

## THE INSTITUTIONAL ARCHITECTURE OF REGULATION AND COMPETITION: SPAIN'S 2012 REFORM

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# THE INSTITUTIONAL ARCHITECTURE OF REGULATION AND COMPETITION: SPAIN'S 2012 REFORM

Francesc Trillas<sup>1</sup>

## Abstract

The decision to allocate a given number of governmental interventions in one or more agencies, for example, in the field of regulation and antitrust, raises important issues in organizational and institutional economics. The economics literature suggests that this decision should take into account horizontal and vertical incentive issues and should also take into account the risk of capture and the degree of optimal regulatory independence. More specifically, it should also consider the subtle complementarity and substitutability between competition policy and ex-ante regulation, and its relationship with the vertical chain of government. These issues are illustrated with the decision of the Spanish government to send a legislative proposal to Congress in early 2012 to merge the main network industry regulators with the competition policy authority. The combination of the economic literature's insights with the specific characteristics of regulated sectors in Spain suggests the need for regulatory reform, but does not seem consistent neither with full integration nor with a homogeneous level of (lower than in the status quo) regulatory independence.

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# THE INSTITUTIONAL ARCHITECTURE OF REGULATION AND COMPETITION: SPAIN'S 2012 REFORM<sup>1</sup>

## 1. Introduction

This paper presents an analysis of institutional architecture in the field of regulation and antitrust. It focuses specifically on the project introduced in February 2012 by the Spanish government, to merge the Competition Policy Authority (CNC) with, among other agencies, the telecommunications regulatory agency (CMT) and the energy regulator (CNE) in a new authority (the National Commission for Markets and Competition, or CNMC). The financial regulators were excluded from this merger. The analysis here is based on ideas on institutional architecture that are drawn from the economics literature and on the specific characteristics of Spanish regulated industries.

The proposal is an unusual one: not only are regulatory agencies from different industries merged (something that has precedents, for example, in the United States state public utilities commissions and in Germany), but these are also merged with the competition policy authority. It is certainly the case that regulation and competition policy have converged in the last decades, and there is overlap and interaction between them. But there are very few cases of this degree of consolidation. In the case of Spain, the proposal takes place after an experience of approximately two decades with sectoral regulatory agencies and when the competition authority had recently been reformed in 2007.

The center-right Popular Party won the general election of November 2011 in Spain after a seven-and-a-half-year period of a Socialist Party government in the midst of a huge economic and financial crisis. This has coincided with an institutional crisis that has affected the central bank, political parties, the judiciary, the financial institutions, the monarchy and the credibility of governance in general. One of the first announcements of the new government was to send the proposal to Parliament to merge the Competition Policy authority with, among others (like the postal services authority or the airports authority, which were not in operation yet), the regulatory agencies in telecommunications and energy. As any merger, this one presents opportunities and threats, social costs and benefits. The government presented the reform as an

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<sup>1</sup> I would like to express my thanks for the comments I received at the 2013 Winter Conference on Regulation and Competition at City University in London. I would also like to thank Xavier Mas, Javier Tapia and Aldo González for sharing useful material with me.

opportunity for reducing administrative complexity and costs. However, the proposal was criticized by many commentators for reducing the overall level of regulatory independence. A closer look is therefore necessary.

I argue that a common level of (reduced) regulatory independence is not necessarily appropriate for industries with different characteristics, and that although regulation and competition policy interact in liberalizing industries, there is still much to be gained in terms of incentives and accountability from keeping different agencies in network industries, especially where there are no complementarities. Savings in administrative costs could be achieved by merging the regulators of converging industries requiring complementary effort inputs, such as telecommunications and broadcasting.

In the rest of this paper, Section 2 presents the background: a summary of the government's proposal and a characterization of the specificities of regulated industries in Spain. Section 3 reviews the main insights from the economics literature that can help analyze this case. Section 4 evaluates the proposal in light of these insights and the specificities of Spanish regulated industries. Section 5 concludes that, although regulatory reform that increases stability and provides adequate incentives for regulators is needed in Spain, a full merger between regulatory agencies and competition authority is not necessary and, especially insofar as the new agency has less independence from government than the previous bodies, may aggravate some of the problems that characterize regulation in Spain.

## **2. Background**

### **2.1 The 2012 Reform Proposal**

CMT and CNE have existed since 1996 and 1998 respectively, and were created by the center-right Popular Party government of Jose M. Aznar (in office between 1996 and 2004). The CNE inherited the structure of the electricity industry regulatory agency, which was created in the early 1990s by the center-left PSOE government of Felipe González (in office between 1982 and 1996). Political change in 2004, with the victory of PSOE under José L. Rodríguez Zapatero (in office between 2004 and 2011), did not cause any major legislative change in the structure of these agencies. The new government moved the headquarters of the telecommunications agency, CMT, from Madrid to Barcelona in 2005. Towards the end of its tenure in 2010, the center-left government introduced the Law of Sustainable Economy (LES), which included a partial reform of CMT and CNE, with a reduction in the number of agency councilors, but this reform was only partially implemented due to the call for a snap election in November 2011. Just some months prior to this election, the government had appointed the new presidents of both the CMT and the CNE, Bernardo Lorenzo and Alberto Lafuente, respectively, both close to the Socialist Party. Under the new LES, the two new presidents had, in theory, a six-year period in office ahead of them. The center-right then won the general election at the end of 2011 under the leadership of Mariano Rajoy, and took office in early January 2012.

The National Commission of Competition (CNC) replaced the Competition Tribunal (TDC) after a reform in 2007 that was preceded by an open debate with the participation of legislators and stakeholders. This reform included the merger of the instruction and the final decision on competition cases in the same authority and an improvement in transparency and procedures.

During all these years, adaptation to European Union directives (see Trillas, 2010) both in telecommunications and energy required the liberalization of these industries under monitoring from the European Commission (EC). EC commissioners<sup>2</sup> have expressed concerns about the current reform in the sense that the Spanish government was reducing regulator independence, and the government has pledged to introduce changes to make the proposal fit with current EU directives, which have increasingly mandated the existence of sectoral independent regulators (that is, the third normative packages in telecommunications and energy of 2009 required more regulatory independence of National Regulatory Authorities than the first two). The changes that the Spanish government has pledged to introduce, however, still do not affect the essence of the proposal: the merger between the regulatory agencies and the competition authority in a single body, although the government is considering splitting the council of the agency into an ex-ante regulation subcouncil and another for competition policy issues, under one single plenary council and presiding over a single agency.

Over the life of the two regulatory agencies, in telecoms and energy, the appointment of the presidents and councilors has reflected a common pattern: perhaps with the exception of the first president of CMT, Vázquez Quintana (who, although with a previous career in Telefónica, was probably the most independently minded of all the presidents), all presidents have been also qualified professionals, but close to the party whose government was proposing the appointment. (The Parliament had to be consulted, but could not veto the appointment.) During the time of overlap between a president appointed by the other party and the new government, there were tensions and legal attempts to find ways to remove the president (for example, the creation of CNE allowed the removal of the president of CSEN, who had been appointed by PSOE). Councilor appointments reflected the proportion of each party's seats in Parliament, different political parties proposing individuals close to them.

The decision in early 2012 was made while other reforms were being delayed in the financial system, the labor market or the pension schemes. The banking bailout that would take place in July 2012 had not occurred yet, and the government, while delaying painful reforms, needed to show a reformist zeal. The new agency, according to the proposal initially sent by government to Parliament (and that is still being debated as this paper is written), specifically, merges CMT, CNE, the postal regulator (CNP), the railway regulator<sup>3</sup> and the competition policy authority (CNC). The functions of two other agencies (the airport regulator and the media regulator) that had been created in 2011 but that were not in operation yet were also assigned to the new CNMC. Some of the responsibilities of the pre-existing agencies, however, are not assigned to the new agency but are devolved to the ministries. For example, in the case of telecommunications, the competences of number portability and conflict resolution are transferred to the Ministry of Industry. As opposed to the pre-existing sectoral regulators, the new agency was initially planned to be financed through the national budget instead of from consumer bills, although the government announced that it would mix budget funding with funding from tariffs after the letter from Commissioner Kroes in February 2013 (see footnote 2).

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<sup>2</sup> Commissioner Nellie Kroes sent a letter to the Spanish industry minister in February 2013 warning the Spanish government that sanctions would be imposed unless the proposal was changed with the aim of guaranteeing the independence of the new agency.

