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REGULATORY CHANGE IN NETWORK
INDUSTRIES: THE SPANISH EXPERIENCE

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Abstract

The 1990s witnessed significant regulatory changes in several Spanish network industries such as electricity, telecommunications, natural gas and oil. This article provides an assessment of these developments, trying to ascertain what goals policy-makers attempted to achieve with the deregulation process and to what extent the program has been successful.

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REGULATORY CHANGE IN NETWORK INDUSTRIES: THE SPANISH EXPERIENCE

Introduction

The 1990s witnessed significant regulatory changes in several Spanish network industries such as electricity, telecommunications, natural gas and oil. This article provides an assessment of these developments, trying to ascertain what goals policy-makers attempted to achieve with the deregulation process and to what extent the program has been successful.

The paper analyzes, first, the possible objectives of this regulatory policy and the key policy conflicts raised by programs of regulatory change, particularly in network industries. The nature of any deregulation program is revealed by the policy stance adopted when confronting these conflicts.

From this perspective, the paper discusses the main features of the Spanish program of regulatory change (1). Analysis of the policy choices in a few key regulatory decisions sheds light on the ultimate objectives of the program, and provides the appropriate background for an assessment of its success.

The official statements at the launch of the deregulation program indicated that the reforms were aimed at achieving increasingly flexible and efficient network services markets. This intermediate objective is consistent with what is typically called the public interest approach to regulation. This article argues that the actual regulatory changes do not seem to conform to the proclaimed objectives.

Most of the evidence summarized in this paper tends to indicate that deregulation in Spain is best understood as a reaction to external shocks (technological change and integration), the reaction being jointly determined by the pressure of interest groups (the companies operating the networks) and a government policy designed to foster the domestic strength of Spanish conglomerates as a springboard for external expansion. This policy is in the public interest only if one is ready to accept that the network companies may thus be capturing oligopolistic rents in international markets.

(1) Arguably, the deregulation program in network industries is part of a wider liberalization package, which includes deregulation of labor markets, deregulation of other product and service markets and the strengthening of competition. The analysis will focus on a set of network industries that share important structural features. I leave aside only air transport, since action in postal services, water and other transport networks has been rather limited (OECD, 2000).

2. The objectives of regulatory change

The changes in the regulatory framework of network industries in Spain have been implemented over the 1990s as part of a broad program of liberalization of product and service markets. The regulatory reform started under the Socialist government in the late 1980s and was pushed forward with renewed vigour by the government of the Popular Party from 1996 onwards. I will concentrate the analysis on this second, more decisive, phase.

The publicized objective of the deregulation program has been to modernize the Spanish service markets, with the objective of increasing their efficiency and flexibility as a prerequisite for successful integration in Economic and Monetary Union. The government introduced liberalization plans in 1996, 1997, 1999 and 2000 (2). The 1997 plan, entitled “Plan aimed at the liberalization and enhancement of economic activity”, included the following statement: “The plan includes a wide set of liberalization measures aimed at achieving greater flexibility of supply and more efficient markets, so as to meet the needs of consumers and the challenges imposed by Monetary Union”.

In the case of network industries, the program has basically involved eliminating restrictive regulations and replacing the old “regulatory contract” with a less interventionist legislative framework. Hence the common use of the term deregulation.

One way to understand this deregulation program is in terms of the well-known public interest theory of regulation. According to this theory, government intervention seeks to maximize social welfare and, therefore, it is only justified by the existence of market imperfections.

Within this approach, the deregulation of network industries can be understood as an attempt to maximize social welfare by removing regulations which do not pursue any efficiency objective, or that have been rendered inappropriate by external shocks such as technological change or the Single European Market.

Alternatively, the deregulation program can be appraised from the perspective of the *interest group* theory of regulation. This theory emphasizes that public policy is determined by political bodies (sometimes through regulatory agencies) which wish to stay in power and are influenced by the pressure (for example, through campaign contributions) exerted by interest groups whose rents can be crucially altered by regulatory decisions. Foremost among these groups is industry, particularly when composed of a small and cohesive group of firms with strong preferences (3).

From the point of view of this theory, the deregulation program can be understood as an attempt by the parties involved in the “regulatory contract” to modify its terms in response to changes in external factors (notably technological change in industries such as electricity and telecommunications) and external liberalization commitments in the case of natural gas, oil and, to a lesser extent, electricity.

I argue in this article that the Spanish deregulation program involves a number of key conflicting policy decisions. An analysis of the general features of the program from this

(2) RDL 6/2000 of 23 June 2000. For a discussion, see Ministerio de Economía (2001).

