strategy. However, when privatization has been completed, rent-seeking behaviors of the former monopoly are less effective. Conversely, the economic rent is more likely to be appropriated and new private investors push the former monopoly to pursue this rent.

Creation of an independant regulatory authority. This point is related to the American debate on the regulation by commission of any form. The Parliament and government are looking for a new commission which has a legal basis for legitimate activity. In many countries, new regulatory authorities are created in order to head up the deregulation process. In fact, they modify the regulatory governance, i.e. the functioning of the political market. Therefore, existing political capabilities of the former monopoly are not as effective as they were before [Bonardi and Quélin, 1998]. To be efficient in this political market, the firm would have to create new political capabilities, but the decision to create these capabilities is in odds with by the decision to create economic capabilities.

In addition, the expected political rent decreases, because independant regulators can take unilateral decisions such as price controls (changing of price-cap or of the rate of return

thereby facilitating the organization for effective political action, but the number of employees in the industry is great ”.

in the case of telecommunications for instance). These decisions are not directly submitted to traditional institutional channels, which means that the political rent decreases with little possibility for the firm to react or counter.

Partial opening of the market. Not only does the regulatory governance evolve, but also the competitive environment, through the gradual entry of competitors during the deregulation process. These competitors have economic capabilities that allow them to be more efficient, in certain areas, than the incumbent firm. But, by doing so, they also reveal competitive information to the incumbent (concerning costs, prices, types of persons to employ, organization, etc.). The incumbent firm can then imitate its competitors in order to accelerate the growth of its economic capabilities.

The expected political rent strongly decreases because new entrants also create competition on the political market [Becker, 1983]. They can adopt political strategies to compete against the rent-seeking strategies of the former monopoly, which will accelerate the deregulation of the market. The political market becomes contestable [Crew and Rowley, 1988], and strategic lobbying by potential industry entrants [Glazer and Konrad, 1995] is more and more efficient.

Wide opening of the market. Many competitors have appeared in all markets. The deregulated firm must create new products, new services, or new pricing to be competitive. The creation of new economic capabilities moves quickly. Moreover, the market for economic capabilities has improved, which means that many economic capabilities are available through contracts with other firms. Dynamic transaction costs have shrunk [Langlois, 1992]. Then, the firm need not develop all the capabilities that are required, which accelerates its launch into new activities. Economic rent continues to rise since the economic capabilities that have been developed or acquired previously have become effective. Expected political rent has decreased significantly since there is no more monopoly position to defend.

Table 2 sums up these external influences of the deregulation process on the decision function of the former monopoly.

Table 2: Deregulation Process and Impacts on the Incumbent Firm

General steps of the deregulation process	Influence on the incumbent firm decision function if the decision is fully adopted at period t
Dismantling	<ul style="list-style-type: none"> • $C_p^t > C_p^{t+1}$ • $R_p^t > R_p^{t+1}$ • $C_e^t > C_e^{t+1}$
Privatization	<ul style="list-style-type: none"> • $C_p^t > C_p^{t+1}$ • $R_e^t < R_e^{t+1}$
Creation of an independent regulatory authority	<ul style="list-style-type: none"> • $C_p^t > C_p^{t+1}$ • $R_p^t > R_p^{t+1}$
Partial opening of the market	<ul style="list-style-type: none"> • $R_p^t > R_p^{t+1}$ • $C_e^t < C_e^{t+1}$
Wide opening of the market	<ul style="list-style-type: none"> • $R_p^t > R_p^{t+1}$ • $R_e^t < R_e^{t+1}$ • $C_e^t < C_e^{t+1}$

External influences and strategic transformation. The analysis of each particular phase of the deregulation process provides fruitful insights into the strategic transformation of the deregulated firm. It explains why the firm has incentive to develop its economic capabilities, while its political capabilities are not as effective as they were before. It also explains why the expected political rent is decreasing progressively, while at the same time the entry of new competitors and the creation of new markets raises the expected economic rent. The firm is thus incited to give up political strategies, and begin to develop economic strategies.

