Jerusalem Papers in Regulation & Governance

Working Paper No. 27
September 2010

EXPLORING TRENDS AND VARIATIONS IN AGENCY SCOPE

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לרגולציה וממשליות
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ISSN: 2079-5882

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Exploring Trends and Variations in Agency Scope

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Abstract: What are the trends in the design of regulatory agencies' scope of responsibilities? To shed some light on this issue, we explore temporal, sectoral, national and regional variations in the scope of agencies across 16 different policy domains and 48 countries. This exercise represents a first step towards a theoretically driven empirical explanation of the determinants of agency scope. Focusing on the distinction between single- and multi-sector agencies, we demonstrate how agency scope is contingent on national, sectoral and regional characteristics, and provide a preliminary analysis of the characteristics of these variations. Our analysis of the data demonstrates, first, that the scope of agencies has been expanding fast since the late 1990s, often as a result of the extension of regulatory agencification to new sectors, and second, that multi-sectoral agencies are more common in Europe than in Latin America, in economic regulation than in social regulation, and in smaller countries than in bigger ones.

Key words: Governance, bureaucracy, Agencies, Regulatory Agencies, Regulatory State, Regulatory Governance, Regulatory Capitalism, Delegation.

Acknowledgements: The first version of this paper was presented at the V ECPR General Conference in Potsdam, September 2009. We thank all the participants in the panel, and particularity Gül Sosay, who acted as a discussant. Jordana gratefully acknowledges the hospitality of the Wissenschaftszentrum Berlin (WZB), and the support of the Spanish Ministry of Science and Innovation (Grant CSO2009-11053). The usual disclaimer applies.

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Exploring Trends and Variations in Agency Scope

In 1997, the newly elected Labour government in Britain surprisingly decided to restructure its financial regulation and to set up a unified Financial Service Agency (FSA) to govern banking, financial exchange and securities. Three years later, in 2000, the same government merged the Office of Electricity Regulation (OFFER) and the Office of Gas Supply (Ofgas) to form the Office of Gas and Electricity Markets (Ofgem). Similarly, in 2002 the British government unified its regulatory institutions and brought media and telecoms together under a single agency, Ofcom. The centralization of regulatory responsibilities is not inevitable, either in Britain or elsewhere. Thus, for example, the establishment of the British Food Standards Agency in 1999 did not lead to a merger with an agency regulating pharmaceuticals (as in the US). Single-sector agencies still exist; and yet, as we show in this paper, there has been a recent trend towards the creation of multi-sectoral regulatory agencies. Thus, from the early 2000s the German government gradually established the *Bundesnetzagentur*, a multi-sector giant regulatory agency, nowadays responsible for electricity, gas, telecommunications, post and railways. More recently, the global economic crisis of 2008 led many commentators in the US to advocate the centralization of financial regulatory agencies, since the fragmentation of such agencies was seen as a cause of regulatory failure.

This paper presents, for the first time, a comprehensive analysis of the data on agency design across the world. States vary and their administrations even more so (Christensen and Laegreid, 2006; Dunleavy, 1989; Politt et al. 2004; Christensen, 2001; Yesilkagit, 2004). The wider context of the study is the worldwide agencification of regulatory functions and the rise of the regulatory state (Braithwaite, 2000; Majone, 1997; Jordana, Levi-Faur and Fernandez, 2011; Gilardi, 2005; Thatcher and Coen, 2008). Agencification can take many forms and raises many questions. One of the most widely studied forms is agency independence. Much less studied is the issue of agency scope, that is, the number of sectors covered by an agency. We distinguish between single-sector agencies and multi-sector agencies in

order to better understand the institutional design of the new regulatory state. A multi-sector regulatory agency is defined as a unified organization that regulates more than one sector, while a single-sector agency covers only one sector. While regulation has always been an important policy instrument for governments, the new regulatory state is characterized by the application of regulation through decentralized, autonomous and specialized bodies which are mainly or even exclusively focused to this task.