<sup>3</sup> This is a smaller and less independent regulator compared with CMT and CNE, the size of which is not commensurate with the importance of the task ahead (liberalizing the market) according to Matas and Asensio (2012).

The purported objectives of the reform according to the proposal sent by the government to the Parliament are threefold:

- 1) To guarantee judicial security and institutional confidence.
- 2) To realize scale economies “derived from the existence of identical or similar supervision functions, similar methodologies and acting procedures and, especially, knowledge and experience.”
- 3) To give an institutional response to technological progress, so that the administration adapts to it avoiding “the maintenance of outdated authorities that regulate some aspects of industries that, having been subject to profound technological or economic changes, should be regulated or supervised adopting an integrated vision.”

The CNMC will have a council with a president and nine additional councilors, according to the initial proposal. The common staff of the new agency is estimated (see CMT, 2012) at about 550 individuals. The project encourages the use of regular civil servants to fill in the staff and senior staff positions, reducing the capacity of the pre-existing regulators to recruit experts in the open labor market. As opposed to the pre-existing agencies and to the financial regulators that are kept out of the new agency, the latter will not have autonomy to fix pay level and pay structure for its staff, although this may change after the February 2013 letter from Commissioner Kroes. The president will be one of the 10 council members for three years on a rotating basis. The council members will be proposed by the government for a six-year period and will be ratified by Parliament.

Table 1 shows the expected cost savings alleged by the Spanish government, according to the project sent to Parliament. Most of the alleged savings come from not creating agencies that had to be created according to the decisions of the previous government.

**Table 1**

Cost Savings

Concept	High Executives Pay	Other Operating Expenditures	Total (euros)
Stop the creation of planned agencies	1,636,253	17,109,198	18,745,451
Scale economies from pre-existing agencies	3,589,187	5,820,596	9,409,783
<b>TOTAL NET SAVINGS</b>	<b>5,225,440</b>	<b>22,929,794</b>	<b>28,155,234</b>

Source: “Proyecto de Ley de Creación de la CNMC. Memoria del análisis de impacto normativo.”

## 2.2. Specific Characteristics of Regulated Industries in Spain

Since the conclusions of the academic literature that will be revised in Section 3 depend on the specific characteristics of the countries, industries and time period of application, it is important to keep in mind some of the specific features of Spanish regulated industries in the analysis:

1. Network industries in Spain (telecommunications, energy, railways) are in a process of liberalization following the instructions of the EU directives, which impose important constraints on the policies that member states should follow to liberalize and contribute to the integration of European markets.
2. Most of the largest regulated firms in Spain (which are also the largest firms overall), notably Telefónica in telecommunications and Endesa in electricity, are a result of privatization with dispersed shareholdings through successive IPOs (the exception is Renfe, the railways incumbent, which is 100% state-owned). The lack of control of significant shareholders has facilitated the appointment of management teams close to government. These same regulated firms have aggressively expanded internationally, most notably in Latin America, but also in other regions. This international expansion started when the firms were under public control, but after privatization the management teams have kept the same ambitions. Until the EC took action on it, the Spanish government tried to hinder the presence of foreign owners with controlling stakes in the shareholding of large regulated firms, for example, through golden shares or specific legislation, in a policy to support national champions.
3. Regulated firms in Spain exhibit a larger proportion of politically connected board members than firms in other industries and in other countries. However, more connected firms do not present better financial results than other firms, suggesting that this mechanism of politico-economic collusion may not be driven by market power, but by behavioral agency reasons (see Castells and Trillas, 2013a and 2013b), which are consistent with dispersed shareholding and aggressive expansion strategies.<sup>4</sup> Graph 1 shows that among the 69 largest quoted Spanish firms, the most frequent type has 20% highly politically connected board members and the second largest type has 30% highly politically connected board members.<sup>5</sup> The sector with the highest number of politically connected board members is the energy sector (electricity and gas). Only 12 of the 69 firms do not have any politically connected board member. Two of the three previous former prime ministers, and all the last three finance ministers (all of them coming from the two political parties that have alternated in office) currently serve on the boards or are paid advisers of regulated firms in energy or telecommunications.

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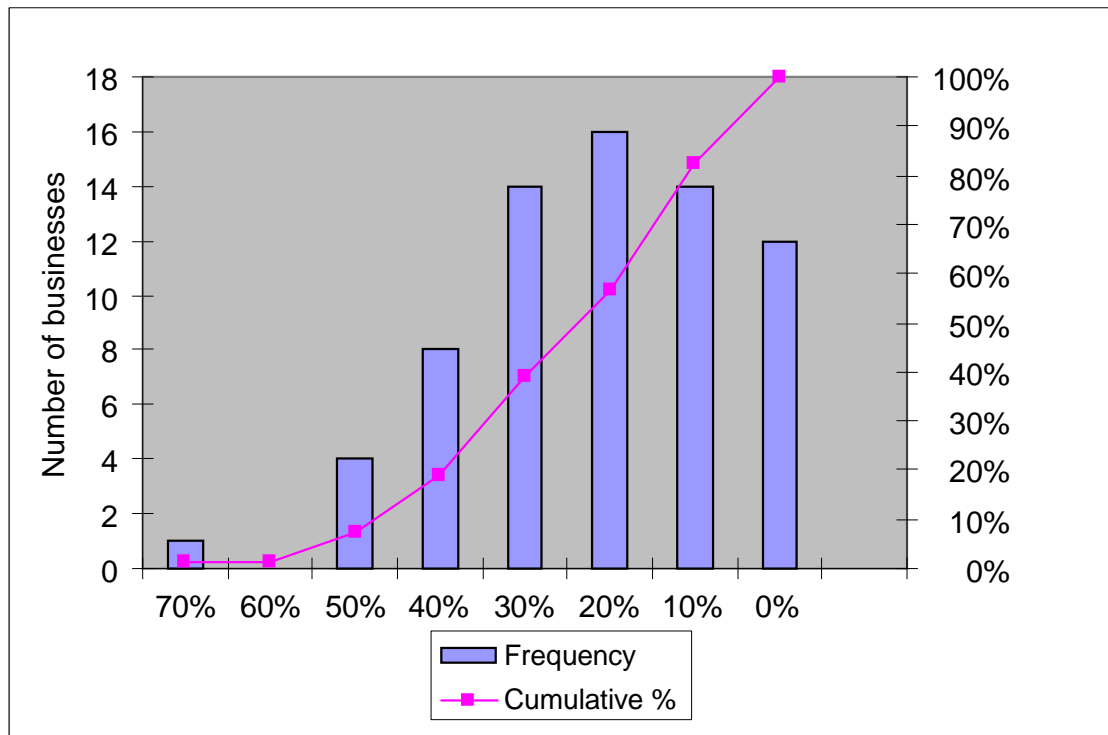
<sup>4</sup> An agency problem that is bad for shareholders does not imply that it does not have any cost for society at large. These costs imply real increased costs for the firm, which may be passed along to consumers in the form of cost-plus regulation. More generally, moral hazard or adverse selection may end up costing real taxpayer money, as has been seen in the recent financial crisis.

<sup>5</sup> In Castells and Trillas (2013), “highly” means a former minister or deputy minister, or equivalent.



## Graph 1

% Highly politically connected board members



Source: Castells and Trillas (2013).

4. The Spanish government has legally recognized a debt with the electricity firms called the “tariff deficit,” which results from the difference between costs and regulated revenues (historically capped for political reasons) and which amounts to €25 billion in 2013. This is a huge distributive conflict between consumers, shareholders and taxpayers; the government could renege on its commitment to transfer money from taxpayers to shareholders, or could start charging consumers until the debt disappears.
5. There is abundant anecdotal evidence of regulatory instability in Spain. Two examples are: a) the attribution to CNE of new competences in mergers and acquisitions in the middle of the takeover battle for the control of Endesa in 2005; b) the numerous changes in the remuneration of renewable energy that led Spain to become one of the largest producers of these energies in the world at the beginning of the 20th century to dramatically cut the subsidies after some time.
6. There is no well-established procedure in Spain to produce policy change or regulatory reform. In 2005, the government commissioned a well-recognized scholar with the production of a white paper on electricity generation, which diagnosed a number of problems and made reform proposals. Some of the changes were timidly implemented and many were not. In 2007, the government and the competition authority opened a debate to all stakeholders, which finished with the reform of the institution. This time, the government has unilaterally proposed a reform and sent it to Parliament.