However, external influences do not tell the whole story about the strategic transformation of the deregulated firm. They do not answer to all the questions raised earlier. More precisely, it does not explain why the optimal strategy of the deregulated firm is not a defensive mixed strategy, i.e. a strategy that aims at impeding the deregulation process, while developing economic capabilities at the same time. Hence, if a defensive mixed strategy is the optimal strategy, why would the strategic transformation fully occur? Why wouldn't the firm continue rent-seeking for certain markets and become a competitive player in others? To address these questions, it is necessary to establish a theoretical link between political and economic capabilities within the firm. Only internal mechanisms can explain why economic capabilities get the upper hand over political capabilities.

4.2. Internal Mechanisms

Two mechanisms are at work within the deregulated firm. On the one hand, the progressive lack of complementarity between political and economic capabilities explains why the firm can not adopt a defensive mixed strategy for a long time and still be efficient in competitive economic markets. On the other hand, economic opportunities are so numerous in deregulated markets that economic capabilities soon overwhelm political capabilities.

4.2.1. The Complementarity Between Economic and Political Capabilities

Economic and political capabilities are not always complementary. There are many cases during the deregulation process in which those capabilities are substitutes for each other. For instance, if the deregulated firm wants to stay politically efficient, it must retain a high number of employees, creating a high level of organizational slack [Schuler, 1996]. This is in contradiction with imperatives concerning the improvement of productivity, the ability to reduce costs, etc., i.e. essential capabilities to become a competitive player. In the same way, the firm will diversify into different activities if it wants to be politically efficient or it wants to be economically efficient. To be politically efficient, the firm develops in directions that will assure its strong political support by the national government. To be economically efficient, the most important thing is on investment into activities that will allow the development of new products or new technologies that could satisfy the demand of consumers. The two perspectives are hugely different. In this case, following a mixed strategy is not adequate to become a competitive player.

The maintenance of these two substitute capabilities create organizational transaction costs within the firm. These transaction costs come from the fact that both capabilities can not be used and developed at the same time within the firm. Therefore, deregulated firms accumulate economic capabilities more rapidly when they have decided to discard their political capabilities. As far as strategy is concerned, it means that deregulated firms have to

give up slowing down the deregulation process on their historical market if they really want to become competitive players. This is why they must evolve from mixed strategies to purely economic strategies if they wish to become competitive players quickly enough to face the competition of new entrants. Our analysis can be summarized in the following analytical proposition: because we assume that the deregulated firm can not invest both in political and economic capabilities, an increase in its economic capabilities is related to a decrease in its effort to promote political capabilities.

Proposition 1: $(C_e^{t+1} - C_e^t)$ when $C_p^{t+1} < C_p^t$, is superior to $(C_e^{t+1} - C_e^t)$ when $C_p^{t+1} \geq C_p^t$.

4.2.2. Economic Capabilities overwhelm political capabilities.

There are more strategic opportunities in economic markets than in political markets. Being able to obtain rapidly many economic capabilities, the firm discovers a large amount of opportunities on the economic market. These opportunities require many other economic capabilities that generate, at their turn, information and opportunities. This means that the firm discovers spontaneously many more economic opportunities than political opportunities. More and more, the firm naturally takes on an economic structure, evolving away from the political structure that was prevalent before.

Since political and economic capabilities become substitutes, people inside the firm must choose between the two. The motivation for their choice is their expectations of which type of capability will prevail on the future. Since economic capabilities tend to develop more rapidly than political ones, and since the expected economic rent for the firm is increasing faster than the political rent, people tend to prefer economic capabilities. As in the competition between two standards [Besen and Farrell, 1994], where the two standards are not compatible, both types of capabilities are not complementary. In the end, one set of capabilities will dominate within the firm. People develop the type of capabilities that they expect will dominate in the future, hastening the extinction of the others. When economic

capabilities are numerous enough to constitute an installed base, network externalities entail the “ tipping effect ” [Farrell and Shapiro, 1992], and economic capabilities dominate political capabilities. The firm passes from defensive mixed strategies to economic strategies or offensive mixed strategies.