(3) See, for example, Viscusi et al. (1995). The case of regulatory capture can also be incorporated under this general category.

perspective provides interesting insights that are helpful in assessing the ultimate objectives of the program and its effectiveness.

3. Regulatory change: the key conflicts

I will review next the key conflicts brought about by the regulatory change in network industries. The first group of conflicts is linked to the specific economics of these industries. The second group is more general and is related to the income redistribution process spurred by deregulation.

3.1. Specific regulatory conflicts of network industries

Deregulating network industries poses some well-known problems that are inherent to these industries and have been well researched in the literature (4). They can be summarized as follows:

- a) Even if the process of deregulation is prompted to a large extent by changes in technology that modify profoundly the natural monopoly features of these industries, there is considerable uncertainty about the extent to which a competitive regime is desirable across the board, since some segments of network industries may still enjoy substantial increasing returns relative to market size.
- b) The existence of inherited dominant positions may allow incumbents to wield their power across markets, preventing the entry of new competitors and the development of a competitive regime. As a consequence, antitrust policy or asymmetric regulation may be used as policy instruments to counter the dominant position of incumbents.
- c) The persistence of bottlenecks in networks may require the regulation of interconnection and access conditions, particularly in the presence of vertically integrated firms that may enjoy preferential access to the networks.
- d) Most network industries provide services that are subject to some sort of universal service requirement. This type of policy restriction may hinder the development of price structures that reflect market forces and therefore may negatively affect the incentives of incumbents and entrants if deregulation takes place.
- e) A key issue during the deregulation process is the role of the regulatory authority, which is supposed to determine the path and nature of regulatory change. In network industries that have been previously public monopolies or private monopolies regulated by the government, it is particularly difficult to create independent regulatory bodies with sufficient expertise, specialization and resources. The personnel for these agencies is likely to be drawn from the incumbent operator and may be easily captured by firms in the industry.

(4) See, for example, Armstrong et al. (1994) and Bergman et al. (1998).

Attributing the regulatory role to the antitrust authorities is also hazardous, since this agency is unlikely to possess the industry-specific specialized expertise.

- f) A final problem of deregulating network industries has to do with the uncertainty about the extent of competition that may be appropriate. Typically, short-term competition can be rapidly achieved by allowing entry that is not based on new network facilities, but rather on reselling through the connection to the network at regulated prices. The terms of interconnection and other regulatory decisions are likely to influence not only current prices and the extent of entry, but also subsequent investment in infrastructure by the incumbent and new entrants and, therefore, the degree of development of new infrastructure and network competition in the future. In many instances there appears to be a trade-off between short-term competition and the medium and long-term goals of encouraging investments and competition among networks.

3.2. Income redistribution conflicts

A second set of conflicts caused by regulatory change has to do with its impact on income distribution. These conflicts are, of course, valid for any industry undergoing regulatory change, but some of the standard arguments become especially relevant in network industries.

Network industries provide in most cases goods or services of general public interest, typically subject to conditions of generalized provision at uniform prices. This implies that changes in the pricing or supply conditions may cause substantial processes of income redistribution between individuals. In many cases uniform tariffs have resulted in the subsidization of low income and rural households relative to the more affluent, urban households and firms.

Another conflicting feature of many network industries is that they require (or have required) the use of large amounts of industry-specific capital goods. These constitute, usually, irreversible investments which technological or regulatory change may render economically worthless, with negative implications in terms of the profitability of established firms (the stranded assets problem) (5).

A third source of conflict in the deregulation process arises from the fact that internal liberalization has been coupled with a process of market opening and internationalization. This implies that policy makers take into account not only the possibility of internal income redistribution, but also the likely external consequences of the deregulation process. Both in terms of the access of foreign companies to the domestic market, and vice versa, the position of domestic firms in foreign markets. Since we are talking of industries which usually have an oligopolistic market structure, the income redistribution consequences of deregulation have to be considered together with the potential for “rent shifting” in domestic and foreign markets.

(5) The literature on this question is fairly large. See, for example, Kahn (1997) and Sidak and Spulber (1998).

Another source of income redistribution problems linked to network industries arises from public ownership. This was the dominant legal status of network companies before the start of the deregulation process. Deregulation is, therefore, tied to a process of privatization and the timing of privatization relative to deregulation, as well as the conditions of privatization, will have a significant impact in terms of the revenues of the government, the revenue accruing to shareholders and consumer surplus (6).

Finally, it should be remembered that the deregulation of network industries may also have implications for public finances. Not only are some of the network industries subject to heavy indirect taxation, but also network industries' prices constitute an important component of the consumer price index, a key budgetary variable in the presence of indexed budgetary commitments.