7. In railways, expressways and airports there are well-known examples of white elephants (expressways around Madrid, high-speed trains in many regions, airports without traffic and extra airport terminals in Madrid and Barcelona) that constitute some of the biggest government failures in Europe, and are seen as powerful symbols of waste in the midst of the economic and financial crisis, while at the same time they illustrate the need for institutional reform that minimizes the likelihood and impact of such obvious policy mistakes.
8. Spain is a substantially (although not completely) decentralized country, and the same is true in regulation: quality issues in electricity, consumer policy and much of water and transport regulation are carried out at the regional or local level.

### 3. The Economic Analysis of Regulatory Architecture

An analysis of the advantages and disadvantages of the merger of agencies must take into account how it will impact government imperfections such as potential capture and government commitment problems. In this sense, the merger can be mainly related to the following branches of the economics literature: the literature on regulatory independence, the literature on public organization (horizontal and vertical scope of agencies), and the literature on the interaction between sector-specific regulation and antitrust in liberalizing network industries.

#### 3.1. Independence from Government

Despite the wide variety, the logic, and the appeal of ways to alleviate underinvestment (due to commitment problems in the presence of sunk investments) that are not based on delegation into a discretionary regulatory institution (for example, detailed legislation or lengthy contracts), some discretion remains necessary. According to Trillas (2010), there will be contingencies not contemplated in initial contracts. It can also be argued that credibility may require some discretion, and not completely rigid rules, because the latter will have to be changed anyway, and it is better to have some knowledge and practice with unforeseen contingencies and discretionary decision makers before the unforeseen contingencies cause the crisis of well-established institutions.

Moe (2013) stresses the political nature of regulatory delegation. He argues that after Niskanen's contribution in the 1970s, attention centered on the key role of information – expertise – and the leverage it gives bureaucrats in pursuing their own interests, as Laffont and Tirole (1993) did. The latter's model struck a balance between the view of very powerful agencies of Niskanen and the view of dominant legislators proposed by new institutionalists such as Weingast in the 1980s, for whom legislative institutions were the key to understanding stability in a context where social choice theory predicted indeterminacy. Moreover, Moe argues that the hierarchy that tries to control regulators has a multi-principal nature, where the executive and the courts also play an important role. Additionally, legislators may want to partially restrict their own control of the agencies for commitment reasons, to avoid future majorities from reversing the initial policies. The less controlled the agency, the more it will be able to use its expertise to the benefit of the agency's own preferences, although there may be situations where their expertise leaves the objectives of the legislators in a better position than in the status quo without delegation, which happens in complex policy contexts. However, expertise is not exogenous, but the result of investment, and, therefore, it must be the result of

an appropriate stable institutional structure that remunerates this investment (and makes it less valuable outside government, which is particularly difficult in regulated industries with large firms that are able to offer monetary packages that more than compensate for the benefits of public sector jobs, as illustrated by the revolving door phenomenon). Moreover, expertise may not be correlated with capacity, understood as the ability to carry out policy effectively.

To formalize the idea of time inconsistency in regulation and the corresponding convenience of delegating into a pro-industry regulator in the simplest way, let us assume a sequential relationship between a firm with objective function  $\Pi = p - I$  and a government with objective function  $W = \gamma I - p$ , with  $\gamma > 1$  (thus guaranteeing that the investment is socially valuable). In period 1 the firm can invest a completely asset-specific sum  $I = 1$  or not invest, i.e.,  $I = 0$ . If the firm does not invest, the game finishes and the payoff is 0 for both players. If the firm does invest, then in period 1 the government can choose between  $p = 0$  and with  $p = 1 + \varepsilon$   $\varepsilon \geq 0$ . If the regulator chooses a zero price, then the payoff of the firm is -1 and the payoff of the government is  $\gamma$ . The value of this parameter can of course vary across different regulated sectors. If the government chooses the positive price, then the payoff of the firm is  $\varepsilon$  and the payoff of the regulator is  $\gamma - 1 - \varepsilon$ . Since the regulator obtains a higher payoff when the price is zero, this is the decision that the firm will expect when it must decide whether to invest or not, and therefore the sub-game perfect equilibrium of the game is that there is no investment. This illustrates the well-known underinvestment problem in utilities regulation. Strategic delegation into an independent regulator with preferences characterized by some positive weight on firms' profits would avoid the zero price branch of the game, and hence would induce positive investment. In practice, different industries will vary in terms of the degree of asset specificity and the degree to which governments care or not about industry profits (depending on policy complementarities, distributive concerns and industrial structure). Therefore, the optimal degree of regulatory independence will vary across industries.

For industries that are organized as systems so that isolating individual lines or projects is complex, the alternative of organizing them through concession contracts (which in theory would not need a standing agency, but could be enforced by courts of justice) is certainly difficult. Of course, delegation of important decisions or policy areas to agents that are not politicians and that have some degree of discretion has many forms and is not limited to network industries regulation. Politicians are better at making decisions when the policy has far-reaching redistributive implications so that compensation of losers is important; criteria of aggregate efficiency do not easily pin down the optimal policy; and if there are interactions across different policy domains so that policy packaging or evaluating controversial trade-offs is required to build consensus or achieve efficiency. Non-elected expert officials are better when the electorate is poorly informed; feedback about the quality of decisions is slow so that there is a time inconsistency problem; the majority's preferences are likely to inflict large negative externalities on the minority; the criteria for good performance can be easily described ex-ante and are stable over time; the legal system is strong; and the policy consequences touch narrowly defined interest groups. It seems clear that among all these criteria, the one that most uncontroversially fits all network industries is the presence of a time inconsistency problem. It is more debatable whether the other criteria apply to regulation, and they will be discussed below, when some qualifications are introduced to the independence solution.

The alternative to reputational and contract based solutions to commitment and other problems in the infrastructure sectors and, increasingly, the preferred solution to the time inconsistency problem, has therefore been for governments to delegate the operation of some elements of the

policy vector to authorities with powers of discretion. The solution is similar to the one in central banking, but it can be argued that it is actually more necessary and more difficult to achieve at the same time in regulation, because slow depreciation and slow demand growth may increase the length of the “temptation period” to renege on initial commitments, as compared to monetary policy. One problem is that delegation does not solve, but it relocates, the commitment problem, which is transformed into one of the government committing to respect regulatory independence, which some countries have found difficult. Another problem is that it is assumed that the government can choose a regulator with the appropriate, optimally pro-industry preferences, as if there were a pool of potential regulators with known track records from which to choose.

The need to appoint authorities with a high expertise in complex matters and to avoid policy polarization reinforces the arguments in favor of delegation. In many cases, regulation and contracts are complementary, because i) some sort of supervision is necessary to enforce previous agreements and react to unforeseen contingencies or contract renegotiation; and ii) discretionary independent regulation needs to be accompanied by mechanisms of social control, accountability, and adequate procedures if it is to obtain social legitimacy and market credibility.

An important issue that is related to specialized regulators is the possible proximity to the industry and its interests. It is not unusual that in new regulatory agencies a fair proportion of the staff and officials come from the historically incumbent firm (and additionally, regulators may value future employment in the industry – the revolving door phenomenon). However, that is precisely one of the objectives of strategic delegation: to take into account the rents of the industry. But an independent regulator must not value industry rents excessively, because that would yield too high prices, possibly getting close to monopoly prices, thereby reducing consumer welfare. That is, there is a socially optimal level of weight that the regulator must attach to industry rents, as there is a socially optimal level of “conservatism” in the independent central banker.

Insulating agencies from politics may have the undesired effect of keeping policies alive that are not feasible in the medium to long run. Some political discretion that allows for well-targeted concessions to stakeholders may be useful to make short-term agreements, find the collaboration of some agents and increase the political legitimacy of policies. Reform policies need local politicians that can build alliances that make policies feasible on the ground.

It must be said that although so far the independent regulator has been characterized as a discretionary, specialized, usually appointed entity, there is also literature characterizing separate regulators as basically an informative agent that supplies a signal to political principals, who are the ones that make the final decisions. In practice, most regulatory agencies are both decision-making actors and suppliers of information.