Proposition 2:

By a certain amount of C_e , $C_e^{t+1} - C_e^t > C_e^t - C_e^{t-1}$, whereas $C_p^{t+1} - C_p^t > C_p^t - C_p^{t-1}$

Mechanisms enhanced in propositions 1 and 2 combine within the firm in such a way that economic capabilities become dominant and largely independent on political capabilities. This entails the strategic transformation of the deregulated firm.

5. Explaining the strategic transformation of the deregulated firm

5.1. External and internal mechanisms are both necessary to explain the transformation of the firm

5.1.1. The role of external mechanisms

The main role of external mechanisms is to trigger the beginning of the transformation process, through a negative impact on the political rent that the firm can expect from regulation. Nothing can happen if there is no change in this expected political rent. The political market is on a stage of equilibrium, and rent-seeking behaviors within the firm do not have any reason to stop. Conversely, the beginning of the deregulation process generates external mechanisms, changes the expectations of managers within the firm, and then trigger the strategic evolution.

External mechanisms also play an important role by revealing new sources of rent in the economic field that were so far ignored by the firm. This is also very important since it partly explains why the firm does not only try to search new rent-seeking opportunities to protect its political rents, but also ventures into economic behaviors. The need to develop or acquire two kinds of capabilities becomes obvious. Here begins the question of complementarity of these two kinds of capabilities that will create the internal mechanisms.

Therefore, external mechanisms are very important to explain the strategic transformation of the deregulated firm since they are at the root of this transformation process, and determine the general trend of the process, i.e. the evolution from rent-seeking behaviors towards economic behaviors.

5.1.2. The role of internal effects

Internal mechanisms do not play a huge role on the short run: Internal effects depend on capabilities, and capabilities are slow to develop and accumulate at the beginning of the deregulation process. It is especially the case in utilities market where years of regulated monopoly have forbidden other firms to provide complementary economic capabilities. Therefore, there is no market for economic capabilities and these capabilities have to be newly developed. This is a slow process. It explains why problems of complementarity of economic and political capabilities do not arise on the short run. Political capabilities are still dominant and mainly determine the strategic behavior of the firm, even if promising economic capabilities are being developed within the organization.

But internal mechanisms are predominant on the long run: When the stock of economic capabilities becomes significant, problems of complementarity of economic and political capabilities appear. Internal mechanisms reinforce this lack of complementarity of both kinds of capabilities, which creates an obstacle to the efficiency of strategies, thus forcing the firm to choose. This explains why the deregulated firm can not keep significant political capabilities in the long run if it wishes to become a competitive economic player when markets are opened.

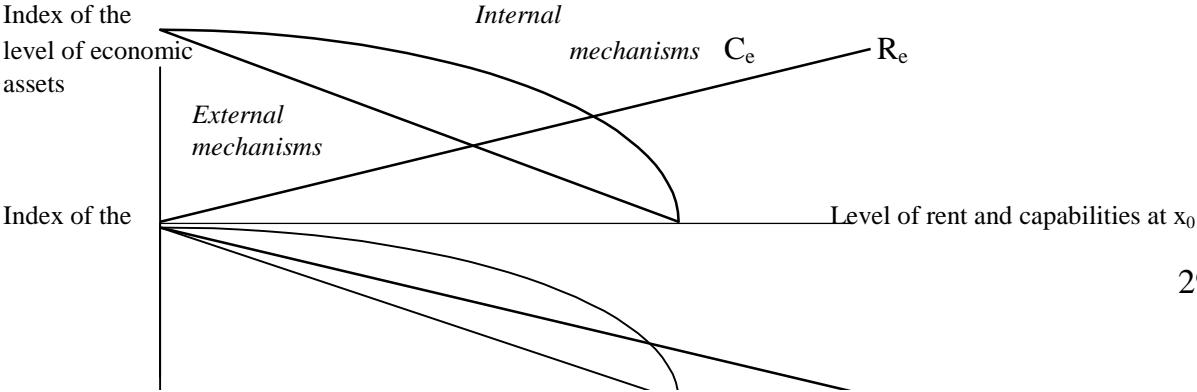
In the same way, a network externality effect in the development of capabilities play a role in the long run, since it is only possible when the firm has developed an “installed base” of existing capabilities. When this installed base has been created, new complementarities appear, leading to network externalities in the development of capabilities. These capabilities also reveal pockets of ignorance in the market, and thus opportunities to