4. Key features of the deregulation process in Spain

A detailed account and analysis of the Spanish deregulation process can be found in Matea (2001) and elsewhere (7). In what follows I will characterize some of the general features of the process. The objective is to highlight those characteristics which help us understand what has been the ultimate objective of the deregulation program and to evaluate its degree of success.

I will stress six general features of the Spanish network deregulation process, referring, for each of them, to what has happened in the markets being considered: oil, natural gas, electricity and telecommunications.

The first general feature is that in almost all industries the policies have aimed at *the preservation of substantially integrated industries* (for a summary, see Table 1). In *oil*, the transportation and storage network is operated by a company, CLH, which is controlled by the three main firms in the industry: Repsol, Cepsa and BP. These firms are present also in refinery and retail. Indeed, they control 80% of retail through direct outlets and long-term exclusive contracts. In natural gas, the network is operated by Enagas, which is owned by Gas Natural, the company that controls 80% of distribution and retailing (8). The process of divestment of Enagas by Gas Natural, establishing that no single operator can control more than 35% of Enagas and opening up to 25% of the long-term contracts for imported gas previously owned by Gas Natural, was implemented only in 2001. In electric power the two leading firms are present in both generation and distribution. By the end of 2000 these activities had to be incorporated separately, but no requirement to divest was imposed. Independent retailers are allowed for the segment of the final market that is liberalized, but in 2001 the new retailers accounted for less than 5% of the market (9). Finally, in telecommunications Telefónica, the owner of the public switched telephone network, provides telephony services downstream, as well as access to its network for other service providers. The second fixed-telephony operator, Retevisión, owns also a substantial network and provides retail services. Reselling has been allowed since late 1998. With regard to mobile telephony, the three current operators are integrated and no resellers are allowed in the market (10).

(6) See Vickers and Yarrow (1988).

(7) OECD (1998, 2000), Lasheras (1999) and, from a legal perspective, Ariño (1999).

(8) Gas Natural is itself partially controlled by Repsol (see Chart 1).

(9) First quarter. Data from Ministerio de Economía (2001).

(10) Regulations for virtual mobile operators are being introduced, but access will be freely negotiated between the companies.

Overall, the maintenance of integrated markets or close vertical ownership linkages poses serious difficulties for non-discriminatory access to the networks, despite the fact that the recent legal reforms (the 1998 Hydrocarbons Law, the 1997 Electricity Law, and the 1997 Telecom Law) have included specific access provisions (11). In general, the development of new service providers is seriously hampered in all industries, with the possible exception of telecommunications, where the “de facto” situation is somewhat less restrictive.

Table 1. Degree of vertical integration

Oil	Gas	Electricity	Telecommunications
<ul style="list-style-type: none"> – Legal separation required for firms with transmission and distribution operations. – Divestment from the main network and storage operator imposed in 2000 (upstream companies cannot own jointly more than 45%, or individually more than 25%). 	<ul style="list-style-type: none"> – Legal separation required for firms with sales operations. Separate accounting required for firms with more than one activity other than sales. – Participation in the capital of the firm owning the main physical network is limited to 35% for any group of firms 	<ul style="list-style-type: none"> – Legal separation of activities required. – Participation in the capital of the high voltage network and system operators is limited to 10% for any firm or up to 40% for the whole industry. 	<ul style="list-style-type: none"> – Separate accounting is required for dominant firms.
<p>Since June 2000 shareholders cannot hold more than 3% of the share capital in two or more leading operators in the same industry</p>			
<ul style="list-style-type: none"> – 2 main refineries control 73% –see Chart 1– of the network operator (but with no political rights above 25% each) and 65% of the retail business. 	<ul style="list-style-type: none"> – One firm controls 100% of transportation (to be reduced to 35% shortly and around 80% of retail. 	<ul style="list-style-type: none"> – 4 main integrated groups control 99% of generation, distribution and retail. 	<ul style="list-style-type: none"> – The transmission network and retail services are integrated in all telecoms segments: fixed telephony, mobile telephony and cable.

The second broad feature of the Spanish deregulation of network industries is that *the government has adopted in general a fairly restrictive stance on the entry of new players* (this includes imposing licensing conditions as well as setting access prices, as mentioned above) (see Table 2). Entry in oil is, in principle, free in most market segments, but red tape

(11) The specific terms of access to the network were established in 1998 for telecommunications (December 2000 for the local loop), in December 2000 for electricity and in 2001 for gas. In oil, a 1996 regulation establishes that access prices have to be non-discriminatory, objective and transparent. The government approves the type of contracts and the tariffs, but no clear rule for rate-setting is established.