The centralization of regulatory activities in multi-sector agencies is an interesting aspect of the rise of the regulatory state, and it opens a window on a better understanding of the politics of institutional design. The new regulatory state represents a change, indeed a transformation, of the old Weberian bureaucracy. By separating service delivery from regulation, regulation from policymaking, and politicians from managerial and regulatory functions, the regulatory state tends to increase the extent of fragmentation in policymaking and institutional structures (Levi-Faur and Gilad, 2004). While since the early 1990s we have experienced such a regulatory revolution, the stability of these new institutional designs has been rarely discussed in a systematic manner. Against this background, this paper aims to identify, portray and analyze some of the organizational patterns of agencies' scope of responsibilities.

Our data covers regulatory agencies in 16 sectors and 48 countries for the period 1979–2007 (OECD and Latin American countries). As will be demonstrated here, we identify a general tendency towards the concentration of regulatory tasks in larger organizational bodies. However, variations are evident across sectors and countries: finance tends to be more governed by integrated supervisory agencies than other sectors, European countries tend to have more multi-sector agencies than Latin American countries.

The first section of this paper reviews the literature on agency scope. The second section presents the data sources, definitions and analytical distinctions that served us in the collection and analysis of the data on agencies in general and multi-sector agencies in particular. The third section presents the spread over time of multi-sector agencies. The fourth and fifth sections prepare the ground for a better understanding

of the process by analyzing regional, national, regulatory area and sectoral variations in the creation of multi-sector agencies. The sixth section concludes.

1. Why Care about Agency Scope?

During the regulatory explosion of the 1990s, the establishment of regulatory agencies and the agencification of service functions (quangos/ quasi-autonomous non-government organizations) were among the clearest manifestations of the rise of network governance, decentralization of power, and retreat from the centralized bureaucratic model that characterized the Weberian state (Rhodes, 1997; Peters and Pierre, 2001, Pollitt et al., 2004; Christiansen and Lægreid, 2006). The scope of responsibilities that is delegated to agencies is one of the most important aspects of this process of decentralization. Agencies with a narrow scope represent challenges of control, regulation and power that differ significantly from those faced by agencies with a broad scope of responsibility. The small literature on agency scope of responsibilities usually focuses on specific policies arenas and sectors. The most extensive discussion deals in finance, in particular concerning the desired scope of responsibility of central banks. The historical involvement of central banks in regulatory tasks in many countries opens a wide array of institutional designs (for a review, see Masciandaro and Quintyn, 2009). Some literature exists also concerning the best design in the utilities sector, focusing on the advantages and disadvantages of multi-sector agencies (Henten, Samarajiva and Melody, 2003). The digitalization of the media and telecoms industries and their convergence with the internet has allowed some countries to centralize regulation in a single unified agency that governs media, telecoms and the internet (for example, Canada, Australia). In this sense, it may be the case that market developments in many sectors have increased the scope of substitutability among different activities and products, beyond the borders of the original sector as first defined. Here, the option to concentrate regulatory activities in a multi-sector agency, covering different sectors in a process of convergence, becomes an opportunity to pursue an institutional reform aiming, arguably, to promote efficient markets. Sectors such as electricity and gas, financial services, transportation

or information and communication technology have since the 1990s been susceptible to these convergence processes.

However, most of the literature either advocates or opposes the integration of agencies in larger regulatory institutions on the basis of multiple considerations, not only adjustment to market developments. Thus, proponents of multi-sector regulatory agencies suggest that such agencies:

a) better monitor large corporations that operate or have interests in different sectors and industries (Herring and Carmassi, 2008);
b) reduce the risk of both business and political capture. Industry-specific groups may find it more difficult to gain access to the top decision levels of the multi-level agencies. The heads of multi-level agencies might prove to be more independent from the relevant line ministry, and hence less open to political capture (Schwarz and Satola, 2000);
c) create more transparency for investors concerning the regulatory principles, criteria, procedures, and so forth, employed in any sector within the same agency, so making changes more predictable. It would not be necessary to be very familiar with a specific sector in order to know its regulatory practices, and this may attract investors from near sectors (Maleric, 2004; Schwarz and Satola, 2000);
d) may exert regulatory arbitrage to narrow the conceptual and logical gaps between regulations in different sectors (Abrams and Taylor, 2003; Samarajiva, Mahan and Barendse, 2002; Cihák and Podpiera, 2007; Herring and Carmassi, 2008);
e) better resolve regulatory conflicts and provide more coherent policies as a result of better coordination and the internal transfer of regulatory know-how (Maleric, 2004; Briault, 1999; Schwarz and Satola, 2000); and
f) can be more technically effective by capturing economies of scale and scope – that is, develop uniform procedures – and so better allocate their scarce professional resources, reduce compliance costs, and so on (Cihák and Podpiera, 2007; Abrams and Taylor, 2003; Schwartz and Satola, 2000).