extract economic rents. This second internal mechanism explains why the firm chooses to concentrate upon the development of economic capabilities and not upon the development of political capabilities.

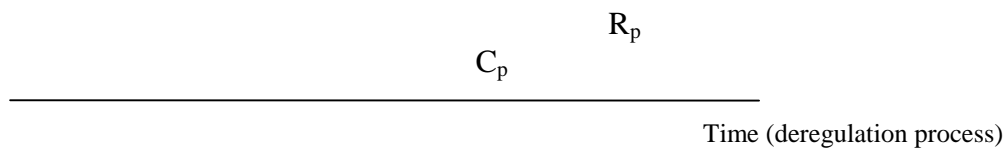
To conclude, one can say that if there is no external mechanism, no transformation occurs within the deregulated firm; if there is no internal mechanism it is not possible to argue that the transformation can be completed. Both external and internal mechanisms that characterize the deregulated firm are thus important to explain its strategic transformation. However, these two kinds of mechanisms are not to be considered independently. In reality, they combine within the firm, which give them significant strength.

We can represent the evolution of rents and capabilities, either economic or political, by the following figure. The beginning of the strategic transformation is driven by external mechanisms, particularly those concerning the shrinking of political rent and the increasing of economic rent. Then, the firm begins to develop new economic capabilities. Internal mechanisms become more and more important. They considerably accelerate the process of change within the firm. That is why, on chart 1, capabilities have such a convex aspect. Note that the evolution of both economic and political assets is here represented as symetric, which is not necessarily the case. We use a symetrical representation for the clarity of the chart.

Chart 1: Evolution of rents and capabilities during the deregulation process



level of political
assets



Consequently, both types of effects are necessary to explain why deregulated firms can be deeply transformed, evolving from pure political strategies to economic strategies.

5.2. Evolution of the strategic decision of the deregulated firm

5.2.1. x_F compared to the status quo x_0

With the evolution of capabilities and rents described above, x_F tends to be more and more different than x_0 . At the beginning of the deregulation process, x_F is mainly determined by political rent and capabilities, as the firm is still a regulated monopoly. Then, more and more, C_p and R_p decrease whereas R_e and later C_e begin to soar. As C_p and R_p become negligible, the strategic decision of the firm, x_F , is more and more determined by R_e and C_e . This is the strategic transformation of the deregulated firm.

Being more and more determined by R_e and C_e , the firm adopts positions in regulatory debates which are always farther from the status quo. This leads to the strategic transformation of the deregulated firm.

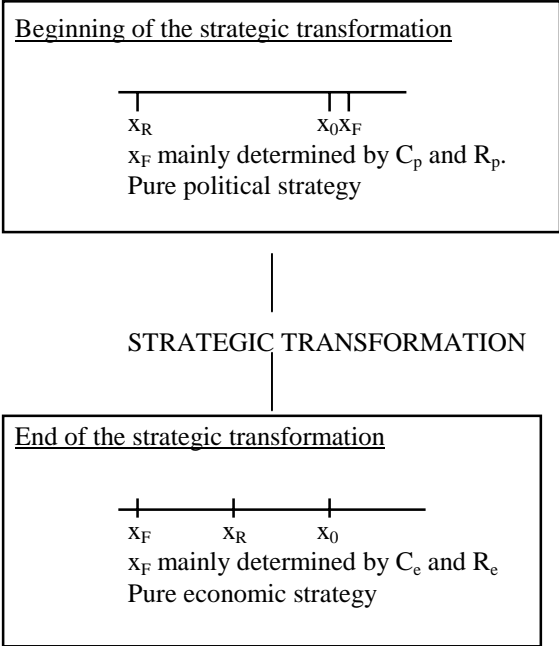
5.2.2. Completion of the strategic transformation

The strategic transformation is completed when the position of the firm is not only very far from the *status quo* position, but is also superior to the position that is finally adopted. In this case, the firm has stopped defensive rent-seeking activities to concentrate upon economic activities. It is the implementation of these economic activities that may require an offensive rent-seeking, for instance if regulatory authorities try to maintain regulation in the sector.