at the retail level and the vertical control by incumbents make it difficult to penetrate the market. As of June 2000, new measures have been taken to restrain market leaders from further encroaching on the market. In *gas*, retailers can enter the portion of the market that has been liberalized (large consumers), but so far only a few inroads have been made. As mentioned above, only recently has access to imported gas been opened, and a formal system of access prices has been introduced. In *electric power*, the situation is similar, even if the portion of the market that has been liberalized is larger. In this particular case the existence of a liberalized wholesale market is somewhat misleading, since the leading actors both upstream (generation) and downstream (distribution and retailing) are the same. These are firms which are legally different entities but belong to the same industrial group. Finally, in *telecommunications* –where entry has been more widespread– the policy can be judged as somewhat restrictive, if we consider the number of licenses awarded and the conditions attached to them (see, for example, the recommendations issued by the OECD (2000, pages 89-90).

Overall, this policy on entry, together with the decisions with regard to vertical integration, has led to the maintenance of fairly stable oligopolistic structures. The third general feature worth stressing is that *the regulation of final prices has been characterized by a substantial amount of discretion* (see Table 3). Typically, prices have been set without taking into account efficiency considerations. That is, the regulator has not attempted to implement either a consistent incentive regulation policy, or a price setting policy that limits the exercise of market power, or any other price scheme that diminishes efficiency distortions. Indeed, price regulation has often been set with the aim of achieving inflation or budgetary targets. If industry considerations have been taken on board, typically, prices have ensured “appropriate” rates of return to incumbent companies.

In *oil*, the impact of the prices of oil products on the CPI, and government revenue concerns have prevented the introduction of efficient pricing schemes. In *natural gas* the incumbent firm is subject to a price regulation system which leads to overinvestment (see Lasheras, op. cit.). For many years the regulation of prices in *electric power* has basically been aimed at covering some environmental externalities and equity concerns (subsidizing the coal industry) and guaranteeing the financial equilibrium of companies burdened with heavy financial costs due to ill-advised previous investments undertaken in the context of the old regulatory contract. With the liberalization that started in 1997, final prices have been liberalized for a small part of the market (the so-called qualified customers), but discretionary prices are used for the large part of the industry which is still regulated. Finally, in *telecommunications* tariff rebalancing has been limited, again due to the impact of the tariff changes on the inflation figures. Since August 2000, the regulation of the final prices of the incumbent has moved to an explicit price-cap system for broad groups of services.

Table 2. Restrictions imposed on new entrants and incumbents

Oil	Gas	Electricity	Telecommunications
<ul style="list-style-type: none"> – Minimum distances between retail outlets abolished in 1995. – Restrictions on openings of new retail outlets on roads were abolished in January 1998. – Concession contracts for new retail outlets were abolished in 1998. – Moratorium periods for the total number of retail outlets were established in June 2000 for firms with more than 15% market share. – Available locations for new retail outlets were increased in June 2000. 	<ul style="list-style-type: none"> – Approx. 10% of the market had been effectively liberalized in 2000. – Access to imports from Algeria was opened to new entrants in October 2001. 	<ul style="list-style-type: none"> – Liberalization started with 26.5% of the business market in 1998. – Approx. 53% of the business market had been liberalized in 2000. – Moratorium periods for the construction of new power plants were established in June 2000 for firms with more than 20% of total generating capacity. – Terms of access of third parties to the network were established in December 2000. 	<p><i>Fixed telephony</i></p> <ul style="list-style-type: none"> – 100% of the market liberalized. – Telefonica's first interconnection reference offer issued in October 1998. – Number portability effectively introduced in March 2000. – Selection and pre-selection introduced by the end of 2000. – Maximum prices for local loop unbundling approved in December 2000. <p><i>Mobile telephony</i></p> <ul style="list-style-type: none"> – Entry limited by spectrum. – Entry made conditional upon building of new infrastructure. – Third operator started operations by 1999. – Number portability effectively introduced in November 2000. <p>Cable</p> <ul style="list-style-type: none"> – Entry subject to award of a concession contract. – Minimum investment required.
<p>In 2000, firms with no refinery capacity in Spain served approximately 29% of retail outlets.</p>	<p>In 2000, new entrants accounted for one third of gas sales (in volume) in the liberalized market.</p>	<p>In 2000, new entrants accounted for 5% of total electricity sales (in volume).</p>	<p>New entrants accounted for 11% of total traffic.</p>

Table 3. Degree of discretion in price setting

Oil	Gas	Electricity	Telecommunications
Since October 1998 no regulation, except for a few final prices of gas products derived from oil.	Maximum prices. Prices are related to costs but no formal calculation method has been published.	Maximum prices. Prices are related to costs but no formal calculation method has been published.	Fixed telephony: since August 2000, prices of incumbent are regulated under a price-cap.