On the other hand, multi-sector agencies may suffer from some difficulties and disadvantages when compared with single agencies. The literature cites several arguments which mainly refer to finance but which equally apply to other sectors. According to such studies, multi-sector agencies:

a) increase the risk of capture to most sectors, by either government or industry, when a major player with vested interests has access to the agency's decision-making process, and the whole regulatory space becomes affected (Schwarz and Satola, 2000; Abrams and Taylor, 2003);
b) introduce diseconomies of scale and scope, because of the loss of sector-specific technical expertise and the difficulties in focusing on specific monitoring activity (Schwarz and Satola, 2000; Abrams and Taylor, 2003; Cihák and Podpiera, 2007);
c) tend to have unclear, conflicting or undefined policy objectives and goals, as a result of their multi-sector nature (Abrams and Taylor, 2003), which may affect the flexibility required to regulate activity and to conduct supervision, also with regard to changes over time (Herring and Carmassi, 2008); and
d) may acquire a certain degree of political power, increasing their salience in the public sphere. This creates a risk that they may make hard regulatory choices without clear political legitimatization, which may endanger their professional profile.

The pros and cons of multi-sector agencies summarized here shed some light on the various perspectives on the institutional design of regulatory agencies. The arguments are based mainly on expectations related to the cost–benefit calculations of specific options undertaken by institutional designers following various decisions on scope. However, these calculations are highly contingent, and their effects may vary radically in different historical situations and traditions. It is not surprising; therefore, that we can conclude that there is no dominant theoretical argument in the literature about the scope of agencies (see Henten, Samarajiva and Melody, 2003; Masciandaro and Quintyn, 2009).

2. Data Collection and Classification

We now turn our attention to the data as the first step towards the analysis of the determinants of agency scope. Our empirical analysis rests on a data set that covers regulatory agencies in 16 sectors and 48 countries for the period 1979–2007. The countries covered in the data set include 19 Latin American countries and all 30 OECD member countries[1]; our notion of "sector" rests on discursive conventions. The sectors covered are: central banking, competition, electricity, environment, financial services, food safety, gas, health services, insurance, pensions, pharmaceuticals, postal services, security and exchange, telecommunications, water and work safety. Our paper also distinguishes four "families" of sectors, namely, financial, utilities, social regulation and competition. Agencies that are included in the data set meet two criteria: first, they must have an autonomous organizational identity rather than be a unit of a larger ministerial department; and second, they must focus primarily on regulatory tasks[2]. The main source for the construction of the database was information posted on the websites of the regulatory authorities. The year of an agency's legal creation was usually derived directly from the legal provisions for those institutions (laws, decrees, regulations, statutes, and so on). This information was meticulously scrutinized, and also complemented by other sources, so as to avoid a bias in favour of those agencies that have websites. Other sources include multilateral and international organizations of regulatory agencies, communication with regulators and professionals, and case-oriented secondary literature[3].

As said, the scope of agencies and the trends that govern it should be analyzed as a part of a more general process of regulatory expansion. In this process regulatory functions that in the past were the responsibility of ministries and under the tight

[1] Mexico is a member of both the Latin American group and the OECD. One of the countries in the data set, the Slovak Republic, is included only for the period 1993–2007.

2 When several regulatory agencies existed within a "country–sector" case, we selected the oldest for our data set. When rule-making and supervisory tasks were separated within a country–sector case, so that two agencies were in operation, we made rule making the criterion for identifying the relevant agency for our study. Finally, it is important to mention that although mergers, name changes, and restructurings also occurred, no cases of complete agency closure (meaning devolution of regulatory responsibility to the government) were identified for the period examined.