We can use Spiller and Vogelsang's [1997] representation of the regulatory process to sum up this strategic transformation. Two periods are then distinguished in chart 2: the

beginning of the deregulation process, where the firm adopts a purely political strategy to try to keep its monopoly rents; the end of the deregulation process, where the firm tries to accelerate the deregulation, to be able to seize the discovered opportunities and overcome remaining regulations that limit its ability to seize these opportunities. Both external and internal mechanisms are then at work to lead incrementally to the strategic transformation of the deregulated firm.

Chart 2 : The strategic transformation of the deregulated firm



Compared to Spiller and Vogelsang’s work, our analysis constitutes another aspect of the same question. We do not try to determine which institutional mechanisms limit the administrative discretion to achieve deregulation, but we show how institutional, competitive and organizational mechanisms progressively affect the strategic choices of the former monopoly, and generate the success of deregulation.

However, if the strategic transformation of the deregulated firm is then completed, it does not mean that regulation does not evolve anymore. The process of regulatory change remains uncertain, and firms have still to find organizational and strategic solutions to face this uncertainty.

6. Conclusion

The introduction of recent advances in the theory of the firm into the political theory of regulation allows us to explain why the deregulated firm, which was formerly a monopoly in utility markets, decides step by step to give up rent-seeking strategies to adopt economic strategies. This strategic transformation of the deregulated firm was only partially explained by the political theory of regulation, either the public choice view or the New Institutional Economics view. In this article, we show that the former is limited by its systematic use of the profit-maximizing rule to explain the strategic behavior of the firm. Unfortunately, the latter just focuses on institutional mechanisms but does not take into account strategies that are specific to the deregulated firm.

To explain the strategic transformation of the deregulated firm, we have thus considered the process of change in real time. This can be done in taking into account not only the rent (or profits) that the firm expects to obtain at each step of the deregulation process, but also the capabilities that it can manage to develop or acquire in both the economic and political realms. Strategic decisions made by the deregulated firm spring from these two variables.

As we have shown, expected rents and existing capabilities in either the political or economic realms are submitted to two distinct influences during the deregulation process. First, external influences come from evolutions in regulatory governance and from the entries of competitors. These external influences are a very important source of change, but do not tell the whole story about the strategic transformation. Indeed, they can not explain why the firm should discard its political capabilities when it tries to develop its economic capabilities. This can just be accounted for by mechanisms that are at work inside the firm. These mechanisms are linked to the internal transaction costs and adjustment costs that arise during the deregulation process because economic and political capabilities tend to be less and less

complementary. Then, they become substitutes, which means that the firm must choose between them to be really effective.

Changes in the institutional environment and changes inside the firm are co-lateral. Both have impacts on each other. That is why the deregulated firm may decide to accelerate the deregulation process, and adopt new rent-seeking strategies, because changes inside the firm are more rapid than institutional changes. All this means that there is a continuous movement toward economic behaviors for the former monopoly during the deregulation process.

The theoretical framework that is developed in this article is compatible with the institutional framework developed by Spiller or Weingast. We assume that it is a complementary analysis, where not only political institutional mechanisms are analyzed, but also organizational mechanisms. This framework is also compatible with North's [1990] or Baumol's [1990] approaches to economic growth, which is based on the idea that institutions determine the allocation of entrepreneurial activities, between productive and unproductive activities. To some extent, we show here how former monopolies can behave as entrepreneurs, and then contribute to economic growth when they are deregulated.