A fourth key broad feature of the deregulation process is *the maintenance of regulatory oversight in the hands of a politically controlled body*, with a very limited role for independent regulatory agencies or antitrust authorities (see Table 4). *Oil and gas* are regulated by the government, with a regulatory body, the Comisión Nacional de la Energía (CNE, which absorbed the electric regulator Comisión del Sistema Eléctrico Nacional (CSEN) in 2000), which is mostly an advisory and arbitrage institution. Oil regulation is limited to the final prices of some products (gas derived from petroleum) and access prices, which must be approved by the government. The same applies to price regulation in natural gas. Here, interconnection prices as well as almost all final prices are regulated – a small share of the market (large customers) has been recently liberalized. In both markets, the granting of licenses in the regulated activities is also controlled by the government. In *electricity* the tariffs of the large part of the final service market that is still regulated are set by the government on the basis of proposals presented by the energy regulator (previously, the specific electricity regulator CSEN). Entry into the emerging retail market is administered by the government. In *telecommunications* the regulator, the Comisión del Mercado de Telecomunicaciones (CMT), proposes interconnection rates and conditions that must be approved by the government. It also provides advice on regulated rates which, nevertheless, are set by the Ministry of Economy. Licenses, when granted by beauty contests, are administered by the government, again on the basis of advice provided by the regulator. This refers to services that involve the use of scarce resources such as spectrum.

Table 4. Independence of the regulatory body

Oil	Gas	Electricity	Telecommunications
Regulatory body is attached to the Ministry of Economy. Main tasks: advice on energy-related issues, arbitrage and resolution of conflicts (except in access pricing), authorization of share purchases in regulated firms and supervision of competition (only detection of potential infringements).			Regulatory body is attached to the Ministry of Economy. Main tasks: regulation (except licensing policy for scarce resources), competition policy issues (including decision authority), advice, arbitrage and conflict resolution.

The fifth feature of the deregulation program is that *many of the network industries have been privatized within a context of limited competition and without a clear regulatory policy that attempts to curb market power*. The lack of a strong antitrust authority (on this, see OECD, op. cit., pages 46-47) and the absence of independent regulatory bodies, discussed above, mean that these private companies have enjoyed a comparatively lenient antitrust climate, deploying in general a substantial degree of market power.

In *oil*, competition was introduced between 1996 (diesel) and 1998 (gasoline). Before that, maximum prices were set by the government and there is little evidence that the ceilings were established with the objective of limiting monopoly power. Moreover, it may be argued that, due to the existence of vertical restraints, competition has not really increased that much over the last three years. In fact, shortly after liberalization the antitrust authority started an investigation process alleging parallel pricing. The government decided to introduce further measures to step up competition in June 2000. Privatization, however, was carried out between 1989 and 1997 (see Tables 5 and 6). In *natural gas*, minimal competition was introduced in 1998 and some additional opening has been enacted in 2001. The industry remains regulated as in the past, with the setting of final prices and access conditions, which, as discussed above, follow a rate of return approach. Privatization of Enagas took place in 1997-. In *electric power*, the privatization of the public (and leading) firm, Endesa, took place between 1995 and 1998. The market was not competitive over this period, with rates set by the government, with the objective, as argued before, of guaranteeing appropriate returns to the firms. Between 1998 and 2001 the government blocked further consolidation and a new player has entered the market, but the competitive conditions have not changed much (see, for example, the assessment in OECD, pages 255-264). In *telecommunications*, Telefónica and Retevisión were privatized before the introduction of competition, in a context of control of final rates to customers. These rates were set with the goal of guaranteeing universal service coverage, with low prices for access and local calls, while ensuring an appropriate profitability of the incumbent. Since 1998 competition has gradually increased.

Overall, we can conclude that the privatization of network industries in Spain has been carried out when the markets were still non-competitive (see Tables 5 and 6) and subject to a regulatory framework which did not effectively restrain monopolistic behavior. This allowed incumbent firms to retain a high degree of control of the market.