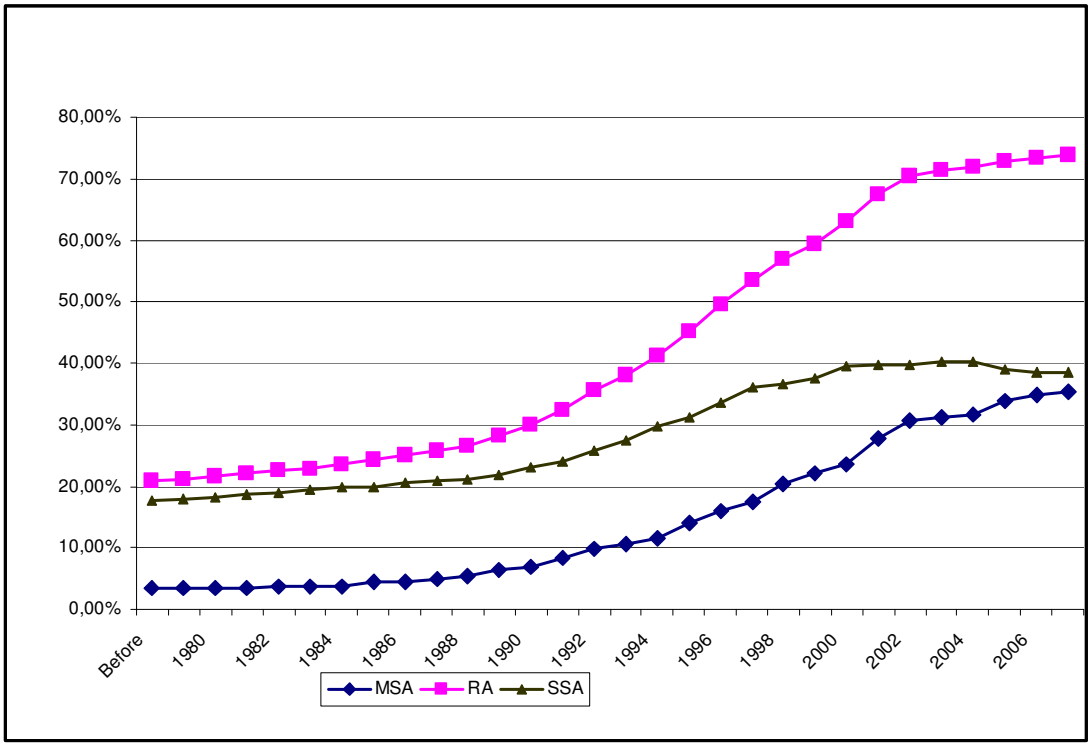
[3] For a detailed description of the data set, see also Jordana, Levi-Faur and Fernàndez (2011).

control of politicians were transferred to specialized and autonomous organizations, each governing one sector or more. The unit of analysis in our data set is the "country–sector" case. Thus, for example, neither Argentina nor telecoms is a unit of analysis, but the Argentinean telecoms sector is. Accordingly, the number of actual regulatory agencies might be smaller than the total number of cases identified for each country in the database. The analytical space comprises 768 "country–sector" cases (16 sectors times 48 countries). Each case may or may not be under supervision by a regulatory agency. To calculate the extent of agencification, we simply divided the number of units that were governed by agencies at any point in time by the total number of possible "country–sector" cases (768). We identified the presence of regulatory agencies at the end of 2007 in 575 of these country–sector cases, representing an agencification level of 74.8 percent. We made it a rule that when a regulatory institution had responsibilities for more than one sector, the same regulatory authority was considered repeatedly for as many sectors as were applicable. To assess the various facets of the process of agencification we employed four measures. First, we captured the process of agencification of regulatory functions, that named regulatory agencification (RA), and measured it as the number of country–sector cases under agency regulation, divided by the total number of country–sector cases in our sample. Second, we captured the degree of single-sector agencification (SSA) by identifying the percentage of country–sector cases covered by agencies that governed one sector only, considering the total number of possible country–sector cases. Third, to calculate the degree of multi-sectoral agencification (MSA), we divided the number of country–sector cases under multi-sector agencies by the total number of country–sector cases. Finally, the concentration ratio (CR) allows us to present a direct measure of the ratio of multi-sectoral agencies to single-sector agencies. It is calculated by dividing the number of country–sector cases under multi-sector agency regulation by the total number of cases under agency regulation. Thus, the CR reflects the proportion of the multi-sector agencification measure in the agencification measure. All measures (except CR, which ranges from 0 to 1) are presented in percentages, with a higher percentage indicating a greater share of the particular form of agencification. These four measures can be calculated at any moment of time over the entire data set or some element of it: country, family of sectors and regions.