We have attempted to explain in which circumstances the strategic transformation of the deregulated firm involved in utilities could be completed. For further research, we believe that a similar theoretical framework could also be used to explain why, sometimes, the strategic transformation is not fully completed, i.e. why a firm can sometimes keep monopoly rents throughout the deregulation process. It may be because external influences have not triggered a strong decline of the political rent or have not effectively questioned political capabilities, or because internal mechanisms have not raised transaction costs enough within the firm to require a substitution between the two kinds of capabilities.

References

- ALCHIAN, A.A., KESSEL, R.A. [1962], "Competition, Monopoly and the Pursuit of Money", In National Bureau of Economic Research, Aspects of Labor Economics, Princeton: Princeton University Press
- ALCHIAN, A.A., WOODWARD, S. [1987], "Reflections on the Theory of the Firm", *Journal of Institutional and Theoretical Economics*, vol.143, n° 1, pp.110-136
- AVERCH, H., JOHNSON, L. [1962], "Behavior of the Firm Under Regulatory Constraint", *American Economic Review*, December.
- BAUMOL, W.J. [1990], "Entrepreneurship: Productive, Unproductive and Destructive", *Journal of Political Economy*, vol.98, n° 5
- BECKER, G., [1983] "A Theory of Competition among Pressure Groups for Influence", *Quarterly Journal of Economics*, vol. XCVIII, pp.371-400.
- BESEN, S.M., FARRELL, J. [1994], "Choosing How to Compete: Strategies and Tactics in Standardization", *Journal of Economic Perspectives*, vol.8, n° 2, Spring.
- BONARDI, J.P., QUELIN, B.V. [1998], "Regulatory Body, Rent-seeking and Market Activities: the Case of Telecommunications in Europe", in Eliasson, G. and Karlson, N. (Eds), Government, Institutions and Public Infrastructures, Stockholm: University of the City Press, forthcoming
- COASE, R. [1937], "The Nature of the Firm", *Economica*, vol.4, pp.386-405.
- CRANDALL, R.W. [1988], "Surprises from Telephone Deregulation and the Divestiture", *American Economic Review*, May, pp.323-327.
- CREW, M., ROWLEY C.K. [1988], "Toward a Public Choice Theory of Monopoly Regulation", *Public Choice*, vol.57, pp.49-67
- DI LORENZO, T.J. [1988], "Property Rights, Information Costs and the Economics of Rent-Seeking", *Journal of Institutional and Theoretical Economics*, vol.144, n° 2, April, pp.318-332.
- DIXIT, A. [1996], The Making of Economic Policy: A Transaction-Cost Perspective, Massachusetts: The MIT Press.
- EGGERTSSON, T. [1990], Economic Behavior and Institutions, New York: Cambridge University Press.
- ELIASSON, G. [1991], "Deregulation, innovative entry and structural diversity as a source of stable and rapid economic growth", *Journal of Evolutionary Economics*, vol.1, pp.49-63.
- FABELLA, R.V. [1989], "Monopoly Deregulation in the Presence of Tullock Activities", *Public Choice*, vol.62, pp.287-293.
- FARELL, J., SHAPIRO, C. [1992], "Standard Setting in High Definition Television", Brookings Papers on Economic Activity : Micro-economics
- FOSS, N.J. [1994], "The Theory of the Firm: the Austrians as Precursors and Critics of Contemporary Theory", *The Review of Austrian Economics* , vol.7, n° 1, pp-31-65.
- FOSS, N.J. [1994], "Why Transaction Cost Economics needs Evolutionary Economics", *Revue d'Economie Industrielle*, n° 68, 2ème trimestre, pp.7-26.
- GLASER, A., KONRAD, K.A. [1995], "Strategic Lobbying by Potential Industry Entrants", *Economics and Politics*, vol.7, n° 2, July, pp.167-179
- GROSSMAN, S., HART, O. [1986], "The Cost and Benefits of Ownership: A Theory of Vertical and Lateral Integration", *Journal of Political Economy*, vol.94, pp.691-719
- HÄGG, P.G.T. [1997], "Theories on The Economics of Regulation: A Survey at the Literature from a European Perspective", *European Journal of Law and Economics*, vol.4, n°4, December, pp.337-370.
- HAYEK, F.A. [1949], "The Meaning of Competition", in F.A Hayek Individualism and Economic Order, Londres: Routledge and Kegan Paul [1959], pp.92-106
- JARRELL, G.A. [1984], "Change at the Exchange: The Cause and Effects of Deregulation", *Journal of Law and Economics*, vol.27, October, pp.273-312
- JARRELL, G.A. [1978], "The Demand for State Regulation of the Electric Utility Industry", *Journal of Law and Economics*, pp.269-295
- KAHN, A.E. [1988], "Surprises on Airline Deregulation", *American Economic Review*, vol.78, pp.316-322
- KASERMAN, D.L., MAYO, J.W., PACEY, P.L. [1993], "The Political Economy of Deregulation: The Case of Intrastate Long Distance", *Journal of Regulatory Economics*, vol.5, pp.49-63