Some practical problems with independent regulators have already been mentioned: the problem of knowing and choosing the person with the right preferences, and the problem of committing to respecting independence. But even if these problems were solved, some more substantial issues have been raised for a long time. Bernstein (1955) provides an early criticism of the institution based on the following arguments:

- A specialized regulator raises the risk of capture, because the specialists come from the same places as the firm’s managers and staff, and because they will be in a repeated relationship with firms without many other parties involved. Discretion and insulation may make regulators less accountable.

- A separate regulator who considers one of his or her most important missions to preserve his or her autonomy will be reluctant to coordinate with the government even though regulatory decisions interact with the rest of public interventions. This is usually answered by saying that regulators make day-to-day decisions on a few policy variables and policy is set by elected politicians choosing among a variety of long-run options (such as fuel decisions, ownership decisions, financing decisions). But some policies such as many on structural regulation (vertical integration, number of firms, mergers and acquisitions) affect both the long and the short run and the distinction between policy and regulation then becomes blurred.
- A regulator that is insulated from the political process will lack the skills and the tools to push some needed reforms through the political process, in terms of convincing public opinion, or building the necessary alliances. Politicians that anticipate that regulators will be insulated and in the job for many years will be reluctant to appoint regulators with strong political skills. Classic regulators such as Alfred Kahn in the United States and Stephen Littlechild in the United Kingdom were probably political entrepreneurs as much as good regulators, but their stature has been revealed as hard to replicate. Notice that the problem is not fixed just by having regulators that are pedagogic and that spend resources educating public opinion. Sometimes, it is not enough with education and pedagogy, but political enemies have to be defeated and the corridors of democratic politics (political parties, parliaments, executive powers, judicial arenas) have to be used for needed reforms to be passed.

Other problems of independent regulators must be associated to the agency costs of delegation: the agent may behave in ways that are not in the best interest of the principal (the voters, the politicians). Incentive contracts are theoretically possible, but problematic in practice.

Regulation of public utilities or of specific industries are thus in principle examples of policies that lend themselves to bureaucratic delegation, since they pit special interests against those of consumers as a whole, do not have large spillover effects, and policy performance can be evaluated on the basis of efficiency or other semi-technical criteria. The spillover effects and large distributional implications would make, say, fiscal or trade policy less amenable to delegation, and the changing and vague objectives of foreign policy would make it a typical field reserved to politicians (at least, at the top of the hierarchy). However, in many cases things are less clear-cut concerning regulation. Regulatory decisions often have important redistributive implications, especially in developing countries (but also in Spain, for example, concerning the tariff deficit in electricity); regulation interacts with many other policies, such as environmental policy or industrial policy; and objectives are much more multifaceted and changing than, say, a target level of inflation in monetary policy. It is not clear, either, that the electorate is poorly informed as required for reserving a field for agents other than politicians (actually, the case can be made that the electorate is often too informed for commitment purposes). And often, as in access pricing or cross subsidies, it is not true that policies just pit firms against consumers, but also some firms against others and some consumers against others.

If there is commitment in one policy dimension (monetary policy) but not in another complementary dimension (fiscal policy), discretionary decision makers in this complementary dimension may ruin the work of those with commitment. In some cases, if there is policy interaction between several dimensions, it may even be better to avoid committing in the first dimension, unless commitment can be achieved in the other dimension as well. This may be applicable to regulation, when the work of independent agencies interacts with interventions

that are usually in the hands of politicians, such as industrial policy, fiscal policy or environmental policy. Or when the work of independent agencies in one dimension of regulation interacts with the intervention of politicians in some other dimension. The latter is relevant in decentralized countries when the fixed costs of specialized regulation make it possible to create independent agencies at the national level, but not at the regional or local level. More generally, the recommendation to create national regulatory agencies with broad powers may conflict with the institutional structure of decentralized countries.

Many theoretical models see the risk of capture as concentrated in the separate regulator in the tradition of Bernstein (1955), mentioned above, whereas the principal is assumed as benevolent. And there is some consensus that specific ex-ante continuous regulation is more prone to capture than generic competition policy. In practice, however, to many scholars and observers, independence is interpreted as introducing expert benevolence in a context of executive non-benevolence. More independence is associated with less capture and with a transition from a clientelist model of regulation to a formal one. The positive political theory literature, however, mostly based on the experience of the United States, sees independent regulators as appointees (the alternatives being elected regulators or civil servants) who may be as vulnerable to interest groups as politicians.

Martimort (1999) explicitly models problems that can arise when an independent regulator is captured. In his model, the regulator and the firm interact repeatedly over time and this leads to regulatory “drift” in the sense that it becomes increasingly difficult for Congress to design collusion-proof contracts for the firm with the degree of “familiarity” between firm and regulator increasing over time. One solution to such problems is the separation of regulatory powers between several regulators. Here, as explained below in the next subsection, capture is rendered a less effective policy for firms because they are less able to influence the web of policies by which they are regulated.

Of course, an idealized vision of the independent regulatory commission making reasoned decisions based on an expert assessment of all of the relevant information available often does not match the reality very well, as pointed out by Joskow (2007). This author rightly argues that no regulatory agency can be completely independent of political influences. Commissioners and senior staff members are political appointments and while they cannot be fired without just cause they are also unlikely to be appointed or reappointed if their general policy views are not acceptable to the executive. Regulatory agencies are also subject to legislative oversight and their behavior may be constrained through the legislative budgetary process, unless they are fully funded by fees. Staffs may be underfunded and weak. Reporting requirements may not be adequate and/or the staff may have inadequate resources to analyze data properly and evaluate reports submitted by the parties to regulatory proceedings. The administrative process may be too slow and cumbersome to allow actions to be taken in a timely way. Under extreme economic conditions (such as exchange rate or financial crises), regulatory principles that evolved to protect investments in regulated enterprises from regulatory expropriation come under great stress. On the other hand, both the executive branch and the legislature may find it politically attractive to devolve complicated and controversial decisions to agencies.

To summarize, the literature on regulatory independence shows that independence has advantages in terms of regulatory commitment, recruitment of experts and smoothing the political volatility resulting from the political process. It also has disadvantages due to difficulties of coordination with the rest of the government, lack of political leadership and risk

of capture. These advantages and disadvantages differ across industries and countries, depending on the economic and institutional context. The empirical literature also shows that *de facto* independence may be as important as *de jure* independence, and that independence does not solve, but relocates the commitment problem, which becomes one of the government respecting regulatory independence or not. To the extent that the project to merge the agencies in Spain comes immediately after a political change, it may also be interpreted as an attempt to remove the current commissioners from their position via a legislative change. The change can also be used to try to reduce the independence of the resulting agency vis-à-vis government, as suggested by Commissioner Kroes in her letter to the Spanish government in February 2013.

### 3.2. Incentives and Horizontal and Vertical Scope of Agencies

The fact that a single agency does several tasks raises the issue of the economies resulting from enlarging the dimensionality of the agency's efforts. As is well-known from the theory of incentives (see, for example, Dixit, 2002), whether incentives should be more powerful or not depends on the degree of complementarity or substitutability between tasks. For example, if there are two tasks, and  $m_i$  for  $i = 1, 2$  is the weight of an observable variable  $x_i$  on the overall pay of an agent, then the optimal level of  $m_i$  (obtained by maximizing the principal's payoff subject to agent's incentive and participation constraints) is

$$m_i^* = \frac{1}{1 + (1+k)rcv}$$

Where  $r$  is a measure of risk aversion,  $c$  is a measure of the cost of effort for the agent,  $v$  is the variance of the noise with which the observable outcomes are measured, if we assume that both are equally measurable.  $k$  is a parameter that enters the cost of overall effort in both dimensions, which may be complements or substitutes. If  $k > 0$ , then the two tasks are substitutes, with the implication that the optimal level of the power of incentives should be lower. If  $k < 0$ , then the two tasks are complements and the optimal power should be higher. The idea can be generalized to situations where instead of designing monetary incentives, we interpret  $m$  as a measure of the improvement of the regulator's reputation as a result of some observable action. A key issue for regulatory institutional architecture is then whether tasks are complements or substitutes. And a related key issue is whether the assumption that all tasks are equally measurable holds in the case of regulatory agencies. It could be argued, as done by Cooper and Kovacic (2012), that some tasks are more salient (pursuing populist policies) and that these are not necessarily those that are more important in terms of social welfare. More generally, when tasks are substitutes and a merger of tasks is not advisable, the general tendency to divide the public sector into separate agencies carrying out different missions may be a powerful way to restore incentives (see Tirole, 1994).