Table 5. The timing of privatization and competition

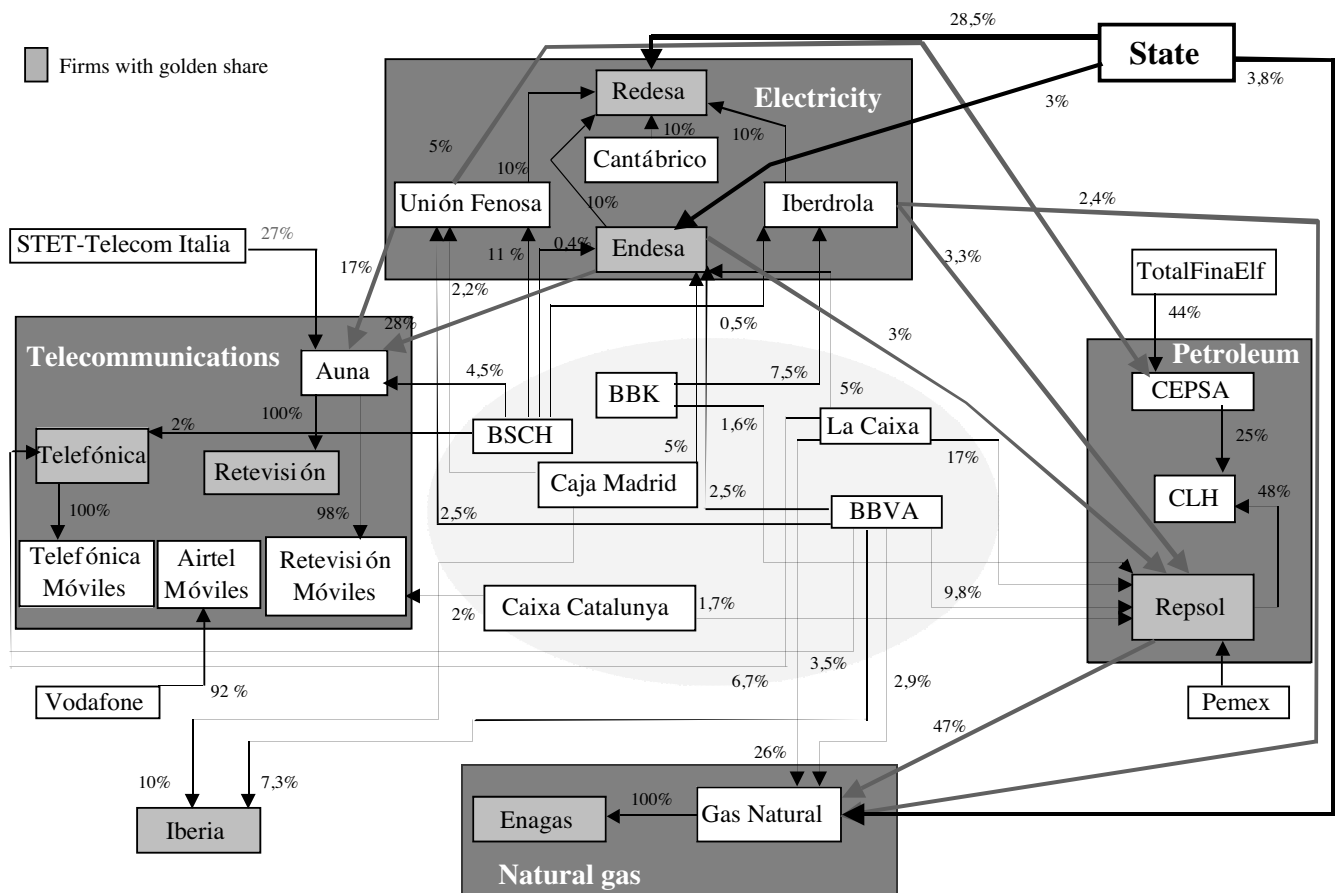
Oil	Gas	Electricity	Telecommunications
– Liberalized between 1996 and 1998. Competition increased gradually, specially after 2000	– Liberalization started in 1998. Competition started in 2001. Regulation strengthened between 1998 and 2001	– Liberalization started in 1998. By 2001, limited competition	– Liberalized in 1998. Competition increased gradually
– Privatization between 1989 and 1997	– Privatization in 1997	– Privatization between 1995 and 1998	– Privatization between 1995 and 1997.

Table 6. Main privatizations in Spain

Company	Year	% of equity	total income (billion ptas.)	Sale through IPO
Seat	1986	75	19	
Telefónica I	1987	na	82	X
Endesa I	1988	20	74	X
Repsol I	1989	26	135	X
Repsol I	1989	4	21	X
Repsol I	1990	3	19	X
Seat	1990	24	20	
Repsol II	1992	10	64	X
Repsol II	1993	14	106	X
Argentaria I	1993	25	69	X
Argentaria II	1993	25	99	X
Endesa II	1994	9	138	X
Repsol III	1995	19	130	X
Telefónica II	1995	12	165	X
Repsol IV	1996	11	140	X
Argentaria III	1996	25	155	X
Gas Natural	1996	4	36	X
Telefónica III	1997	21	630	X
Repsol V	1997	10	169	X
Auxini	1997	60	6	
Endesa III	1997	25	660	X
Telefónica Internacional	1997	24	131	
CSI (Aceralia)	1997	60	222	X
Elcano	1997	100	6	
Inespal	1997	100	62	
Retevisión	1997	70	181	
Aldeasa	1997	100	56	X
Enagas	1997	9	14	
Argentaria IV	1998	29	368	X
Tabacalera	1998	52	275	X
Endesa IV	1998	30	1.500	X
Redesa (REE)	1999	32	57	X
Repsol VII	1999	21	na	X
Indra	1999	66	73	X
Retevisión	1999	na	na	
Telefónica	1999	na	na	
Iberia	2001	54	97	X
Ence	2001	25	22	
Ence	2001	26	16	X
na: not available				
Source: OECD, <i>Expansión</i> , <i>El País</i> and SEPI				