3. Multi-sector Agencies: Spread and Origin

The continuous expansion of regulatory agencies as worldwide best practice is presented in Figure 1. Regulatory agencification covered both single- and multi-sector agencies and, as Figure 1 shows, the number of these agencies out of the total number of possible cases rose significantly in the 1980s and 1990s. Single-sector agency creation boomed in the early 1990s, and multi-sector agencies become popular only in the second half of the 1990s. Multi-sector agencies were rare in the beginning and were confined to finance, but their number started to grow from the end of the 1980s, expanding to sectors beyond finance. In 1979, only 21 percent of our country–sector cases were under agency regulation, most of them single-sector agencies (just 4 percent of cases were covered by multi-sector agencies). However, less than three decades later, in 2007, single-sector agencification had reached 39 percent of total country–sector cases (297 cases), while another 35 percent of cases were covered by multi-sector agencies (269 cases). At this time we identified agencies in 74 percent of total possible cases, almost four times more than in 1979. Not only did multi-sector agencification contribute significantly to this expansion, but during the 2000s the number of cases covered by single-sector agencies did not grow. In fact, while the rate of single-sector agencification declined in the early 2000s, the rate of multi-sector agencification stagnated only after 2005. The number of new single-sector agencies remained stable or even fell after 2001 – not because single-sector agencification ceased but because of the many mergers and absorptions that occurred. Consequently, the share of multi-sector agencification in the total number of country–sector cases grew from about 23 percent in 2000 to more than 35 percent in 2007. To summarize, multi-sector agencies are now a common institutional feature worldwide. At the end of 2007, almost half of the country–sector cases covered by regulatory agencies were in fact regulated by multi-sector agencies.

Figure 1: The spread of agencification, 1979–2007



Source of all figures and tables: authors' database.

Index: RA: regulatory agencification (total, cumulative); SSA: single-Sector agencification; MSA: multi-sector agencification;

Three different origins of multi-sector agencies can be distinguished: new creations, expansions and mergers. The first source of the establishment of a multi-sector agency is its creation *de novo*. In this case, a new agency covers two or more sectors that were not previously agencified. The second source of multi-sector agencies is the expansion of an existing single-sector agency to sectors not previously covered by any regulatory agency. At some point a regulatory agency might have expanded its scope to additional sectors after the year of its creation. In that case, we identified the year of "expansion" – to a new country–sector case – as the year in which the agency assumed such additional responsibilities. The third origin of multi-sector agencies is a merger of two or more already-existing Agencies.