According to González (2006), there are two related issues in terms of the potential merger of agencies. The first issue to be considered is whether to create a national regulatory authority in charge of all sectors under regulation, or choose a scheme of industry-specific agencies. The second is to evaluate whether in a particular industry it should be a single regulatory agency that concentrates all responsibilities or it is preferable to separate the functions in different institutions or agencies.

On the one hand, a multisectoral agency may be better at issues that demand coordination (such as the management of rights of way) or sharing scarce resources, which may be relevant

in the case of countries without sufficient professionals specializing in regulatory issues. It may also be better where it is difficult to delineate industry boundaries, as between gas and electricity or telecoms and broadcasting. Thus, England has a convergent regulator in energy, OFGEM, and a convergent regulator in telecoms and broadcasting, OFCOM. On the other hand, there are functions like those related to technological issues that are specific to each particular industry and therefore scope economies may be less important. By way of example, González (2006) argues that the powers required to monitor the quality of a telecommunications service differ from the control of the effluents of a drinking water system.

Regulation can also be interpreted as a vertical process where multiple agencies deliver various inputs (or functions) that ultimately result in obligations for undertakings in the sector. A dynamic inconsistency problem can then be alleviated through separation of functions between agencies. Such separation, which involves different objectives for each agency, solves the problem of lack of credibility for sanctions or extreme measures. Tirole (1994) presents the example of a public company, which is operated by a sectoral ministry. If the company, as a result of poor performance, does not meet budget targets, then control of the company could be held by the finance minister, usually more interested in fiscal balances than in the activity of the company. This change of control between agencies over the operating income of the firm acts as a device that lends credibility to the painful measures to amend the direction of the company, which disciplines managers. In regulation of natural monopolies, extreme sanctions may be subject to credibility problems. In extreme cases in which the company is the sole provider, this cost can be very significant if threatening continuity of service.

Formal incentives in the public sector are difficult to implement because governments, unlike private businesses, undertake multidimensional efforts to pursue multiple objectives, often with measurement difficulties (Dixit, 2002). Despite this, as mentioned above and also pointed out by Tirole (1994) and González (2006), practice shows that the government is organized internally through specialized agencies that have missions that are rather one-dimensional. Since formal incentives in public institutions are weak, the way to provide them is through professional promotions within the institutions. In agencies that have only one goal, it is easier for their executives to demonstrate their skills.

It is important to look at the impact of the institutional arrangement in the propensity of a regulator to be captured and autonomy in relation to political power. Some authors recognize that the more general the regulator is in terms of the industries it oversees, the lower the possibility that it is captured by a single firm or industry. In an integrated agency, the top executives need not be sector specialists and therefore their career will not be tied to a specific industry. A multisectoral agency will have great power and impact on the sector, which will make it more publicly visible and therefore more exposed to the scrutiny of interested audiences such as consumer groups, business associations, parliament, media, etc. The greater public scrutiny increases its “accountability,” but will have to be accompanied by good commitment devices to avoid that more public visibility derive into populism. Any decision not well-founded or influenced by capture is more liable to be discovered. The largest institutional weight allows the agency to better resist interference or pressure from political power. In addition, there will be a clear ministry interlocutor with the government. If a multisectoral agency regulates a company that participates in several markets under their supervision, then the previous message may vary, and the possibility of capture is restored.

Shleifer and Vishny (1993) argue that in a context in which a company needs complementary permits or authorizations, if they are issued by separate agencies, corruption could be more



damaging than if they are delivered by a single agency. This is because agencies acting individually do not internalize the damage, or increased costs, that their actions have in other agencies (as in the double marginalization problem in industrial organization). Laffont and Martimort (1999) question this result, introducing the problem of asymmetry of information between agencies and between them and the regulated firm. The power conferred by information to the regulatory agency opens the possibility of being captured via bribery by the firm. If there is only one regulatory agency, it will always know the firm's maximum willingness to pay to hide the information, and capture will always happen. If there are multiple agencies involved in the regulatory process, where each of them is in charge of reducing the asymmetry of information in a particular parameter, the maximum willingness to pay of the regulated firm will depend on the information available to each individual agency. The separation creates a coordination problem and informational externality affecting the incentive of each agency to disclose information, weakening the bargaining power of those institutions to the regulated firm and making capture less likely.

Given the differing recommendations between the two previous models, the question arises as to what should be the correct model to use as a reference for dealing with the problem of regulatory capture when opting for institutional design. González (2006) argues that if we are in a scenario where the capture by way of bribery is going to happen anyway, Shleifer and Vishny (1993) will be right, and, therefore, to minimize corruption, having only one agency will be optimal. On the other hand, if corruption levels can be modified, the separation makes it more difficult for it to occur. One single agency may have the advantage of easier monitoring by the public at large, and making it more difficult for the revolving door phenomenon to work smoothly. However, several agencies provide checks and balances among themselves. For the firms whose profits depend on the decisions of at least two agencies, capturing only one of them is less costly than capturing two. In the specific case of the Spanish reform, the initial announcement by the government replicated, almost literally, a consulting report commissioned by the telecommunications incumbent, Telefónica, a few weeks earlier. The minister making the proposal, Luis de Guindos, had been a board member of the incumbent energy firm, Endesa, just prior to his appointment as economics minister. This combination of episodes raised the suspicion of the merger of agencies being the result of political capture.

Of course, there are hybrid modes of institutional architecture that may achieve the best of separation and integration, if it is deemed that separation is needed to clarify objectives and mandates or missions, but some coordination is still necessary. Separate agencies with standardized protocols of communication as recommended by Aoki and Rothwell (2011) after the Fukushima accident, may be appropriate in this case.

### **3.3. Interaction between Competition Policy and Ex-Ante Regulation**

The theory of incentives suggests that when efforts are complements, accountability and incentives are easier, and the opposite when they are substitutes. That is a good argument in favor of convergent (complementary) as opposed to multisectoral regulators. Convergent regulators deal with similar industries, such as telecoms and broadcasting in one package, and electricity and gas in another, as in England and Wales. Multisectoral regulators deal with different network industries in the same agency, as in Germany or in the United States. But are competition policy and ex-ante regulation substitutes or complements? They are complements when both are necessary, but they are substitutes when it is possible to choose between antitrust legislation/authority and regulation legislation/authority, as it is the case in the United

Kingdom, where both sets of legislation have concurrent powers. Access regulation in telecommunications, for example, can be managed using competition policy or using regulation. This is a key issue for network industries that are being liberalized in some segments, whereas others are still monopolized. The introduction of competition in segments that are not natural monopolies creates a space for the interaction, sometimes as substitutes and sometimes as complements, between sector-specific regulation and competition policy.

Sunk assets are still important with deregulation, although in a proportion that depends on the specific technology. Bottlenecks remain in some segments and there is consensus that they deserve ex-ante regulatory attention. In the interaction between regulation and competition, there is a trade-off between static and dynamic efficiency, which has been stressed by, among others, Sidak and Spulber (1998). Remedies run the risk of appropriating quasi-rents and, therefore, also yield the hold-up problem emphasized above in Subsection 3.1., and must be carefully fine-tuned. In any event, the removal of monopoly rights has been combined with the regulation of the bottlenecks. There is thus unavoidable overlap between competition policy legislation and authorities and ex-ante regulation legislation and authorities. This overlap can be managed in a variety of ways, from formal coordination and consultation at the same level, through a hierarchical vertical relationship, to full integration. One of the advantages of full integration, as pointed out by Naert (2009), is that it eliminates the vested interest of the agency in the permanent regulation of industries that should have the long-run elimination of regulation as their objective. The problem is that the objectives of regulation are usually broader than those of competition policy, because the latter addresses market power when competition is technologically possible, and the former, while also addressing market power (although when competition is deemed not possible and/or not desirable), it also may address other market failures related to efficiency, such as information asymmetries, externalities or the coordination of technical standards, and in some cases other public policy objectives, such as merit goods (for example, in the case of public broadcasting) or redistribution (in the electricity sector in Spain, whatever solution is given to the problem of tariff deficit, see above Section 2). Probably for this reason of diversity of objectives, most countries do not merge sectoral regulators and competition policy authorities, although they set up coordination mechanisms between both types of authorities.