The final remark refers to *the encouragement of “noyeaux durs” within the privatized companies and ownership links across these firms and domestic banking groups*. Not only have oligopolistic structures been allowed (12), but there has been a clear policy of forming a tightly knit ownership structure which ensures domestic control of the privatized operators. Foreign presence in these “noyeaux durs” has been limited to the second mobile operator (Vodafone), until recently the second fixed telecom operator (Telecom Italia in Retevisión) and the second firm in the petroleum industry (TotalFina’s presence in CEPSA). The introduction of golden shares in most privatized firms (see Chart 1) further ensures that this goal is achieved (13).

Chart 1. Cross-ownership in the Spanish network



Note: Draft. Data as of april 2002. Approximate holdings (percentages are rounded). Data for La Caixa includes shares owned by its 100% subsidiary CaixaHolding

- (12) Since June 2000 participation in more than one of the main operators in the same industry has been limited to 3% of the capital.
- (13) The golden shares of Endesa and Telefónica are valid until 2007. That of Repsol until 2006. In a Judgment issued on 4 June 2002 (cases C-367/98, C-483/99 and C-503/99) the European Court of Justice (ECJ) has detailed the conditions under which golden share restrictions are justified under EU law. The ECJ will also rule in the future on the Spanish golden share arrangements and that may limit the scope of government intervention.

Overall, the result is a set of domestic oligopolies with strong interdependencies. These industrial and banking conglomerates may have a rationale in diversification gains or some sort of unexplored business synergies. They may also reflect that banks provided the obvious large source of domestic capital at the time of privatization. The final control is, therefore, quite often in the hands of financial institutions. To them, investing in loosely regulated network companies exploiting monopolistic markets has proven to be a good source of non-traditional income at a time of declining financial margins.

5. A preliminary assessment of network deregulation

What can we conclude about the goals and the effectiveness of the deregulation program? Has it achieved its objectives? Structural reform programs have to be assessed over the long term, but five years down the road of liberalization it is worth attempting a preliminary evaluation of the results. The analysis in the previous sections allows us to draw some conclusions about the nature of the deregulation program in practice and contrast that with the proclaimed goals. Moreover, even if the data on the performance of these network industries is sketchy and preliminary, it may adequately complement the qualitative assessment.

This paper starts by identifying the objectives of the liberalization plan with the public interest theory of regulation, in so far as well-functioning markets are likely to lead to an increase in overall social welfare. In section 4 I have highlighted the main features of the deregulation program. To what extent are they consistent with the broad general objective of a regulatory policy in the public interest?

The maintenance of vertically integrated industries with limited entry (features 1 and 2) can be defended from a general welfare point of view if one can argue that, despite technological change, most network industries are still subject to substantial scale and scope economies. Otherwise, preventing free entry and allowing the control of network access by incumbents can only be understood as mechanisms through which the regulators guarantee rents to established firms. Nevertheless, the jury is still out on the extent to which there are important efficiency advantages associated with vertical integration. In telecoms, the lack of success in opening existing networks may indicate that the scale disadvantages of entrants are fairly large, and may have been underestimated by regulators (Gual, 2002). In electricity, experience also shows that liberalization may require tight regulation of the wholesale market, even if structural vertical separation is imposed (Newbery, 2001). That is, the choice is between regulating vertically integrated firms, or a vertical break-up that only partially diminishes the need for government regulation and may reduce the efficiency gains associated with vertical links.