- KEELER, T.E. [1984], "Theories of Regulation and the Deregulation Movement", *Public Choice*, vol.44, n°1, pp.103-146
- KRUEGER, A. [1988], "The Political Economy of Controls: American Sugar", National Bureau of Economic Research Working Paper Series, N°2504
- LAFFONT, J.J., TIROLE, J. [1991], "The Politics of Government Decision-Making: A Theory of Regulatory Capture", *Quarterly Journal of Economics*, November, pp.1089-1127
- LANGLOIS, R.N. [1992], "Transaction-cost Economics in Real Time", *Industrial and Corporate Change*, vol.1, n° 1, pp.99-127
- LEVY, P., SPILLER, P. [1994], "The Institutional Foundations of Regulatory Commitments: A Comparative Analysis of Telecommunications Regulation", *Journal of Law, Economics and Organization*, vol.10, n°2, pp.201 à 246
- LEVY, P., SPILLER, P. (Eds) [1996], Regulations, Institutions, and Commitment, Cambridge M.A.: Cambridge University Press.
- LOTT, J.JR, REYNOLDS, M.O. [1989], "Production Costs and Deregulation", *Public Choice*, vol.61, pp.183-186
- MCCHESENEY, F.S. [1987], "Rent Extraction and Rent Creation in the Economic Theory of Regulation", *Journal of Legal Studies*, vol.XVI, January.
- MISES, L. von, 1949, Human Action, Henry Regnery Company: Chicago
- NELSON, R.R., WINTER, S.G. [1982], An Evolutionary Theory of Economic Change, Cambridge M.A.: Harvard University Press.
- NOLL, R.G. [1989], "Economic Perspectives on the Politics of Regulation", in Handbook of Industrial Organization, vol.II, chap.22, Edited by R.Schmalensee and R.D Willig, Elsevier Science Publishers B.V.
- NOLL, R.G., Owen, B.M. [1983], The Political Economy of Deregulation, Washington D.C.: Brookings Institution
- NORTH, D.C. [1994], "Economic Performance Through Time", *American Economic Review*, vol. 84, n° 3, Juin, pp.359-368.
- NORTH, D.C. [1990], "A Transaction Cost Theory of Politics", *Journal of Theoretical Politics*, vol. 2, n° 4, pp.355-367.
- NORTH, D.C. [1986], "The New Institutional Economics", *Journal of Institutional and Theoretical Economics*, vol. 142, pp.230-237.
- OLSON, M. [1965], The Logic of Collective Action, Cambridge: Harvard University Press
- PELTZMAN, S. [1976], "Toward a more general Theory of Regulatory Regulation", *Journal of Law and Economics*, vol.19, n° 2, August, pp.211-248.
- POITRAS, M., SUTTER, D. [1997], "The Efficiency Gains from Deregulation", *Journal of Regulatory Economics*, vol.12, pp.81-89
- POSNER, R.A. [1974], "Theories of Economic Regulation", *Bell Journal of Economics and Management Science*, vol.5, n° 2, pp.335-358.
- PRIEST, G.L. [1993], "The Origins of Utility Regulation and the 'Theories of Regulation' Debate", *Journal of Law and Economics*, vol.36, n° 1, April, pp.289-323.
- RICKETTS, M. [1987], "Rent-seeking, Entrepreneurship, Subjectivism, and Property Rights", *Journal of Institutional and Theoretical Economics*, vol.143, pp.457-466.
- RIZZO, M., O'DRISCOLL, G. [1985], The Economics of Time and Ignorance, Basic Blackwell.
- SCHLEIFER, A., VISHNY, R.W. [1994], "Politicians and Firms", *The Quarterly Journal of Economics*, November, pp.995-1025
- SCHULER, D.A. [1996], "Corporate Political Strategy and Foreign Competition: the Case of the Steel Industry", *Academy of Management Journal*, vol.39, n° 3, pp.720-737
- SHEPSLE, K.A., WEINGAST, B.R. [1981], "Structure Induced Equilibrium and Legislative Choice", *Public Choice*, vol.37, pp.503-520
- SPILLER, P.T., VOGELSANG, I. [1997], "The Institutional Foundations of Regulatory Commitment in the UK: The Case of Telecommunications", *Journal of Institutional and Theoretical Economics*, vol.153, n°4, pp. 607-629
- SPILLER, P.T., VOGELSANG, I. [1996], "The United Kingdom: A Pacesetter in regulatory incentives", in Regulations, Institutions and Commitment, Levy, B. and Spiller, P.T. (Eds), Cambridge University Press, pp.79-120