Vickers (2010) poses this same question of complementarity or substitutability of competition and regulation in Subsection 1.2 of his article, and concludes mostly that they are complements, but accepts that the answer may depend on the institutional endowment, and that there are trade-offs among the two policy instruments. (An old line of thought in public economics, prior to the analysis of incentives and asymmetric information, starting in Tinbergen and continuing with the theory of the second best, suggests that it is best that there is a correspondence between the number of instruments and the number of objectives.) On the one hand, in the United States, the view has prevailed that the focus of competition policy on static efficiency may be detrimental for long-run objectives of dynamic efficiency and welfare, but on the other hand such concerns may be of lower concern in Europe because of a tradition of state-owned vertically integrated national monopolies. For example, as explained in Carlton and Sider (2009), the Supreme Court decision in the *Trinko* case imposed the criterion that where sector-specific regulation is present, there is no need to supplement it with antitrust law.

Hellwig (2009) argues that systemic interactions across markets (such as common cost allocation issues and regulatory arbitrage) suggest that ongoing regulation is necessary even when an industry has some segments completely open to competition. The strength of competition policy is precisely that it is not ongoing, which makes it more consistent across

industries and less prone to capture. This author argues that the tensions between European competition policy (which has a higher status in the treaties than regulation, which is still basically national) and national sectoral regulation have provided a healthy rivalry of authorities that has reduced regulatory capture. The EC has used its large powers of competition policy to promote regulatory objectives, for example, using structural remedies in cross-border mergers and other cases (see Tapia and Mantzari, 2012).

It is interesting how Geradin and Sidak (2003) describe the different approaches between the United States<sup>6</sup> and the EU in the institutional design of one of the liberalizing network industries, namely telecommunications. In both jurisdictions, a key issue is the interaction between regulation and antitrust in designing how competition in some segments of the value chain must take place in the context of monopolist bottlenecks, an issue that is discussed in depth in Farrell and Weiser (2003). In this respect, the EU has followed a more systematic approach than the United States, according to Geradin and Sidak (2003), although in both jurisdictions a number of different agencies (at the federal and state level) have been kept in place. These authors stress the difference between ex-ante and ex-post public interventions to deal with market power. Ex-ante interventions are based on market failure in general (including externalities and information problems), following an economic prophylactic approach, which is usually the focus of sector-specific regulation. Ex-post interventions focus instead on illegal behavior, and follow a judicial approach centered on market power, as it is the focus of antitrust remedies. Some figures are hybrids of ex-ante and ex-post, such as consent decrees in the United States (issue-specific litigation leads to company specific regulation arising from structural and behavioral remedies, as with the Bell Companies in the 1980s and Microsoft in the 1990s) or in the EC guidelines or policy statements. According to Geradin and Sidak (2003) “the United States epitomizes the use of heavy-handed regulation,” originating from the 1996 Telecommunications Act, which gave way to long and continuous litigation, whereas the EU approach is deemed by these authors as more flexible and decentralized. The initial vision of EU reforms was that competition law would replace sector-specific regulation. In the meantime, sector-specific regulation should have a subsidiary role, which should be phased out over time as competition makes progress and eventually disappear through effective sunset clauses. But significant market power (SMP) determination and remedies depend on decisions made by national regulatory authorities (NRAs), which according to EU directives must fulfill some conditions that make them relatively independent from government, along the lines of the Federal Communications Commission (FCC) and the states’ Public Utility Commissions in the United States.

Nuechterlein and Weiser (2007) argue that determination of the optimal institutional location of telecommunications public intervention should be determined by the criteria of determinacy, expertise, neutrality and humility. Although general antitrust coupled with judicial oversight fares well in terms of neutrality, it does not fare as well in terms of determinacy (providing certainty and credibility for investors) and in terms of expertise.

The interaction between sector-specific regulation and antitrust is not the only instance where agencies (one generic, the other more specific) with different objectives or instruments interact, while dealing with the same industry or set of industries. Other instances include the interaction between an environmental regulator and a public utility commission, and the example of banking regulation and monetary policy.

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<sup>6</sup> See also Nuechterlein and Weiser (2007).

Baron (1985) discusses the interaction between a federal (centralized) environmental regulator and a state (decentralized) utility regulator, noticing that the decision of each has an impact on the achievement of the objectives of the other. In that case, if both regulators are not coordinated, having different objectives, the outcome will be worse than the social optimum. Much of the efforts on the part of the United States and the EU in the recent past in network industries such as telecommunications and energy can be interpreted as a process of cooperative federalism to overcome these kinds of problems, but in no case have the attempts to achieve better coordination involved the full merger of agencies.

Santos (2001) discusses the integration or otherwise of different banking regulatory functions (lender of last resort, deposit insurance and bank supervision) in the same institution. Different regulators may have different objectives, which may depend only loosely on performance due to observability, incentives, agency problem and monitoring. Then, there may be conflicts of interest. For example, allocating the responsibility of bank closure to an authority other than the deposit insurer may result in a loose policy of closures because the authority does not bear the full cost of delaying closure. There are often regulations to avoid these conflicts of interests.

Goodhart and Schoenmaker (1995) discuss the potential integration of monetary policy and banking regulation. The two may be in conflict because a central bank with the objective of keeping inflation low may wish for high interest rates whereas a bank regulator (either captured or worried about systemic risk) may wish for low interest rates to keep banks alive. In cases where there are problems with banks, central bank supervision may have negative implications on its credibility and consequently affect its ability to achieve its monetary policy goal.

It could also be argued that regulation is more political than competition policy, as bank supervision is more political than monetary policy; e.g., bank rescues involve more use of taxpayers' money when bank supervision is carried out by a separate agency, which tended to happen increasingly in the database of Goodhart and Schoenmaker because of structural changes in the banking industry. If so, there could be implications for the merger vs. separation issue. That is also a difference between telecommunications and electricity, i.e., telecommunications needing less taxpayer money than electricity, or at least being less subject to distributive problems.

To summarize this subsection, competition policy and regulation are just examples of policy issues with different but interacting and overlapping mandates and instruments. In most jurisdictions, there are efforts to achieve coordination, with the integration of agencies being only an extreme option to obtain it.

#### **4. Evaluation of the 2012 Reform Proposal in Spain**

Since their creation in the 1990s, the telecommunications and energy regulatory agencies in Spain have been surrounded by the same controversy that has surrounded the incomplete liberalization process of network industries in many EU member states. At the same time, these agencies have accumulated experience and specific human and organizational capital, participating in the coordinating efforts of regulatory agencies at the European level. Both have adapted to European legislation that has progressively strengthened the role of industry regulators. This organizational capital may be lost with the proposed reform. Such capital is just part of the fixed administrative costs of specific regulation, which must be taken into account and which are more affordable the larger the number of citizens to which it is applied (Mulligan

and Shleifer, 2005). But the fact that the costs had already been incurred means that they must not be incurred again unless the organizations that embody them disappear. At the same time, each agency has experienced specific shocks:

- The telecommunications regulator was transferred from Madrid to Barcelona in 2005 as a result of an electoral pledge of the winning center-left PSOE government in 2004.
- The energy regulator has been tested by corporate governance battles between and inside energy firms. A takeover wave coincided with energy liberalization in Europe between 2000 and 2010, and all Spanish energy firms participated in it, either as bidders or targets or both. In addition to this, two large energy firms, Iberdrola and Repsol, have experienced corporate control battles between management teams and construction companies that had important stakes in the ownership.

These shocks have made these agencies excessively controversial, but during these years they have been accumulating valuable experience from which teachings can and should be derived.

One of the main problems of the merger of regulatory agencies is the coincidence in the same body of ex-ante and ex-post functions. As mentioned above citing Tirole (1994), the coexistence of agencies with different objectives is good for incentives, commitment and accountability, although these benefits must be balanced with the higher administrative costs.