As for the policy of retaining domestic control of the privatized network companies, it is justified from the public interest viewpoint only to the extent that the losses in terms of domestic consumer welfare are countervailed by the rents shifted from foreign markets towards domestic companies. And this, of course, assumes that profits and consumer welfare are equally weighted in the domestic social welfare function. Profitability data are notoriously difficult to assess, but Table 7 provides an approximation for the leading network operators and the two leading Spanish banks. As shown in Graph 1, these banks also play a key role in the network industries under consideration. The table uses total stock market returns, including dividends, and assesses the period April 1997-April 2002, comparing the returns of the five companies with the relevant industry aggregates. The results, which are somewhat sensitive to the selected period given the high volatility of the stock market over

the last five years, show that in the case of telecommunications the strategy has paid off in terms of obtaining extraordinary returns in the marketplace (of course, a more detailed analysis should assess the contribution of domestic versus foreign operations). The returns for both electricity and oil appear to be below industry averages. As for banks, their relative profitability is rather volatile, since they went through a period of huge appreciation right before the merger period of 1999. Moreover, and this is true of course of all five corporations, returns could change substantially in the coming years due to the volatility of some of their overseas investments.

Table 7. Stock market returns on the leading Spanish network companies and banks
(annual rates compared to worldwide industry averages, 1998-2002)

	BBVA	BSCH	Index	Endesa	Index	Repsol	Index	Telefónica	Index
1998	142%	125%	28%	47%	21%	39%	28%	77%	50%
1999	-9%	-11%	6%	-4%	2%	-6%	14%	22%	39%
2000	8%	14%	-12%	16%	-2%	48%	-2%	69%	33%
2001	8%	0%	7%	-18%	13%	-5%	12%	-19%	-34%
2002	-17%	-5%	0%	-8%	-8%	-33%	-2%	-35%	-37%
Return over the last five years, at annual rate									
1997-2002	16%	16%	5%	4%	5%	4%	9%	14%	3%
Return over the last four years, at annual rate									
1998-2002	-3%	-1%	0%	-4%	1%	-3%	5%	2%	-6%
Source: Elaborated using Datastream.									
Total returns, including dividends. Annual rates. Cumulative annual rates for four and five-year periods.									
(Years are computed starting on May 1 and ending on April 30. That is, data for 1998 correspond to 1/5/97 to 30/4/92).									
Telecoms: Dow Jones Titans Telecomms Index									
Banks: Datastream Banks Index									
Electricity: Datastream electricity Index									
Oil: Datastream oil integrated Index									

With regard to discretionary price regulation, the verdict hinges upon the bias in price setting by the government. Arguably, the discretionary policy (feature 3) may have resulted in the control of market power, thus increasing overall welfare. As discussed above, however, despite the fact that some prices have been regulated in the context of universal service policies, in general price regulation has attempted to guarantee rates of return to companies, ensuring expected profitability levels given the investments made in the past.

Price comparisons are performed now routinely in these industries, particularly in electricity and telecommunications. In electricity, between 1998 and 2000, Spain ranked 12th in terms of the decline in electricity prices for large users, 8th for small enterprises and 3rd for households (14). In telecommunications, despite large declines in recent years, the composite

(14) Source: European Commission.

basket for residential users computed by the OECD still showed Spain in 2001 with a relatively high level of telecommunication prices in 2001, 65% above the three countries with the lowest prices (computed in euros adjusted for purchasing power), and 18% below those of the three countries with the highest prices (15). Drawing an overall picture is difficult given the variety of market segments in both industries, but the results seem to indicate that despite significant price reductions, the overall price levels are comparatively high on an EU-wide basis.

The last two general features which I have stressed –the insufficient development of independent regulatory agencies (feature 4) and the timing of the privatization process when compared to the enforcement of competition (feature 5)– are less controversial and appear clearly at odds with a general objective of improving overall welfare. Regulation by the government rather than by an independent agency is more likely to be amenable to pressure from interest groups and, in particular, the regulated industries. Similarly, privatization in the absence of a competitive regime or proper regulation that enforces consumer welfare maximization leads to a transfer of rents from the public to the private sector and it is unclear how this can lead to an increase in general welfare (unless one argues that sharp managerial improvements will take place). Indeed, such a privatization process, ahead of strengthening competition, is more consistent with the joint impact of the pressure of interest groups and the government’s revenue collecting objectives than with the pursuit of the general interest.

Overall, the analysis of the Spanish deregulation program shows that its objective has been somewhat more complex than the improved functioning of the network service markets and their opening to foreign competition. Within these broad objectives, the key features of the process show that the deregulation has been directly controlled by the government, and has attempted to preserve the interests of domestic industrial and banking groups, with a gradual and moderate opening up of the markets, and an emphasis on allowing a limited number of entrants which undertake investments in infrastructure. Prices have declined but are still relatively high when compared to other EU countries. Overall, the focus has not been on lower prices and increased variety to consumers and business users, but rather on the promotion of strong domestic firms with the financial muscle to enter foreign markets, particularly in South America, and to defend themselves from takeover by foreign firms. The performance of the companies seems to show that so far this strategy has been successful in the case of telecommunications, but less so in electricity and oil.

(15) Source: OECD Communications Outlook.

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