Figure 2: The origins of multi-sector agencies, 1979–2007

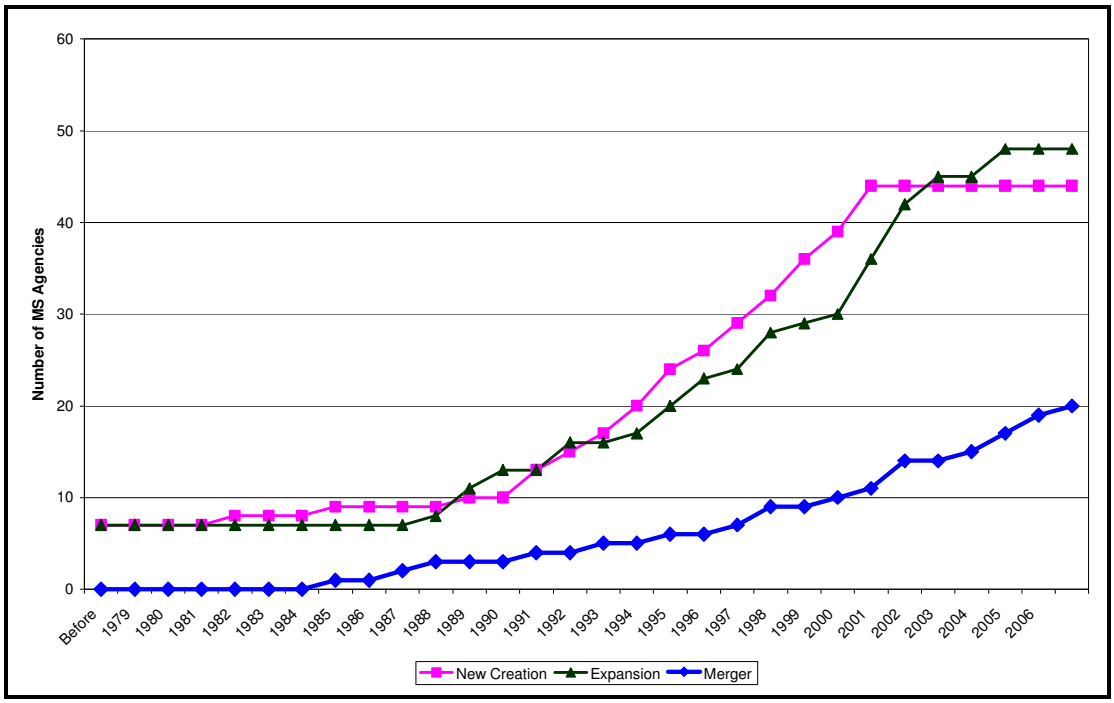


Figure 2 presents these three sources of multi-sector agency creation since 1979. The graph includes the actual number of agencies as organizations rather than the country–case as the unit of analysis[4]. As said, the total number of actual agencies identified in our sample (established organizations) was 409 by the end of 2007, and out of this number 112 were multi-sector agencies (covering more than one country–sector case). Among these 112 multi-sector agencies identified at the end of 2007, 44 were created *de novo* to cover sectors that lacked any previous regulatory institution. However, the majority are the result of either mergers or expansion to new sectors, proceeding from existing organizations. In 48 cases the agencies already existed, covering one or more sectors, but become multi-sector when expanded to sectors not previously covered by a regulatory agency. Only in the remaining 20 cases, most of them in finance, did we

[4] In a few cases, mergers or expansions occurred several times during the life of a multi-sector agency (for example, expanding first from one to three sectors, and a few years later from three to five). We considered only the agency configuration existing at the end of the period (2007), and did not count the intermediate ones (in our data set, we counted 12 cases of sequential growth, almost all in the financial area). We did not identify a single case of separation of regulatory agencies, that is, a movement from a multi-agency design to a single-agency design.

find integration of two or more already existing regulatory agencies to create a multi-sector agency, without any additional expansion to new sectors.

4. Variations in Agency Scope: Regions and Families of Sectors

Table 1 presents the distribution of multi-sector agencies across regions (Europe, Latin America, and others) and families of sectors (financial, utilities, social regulation and competition) in 2007. In order to analyze the data we employ the different measures of agencification already introduced in section 2: regulatory agencification (RA); single-sector agencification (SSA), multi-sector agencification (MSA), and concentration ratio (CR). Observing similarities and differences over the different categories established, our aim is to elaborate possible conjunctures to explain trends and variations observed in the data.

Starting with regional variations, we find that there is a higher degree of agencification in Europe (82 percent of all possible cases) than in Latin America (66 percent). We observe that these differences are mainly concentrated in the area of social regulation (68 versus 38 percent) and to less extent, the utilities area (78 versus 67 percent). This is not, however, the case with finance, where the two regions have similar coverage of regulatory agencies. Moving the comparison to the multi-sector agencification, we find that European countries tend to have more multi-sector agencies than Latin America. This is clearly observable from focusing on the CR of European countries, which is much larger (0.55) than among Latin American countries (0.39) – and it is important to note that CR already takes into account the relative differences in the level of agencification. While CR is bigger in Latin America for social regulation agencies (0.04 versus 0.29), major differences between the two regions are visible in finance and the utilities, where European countries have much larger CRs. Also, it appears that major similarities between these two regions lie in finance, but even here Latin America lags behind for all the agencification measures. In addition, if we take into account the total number of cases, which includes another ten OECD countries from different regions in the world, and

compare it with both Europe and Latin America, the ratio of Latin American multi-sector agencies is comparatively low. European countries have also a larger number of multi-sector agencies when compared with the remaining countries in the data set.