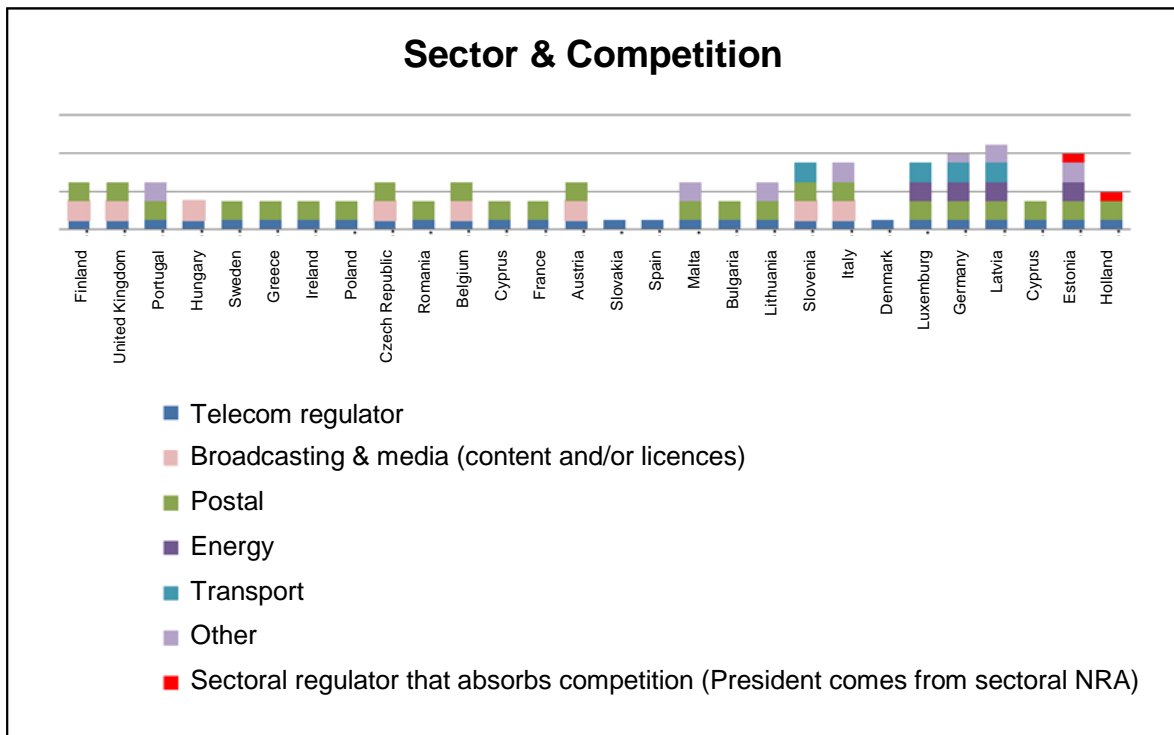
The merger of sectoral regulators in industries with very different technologies does not seem to reap any significant scale economies. On the contrary, a council supervising industries such as telecoms, electricity and transportation at the same time will hardly have the same high level of knowledge about all three of them.

The new legislation initially included changes in the workings of the new agency that were unrelated to the merger, namely the removal of the role of the agencies as monitors of their respective industries, or the change in the funding system: the industry regulatory agencies were so far funded via consumer fees, and they would have government budget funding after the new legislation. This implied a loss of independence that goes against the spirit of the most recent EU regulatory packages in telecoms and energy. As a result of pressures from the EC, the Spanish government seems to have decided to withdraw some of their proposals.

If we draw international comparisons, according to CMT (2012), one must distinguish between convergent (telecoms) and multisectoral regulators. Multisectoral regulators (several network industries such as telecoms and electricity or railways in the same agency) are common in small EU countries as well as Germany. Convergent regulators (industries that converge in technology such as media and telecoms) have been gathering an increasing amount of responsibilities and are the prevalent model in the United Kingdom, France and Italy. The only other country that has plans to introduce (in 2013) an authority that merges sectoral regulators with the competition authority is Holland. CNE (2012) adds that Estonia is another EU country with this regulation cum competition agency. New Zealand also used to have such a model according to González (2006), but in 2003 the “Electricity Commission” was created, due to “events that derived in scarcity of supply which obliged the government to create a specific regulatory institution for the electricity industry.” This agency is responsible for security of supply and for providing incentives for investment in transmission infrastructure. In New Zealand, however, there is no specific telecommunications regulator.

## Graph 2

Scope of Telecoms Regulators in the EU



Source: CMT.

As can be seen in Graph 2, in Spain the telecoms regulator was one of those that had fewer competences prior to the agency merger proposal. As mentioned above, some of these competences (like number portability) were planned to be transferred to a ministry with the reform, before the EC intensified its pressure. Therefore, the independence of the regulator, as measured by the importance of its responsibilities, would have gone from low to even lower.

There are numerous cases in the world where the regulatory functions within the same industry or sector are shared by more than one agency. For example, in Australia, telecommunications regulation is exerted by two institutions: the agency competition (ACCC) and the office in charge of the telecommunications market (ACMA). In the application of United States antitrust laws, responsibility is shared between the Department of Justice and the Federal Trade Commission or the federal regulatory agencies (such as FCC and FERC). Chile has varied examples of vertical separation of functions. In energy, the National Energy Commission (CNE) sets policies, while the Superintendency of Electricity and Fuels (SEC) monitors compliance with them. Similar separation exists in the extractive fishing sector with the Secretary of Fisheries and the National Marine Fisheries Service.

Geradin and Kerf (2003) argue that even when there is sector-specific regulation, antitrust authorities should deal with mergers, collusion and cross-subsidies. After analyzing the early experience of five countries (the United States, Chile, New Zealand, Australia and the United Kingdom), they conclude that specialized entities are needed to deal with some of the most complex issues that would otherwise remain completely unaddressed, such as interconnection or unbundling. But a generalized entity with specialized staff would be better equipped to deal

with the issue of determining whether the sector-specific rules still need to be in place or not after some period of time, as some rules needed in the liberalization stage are no longer needed when competition generalizes.

A very complex and large organization under only one council, as is proposed in Spain's reform, seems like an unbalanced structure. A three-year period for the president seems too short a period to build expertise and reputation. A homogeneous workforce whose pay will be supervised by government does not seem like the best way to attract experts who can deal with very different complex technologies (such as telecommunications, electricity and airports).

The cost savings alleged by the government do not make much economic sense. Most of them come from not creating agencies. However, the functions of these agencies will surely have to be undertaken by some government agent, so the savings will not be as such. Compared to an alternative reform proposal to create three convergent regulators (one for telecoms/postal/media, one for energy and one for transportation) plus a competition authority, Llobet (2012) reduces the cost-savings to €2 million, and these would be easily compensated by any consumer surplus or producer surplus loss due to a regulation of worse quality. A list of exaggerated cost savings cannot substitute an ex-ante social cost benefit analysis. The budget savings that may result from duplicated functions are only part of the necessary cost-benefit analysis. This must include a relevant time frame, an assumption about the discount factor, and the inclusion of any cost or benefit item, financial or otherwise. Any change in consumer surplus due to differences in regulation before and after must be factored in.

To summarize, neither the cost savings nor the need to coordinate competition and regulation seem to justify a full merger of regulatory and competition policy agencies, especially when international experience provides better examples of how to maintain independent, predictable regulation that is better coordinated with competition policy, without the need to achieve full integration.

## 5. Conclusions

Competition policy and the regulation of liberalizing industries must be coordinated. However, there are few examples in the world where this coordination is achieved through full integration of regulation and antitrust agencies. The reason is that there are good policy and incentive reasons to keep separate agencies with different mandates. Although the influence of the decision of separation vs. integration on regulatory capture is theoretically ambiguous, in countries with very powerful large firms with national and international champions ambitions, the large firms could have a preference for as few regulators as possible and keeping them as close as possible to the executive powers. The incumbents have long-term strategies of political connections and international expansion, and may prefer to have a single agency to lobby regardless of its size, and to deal with a government that continues to make most of the relevant decisions.

The merger of agencies has advantages and disadvantages, but it was apparently being used by the Spanish government to try to reduce regulatory independence, at a time when the EU rules had been requiring more, and not less, regulatory independence. Not surprisingly, the Spanish government was bargaining with the EC one year after introducing the proposal, when the Commission publicly expressed its concern for the reduction in regulatory independence. However, regulatory independence itself also has advantages and disadvantages, and there is an optimal degree of regulatory independence that varies across specific industries, depending, for

example, on the magnitude and degree of asset specificity and the need to coordinate regulation with other government policies. Tailoring of independence must be balanced with fixed administrative costs, some of which have already been sunk by agencies that have been in existence for almost two decades. Therefore, a conclusion must be obtained by combining the insights from the economics literature with the specific characteristics of regulated sectors and by drawing international comparisons.