- STEUNENBERG, B. [1996], "Decision Making under Different Institutional Arrangements: Legislation by the European Community", *Journal of Institutional and Theoretical Economics*, vol.150, n° 4, pp.642-669
- STIGLER, G.J. [1971], "The Theory of Economic Regulation", *Bell Journal of Economics*, n°3
- SUTTER, D. [1994], "The Discovery of Knowledge and Constitutional Systems: A New Perspective on the Provision of Public Goods", *Journal of Institutional and Theoretical Economics*, vol.150, n° 2, pp.401-410
- TAYLOR, D.F. [1996], "The Relationship between Firm Investment in Technological Innovation and Political Action", *Southern Economic Journal*
- TEECE, D.J. [1986], "Firm Boundaries, technological Innovation and Strategic Management", in L.G. Thomas, The Economics of Strategic Planning, Lexington, pp.187-199
- TEECE, D.J., RUMELT, R.P., DOSI, G., WINTER, S. [1994], "Understanding Corporate Coherence, Theory and Evidence", *Journal of Economic Behavior and Organization*, vol.3, pp.39-63
- TESKE, P., BEST, S., MINTROM, M. [1994], "The Economic Theory of Regulation and Trucking Deregulation: Shifting to the State Level", *Public Choice*, vol.79, n° 3, pp. 247-256
- TESKE, P. [1991], "Rent-Seeking in the Deregulatory Environment: State Telecommunications", *Public Choice*, vol.68, n° 1, pp.235-243
- VIETOR, R.H.K. [1994], Contrived Competition: Regulation and Deregulation in America, The Belknap Press of Harvard University Press
- VISCUSI, W.K., VERNON, J.M., HARRINGTON Jr, J.E. [1995], Economics of Regulation and Antitrust, The MIT Press, Cambridge, Massachusetts, Second Edition
- WEINGAST, B. [1981], "Regulation, Reregulation, and Deregulation: the Political Foundations of Agency Clientele Relationships", *Law and Contemporary Problems*, vol.44, n° 1, pp.16-46
- WILLIAMSON, O.E. [1985], The Economic Institutions of Capitalism, New York, Free Press
- WINSTON, C. [1993], "Economic Deregulation: Days of Reckoning for Microeconomists", *Journal of Economic Literature*, vol.XXXI, September, pp.1263-1289