Table 1: Variations in the propensity to establish regulatory agencies

	Total country–sector cases	Country–sector cases with agency	Actual number of multi-sectoral agencies	Multi-sector agencification (%)	Single-sector Agencification (%)	Regulatory Agencification (%)	Concentration ratio (%)
Latin America (19)	**304**	**202**	**33**	**26**	**40**	**66**	**0.39**
Finance	95	88	16	40	53	93	0.43
Utilities	95	64	12	30	37	67	0.45
Competition	19	14	0	0	74	74	0
Social regulation	95	36	5	11	27	38	0.29
EU countries (19)	**304**	**249**	**55**	**45**	**37**	**82**	**0.55**
Finance	95	92	24	73	24	97	0.75
Utilities	95	74	30	65	13	78	0.83
Competition	19	18	0	0	95	95	0
Social regulation	95	65	1	3	65	68	0.04
All countries (48)	**768**	**567**	**112**	**36**	**39**	**74**	**0.49**
Finance	240	219	50	57	36	91	0.62
Utilities	240	174	50	47	27	73	0.64
Competition	48	42	2	10	75	88	0.11
Social regulation	240	132	10	8	47	55	0.15

Looking at variations across families of sectors (Table 1) we find that the degree of multi-sector agencification is related to some extent to the total level of agencification in each family of sectors. As more sectors are covered by regulatory agencies, the more multi-sector agencies we find, with the exception of competition, a sector where

only in very few countries (for example, New Zealand) do we find multi-sector agencies. MSA is dominant in finance (57 percent) and the utilities (47 percent).

It is also interesting to note that the number of sectors covered by MSA differs greatly among different families of sectors. MSA in finance appears to cover on average more sectors (2.85 sectors covered) than MSA in competition (2.4 sectors covered), the utilities (2.17 sectors covered) and in social regulation (2.0 sectors covered). The larger scope of MSA in the finance also correlates with the almost complete agencification in these sectors (91 percent).

Considering national variations in countries' propensity to create multi-sector regulatory agencies, we might expect the size of countries to affect the likelihood of multi-sector agencies being created. Such relationship could be related to the interaction of the agency with larger constituencies – which might exert pressure to keep their own regulatory agencies – and also to the greater specialization and differentiation of governments in larger countries, with substantial bureaucracies interested in maintaining single-sector regulatory agencies within their policy network. As a first approach here, we use population as a proxy for the size of countries, although finer measures might better capture this expected effect. Observe Table 2, where we break up our sample of countries into four groups. Although RA tends to be greater in larger countries (the smallest countries also have a significant percentage), the CR systematically decreases with the size of the country. In other words, we find a clear trend towards a higher concentration of agency scope in smaller countries, once we control for country differences in their level of agencification.

Table 2. Country variation in the propensity to establish multi-sector regulatory agencies

Inhabitants (millions)	Regulatory agencification (percent)	No. of multi-sector agencies (country average)	Multi-sector agencification (percent)	Concentration ratio
Up to 6.0 (N = 12)	77.6%	2.67	44.8	0.58
6.1 – 12.0 (N = 14)	68.8%	2	30.8	0.45
12.1-60.0 (N = 13)	73.6%	2.23	32.2	0.44
More 60.1 (N = 9)	79.9%	2.44	34.0	0.43

Results show that in small countries structural aspects are significant not only in promoting multi-sector agencies but also in including more sectors in these agencies. In Latin America, we find that small countries such as Costa Rica, Panama or Uruguay often use multi-sector regulatory authorities as a way of dealing with resource problems (Jordana and Levi-Faur, 2006). For example, in 1996 Costa Rica created the *Autoridad Reguladora de los Servicios Públicos* (ARESEP), which integrated five different sectors within the same structure. ARESEP replaced a former agency that was originally established in 1928 to regulate electricity, and it regulated telecoms as well after 1963. In 1996 this regulator was subsumed under the new agency, which also regulates the postal, gas and water sectors. In Uruguay only one agency (the financial services regulator) is a stand-alone organization. The others are organized as multi-sector agencies (the central bank controls also securities and exchange, the agency for communications includes telecoms and post, and a multi-sector agency covers energy and water). In Europe, cases which, like Slovakia, have a single agency for finance and another for utilities display a similar institutional architecture. Smaller countries seem to be less selective about the spheres of regulation that are covered by the same regulatory institution.