Instead of a government initiative, it would have been better to introduce reforms in the institutions of regulation after a white paper and an open debate, as had been done with the reform of competition policy in 2007.

There is a broad consensus among scholars and practitioners that institutional quality is important, but it is more difficult to say which specific attributes conducive to institutional quality should be adopted. Many of the relevant attributes are probably difficult to measure and define: credibility, stability, good appointments, etc. Both written and non-written rules matter. Institutions are endogenous and they are not good travelers, in the sense that they must fit and complement the previous institutional endowment (see Levy and Spiller, 1994, and Spiller and Tommasi, 2007).

The role of the EU can be interpreted in this sense as an excessive constraint on the flexibility that member states need, but the priority to gain efficiencies from a single market, and precisely the institutional quality of EU procedures as compared to many national procedures, makes the EU influence precious for a country like Spain.

This influence should be welcomed to achieve the optimal level of both *de jure* and *de facto* independence in each one of the industries. These should be regulated by balancing the trade-off between the need to have clear objectives and the economies of scale and scope that come from regulating similar industries.

However, the EU should also think about the difficulties experienced, not only in Spain, but also in Denmark and other countries, with *de facto* independence. It apparently seems that the institution of regulatory independence lacks the resilience and public support that, at least until recently, central bank independence enjoyed. There is also a trade-off between independence and scope economies due to incentives and accountability issues. Independence requires low dimensionality due to accountability concerns, but scale economies and scarcity of experts call for at least convergent regulators, which introduces multidimensionality, perhaps without the necessary accountability. This works better with elected agents. In any event, there is a desperate need in Spain for increased regulatory stability and regulatory innovation.

Finally, regulation and competition laws should take bounded rationality seriously into account (lack of immediate feedback, biases that especially affect experts): ex-post evaluation of regulatory decisions, and de-biasing strategies, should be contemplated in any reform (see Cooper and Kovacic, 2012, and Rachlinski and Farina, 2002).

A good appointment as head of the new agency might overcome any of the problems of an integrated agency that have been raised here, but the track record with regulatory appointments in Spain so far is less than satisfactory, and there is nothing in the new law that makes one presume that the trend will be reversed. Given the institutional crisis that Spain has been undergoing, it is not clear that it is the best place to run institutional experiments.



## References

- Aoki, M. and Rothwell, G. (2011), "Organizations Under Large Uncertainty: An Analysis of the Fukushima Catastrophe," SIEPR Discussion Paper, no. 11-001.
- Baron, D. (1985), "Noncooperative Regulation of a Nonlocalized Externality," *Rand Journal of Economics*, 16 (4): pp. 553-568.
- Bernstein, M. (1955), *Regulating Business by Independent Commission*, Princeton University Press.
- Castells, P. and Trillas, F. (2013), "The Effects of Surprise Political Events on Quoted Firms: The March 2004 Election in Spain," forthcoming in SERIES.
- Carlton, D. W. and Sider, H. (2009), Regulation, Antitrust, and *Trinko*, in J. E. Kwoka, Jr. and L. J. White, (eds.), *The Antitrust Revolution. Economics, Competition, and Policy*, Case 18, Oxford University Press.
- CMT (2012), Informe sobre el anteproyecto de ley de creación de la Comisión Nacional de los Mercados y la Competencia.
- CNE (2012), Informe sobre el anteproyecto de creación de la Comisión Nacional de los Mercados y la Competencia.
- Cooper, J. C. and Kovacic, W. E. (2012), "Behavioral Economics: Implications for Regulatory Policy," *Journal of Regulatory Economics*, 41: pp. 41-58.
- Dixit, A. (2002), "Incentives and Organizations in the Public Sector: An Interpretative Review," *The Journal of Human Resources*, 37 (4): pp. 696-727.
- Farrell, J. and Weiser, P. J. (2003), "Modularity, Vertical Integration and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age," *Harvard Journal of Law and Technology*, 17 (1): pp. 86-137.
- Geradin, D. and Kerf, M. (2003), *Controlling Market Power in Telecommunications. Anti-trust vs Sector-specific Regulation*, Oxford University Press.
- Geradin, D. and Sidak, J. G. (2003), "European and American Approaches to Antitrust Remedies and the Institutional Designs of Regulation in Telecommunications," in *Handbook of Telecommunications Economics*.
- Goodhart, C. and Schoenmaker, D. (1995), "Should the Functions of Monetary Policy and Banking Supervision Be Separated?" *Oxford Economic Papers*, 47: pp. 539-560.
- Goodhart, C., Schoenmaker, D. and Dasgupta, P. (2002), "The Skill Profile of Central Bankers and Supervisors," *European Finance Review*, 6: pp. 397-427.
- González, A. (2006), "Estudio sobre la revisión de la institucionalidad regulatoria de los servicios sometidos a fijación tarifaria," Report for the Ministry of Economics in Chile.
- Hellwig, M. (2009), "Competition Policy and Sector-specific Regulation for Network Industries," in X. Vives, (ed.), *Competition Policy in the EU. Fifty Years on from the Treaty of Rome*, Oxford University Press.
- Joskow, P. (2007), "Regulation of Natural Monopolies," in A. Mitchell Polinsky & Steven Shavell, (eds.), *Handbook of Law and Economics*.

- Laffont, J.-J. and Martimort, D. (1999), "Separation Of Regulators Against Collusive Behaviour," *RAND Journal of Economics*, 30 (2): pp. 232–262.
- Laffont, J.-J. and Tirole, J. (1993), *A Theory of Incentives in Procurement and Regulation*, the MIT Press.
- Levy, B. and Spiller, P. T. (1994), "The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation," *Journal of Law, Economics and Organisation*, 10 (2): pp. 201-246.
- Llobet, G. (2012), "Organismos Reguladores y Autoridades de Competencia, ¿Mezclar o Agitar?" *Nada es Gratis* blog.
- Martimort (1999), "The Life Cycle of Regulatory Agencies," *Review of Economic Studies*, 66: pp. 929-947.
- Matas, A. and Asensio, J. (2012), "La liberalización del ferrocarril de pasajeros," *El País*, August 19, 2012.
- Moe, T. (2013), "Delegation, Control, and the Study of Public Bureaucracy," in R. Gibbons and J. Roberts, (eds.), *The Handbook of Organizational Economics*, Princeton University Press.
- Mulligan, C. B. and Shleifer, A. (2005), "The Extent of the Market and the Supply of Regulation," *Quarterly Journal of Economics*, 120 (4): pp. 1445-1473.
- Naert, F. (2009), "Competition Authorities and Regulators in Belgium: Hierarchy vs. Cooperation," *Competition and Regulation in Network Industries*, 10 (2): pp. 139-158.
- Nuechterlein, J. E. and Weiser, P. J. (2007), *Digital Crossroads. American Telecommunications Policy in the Internet Age*, the MIT Press, paperback edition.
- Rachlinski, J. J. and Farina, C. R. (2002), "Cognitive Psychology and Optimal Government Design," *Cornell Law Review*, 87: pp. 549-615.
- Santos, J. (2001), "Institutional Allocation of Bank Regulation: A Review," Occasional Papers, 31, Federal Reserve Bank of New York.
- Sidak, G. J. and Spulber, D. F. (1998), *Deregulatory Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States*, Cambridge University Press.
- Spiller, P. and Tommasi, M. (2007), "The Institutions of Regulation. An Application to Public Utilities," in *Handbook of New Institutional Economics*, Springer.
- Tapia, J. and Mantzari, D. (2012), "The Regulation/Competition Interaction," in D. Geradin and I. Lianos, (eds.), *Research Handbook on European Competition Law*, ch. 15, Edward Elgar.
- Tirole, J. (1994), "The Internal Organization of Government," *Oxford Economic Papers*, 46 (1): pp. 1-29.
- Trillas, F. (2010), "Independent Regulators: Theory, Evidence and Reform Proposals," PPSRC-IESE working paper.
- Trillas, F. (2010), "Electricity and Telecoms Reforms in the EU: Insights from the Economics of Federalism," *Utilities Policy*, 18 (2): pp. 66-76.
- Vickers, J. (2010), "Competition Policy and Property Rights," *The Economic Journal*, 120: pp. 375-392.