5. Sectoral Variations in Agency Scope

Multi-sector regulatory institutions exist in almost all regulatory areas; but their popularity differs greatly across family of sectors. Sectors like gas and electricity, financial services and insurance are often governed by multi-sectoral agencies, while in other regulatory areas they are less common, such as food safety and pharmaceuticals. Also, as we have seen before, some types of multi-sector agency are much more common in some regions than in others. Table 3 provides a detailed account of the most common types of multi-sector regulatory agencies. It reveals the two families of sectors in which multi-sector agencification are most popular: utilities and finance. The most popular combinations in utilities are electricity and gas, and telecommunications and post, and the most popular in finance are the combinations of central bank and financial services, and also those agencies including the four sectors of financial services, securities, insurance and pensions but not the central bank. Other combinations are less frequent but also quite widespread, particularly in finance.

Table 3: Main combinations of multi-sector regulatory agencies (2007)

	Number of cases	Percentage of cases	Percentage of countries
Involving central bank	14	12,5	29,16
Finance (4 sectors)	11	9,8	22,92
Telecom + post	16	14.42	33.33
Elect + gas	25	22.32	52,08
Food + pharma	7	6,25	14.50
Others	39	34.82	81,5
TOTAL	112	100.00	

To make sense of the differences observed, in this section we enquire whether the nature of certain sectors affects MSA. Here we expect multi-sector agencies to be more common in industrial activities that offer products or services that have more prospects for market integration, with significant substitution possibilities among them. There are some clear examples of this: the production of electricity by different

sources, the transmission of data over different networks, or contributions to pension funds from various financial schemes.

Table 4: Propensity to establish multi-sector regulatory agencies by sector

	Country–sector cases	Country–sector cases with agency	Actual number of multi-sectoral agencies	Multi-sector agencification (%)	Single-sector agencification (%)	Regulatory agencification (%)	Concentration ratio
Gas	**48**	**39**	**32**	66.6	14.6	81.3	0.82
Postal services	**48**	**24**	**20**	41.7	8.3	50	0.83
Electricity	**48**	**45**	**34**	75.5	24.4	93.7	0.81
Telecoms	**48**	**47**	**23**	47.9	50.0	97.9	0.49
Water	**48**	**22**	**7**	14.6	31.2	45.8	0.32
Utilities	**240**	**177**				73.7	
Central bank	**48**	**47**	**14**	29.2	68.8	97.9	0.30
Financial services	**48**	**48**	**39**	81.3	18.8	100	0.81
Insurance	**48**	**43**	**32**	66.6	22.9	89.5	0.74
Securities	**48**	**45**	**23**	47.9	45.8	93.8	0.51
Pensions-Social Sec.	**48**	**37**	**25**	52.1	25.0	77.1	0.68
Finance	**240**	**220**				91.6	
Competition	**48**	**42**	**2**	4.2	83.3	87.5	0.05
Food safety	**48**	**30**	**8**	16.6	45.8	62.5	0.27
Pharmaceutical	**48**	**31**	**7**	14.6	50.0	64.6	0.22
Work safety	**48**	**22**	**1**	2.1	43.8	45.9	0.48
Environment	**48**	**27**	**3**	6.3	50.0	56.3	0.11
Health	**48**	**18**	**1**	2.1	35.4	37.5	0.06
Social regulation	**240**	**128**				53.3	
All sectors	**768**	**567**				73.8	

On the other side, we expect those sectors with conflicting policy objectives to resist integration in multi-sector regulatory agencies. Conflicting policy objectives refer to the existence of different purposes in regulation (broadly speaking, we might refer to the classical distinction between the regulatory objectives of market efficiency and

avoiding risks). To corroborate this view, we should find more agency integration processes in regulatory areas where the possibility of disagreement is less, while in those areas with a high potential for conflicting objectives the number of integration processes should be much reduced.

According to these expectations, we might predict that finance and energy would have more integrated agencies than other areas. From Table 4 it is possible to confirm this relationship, in particular by observing the relative weight of multi-sector agencies in the total number of cases covered by regulatory agencies in a specific sector (the CR). We observe a CR of 0.81 in financial services (which also shows an MSA of 81 percent of cases), and a CR of 0.74 in insurance agencies. As for regulatory agencies in the electricity and gas sectors, their CRs reach 0.74 and 0.85, respectively (with an MSA of 73 percent and 69 percent of the cases, respectively). Thus, we realize that these areas are highly integrated, and it seems most likely that, for both pairs in energy and finance, certain structural features related to interlinked productive activities encouraged the creation of multi-sector regulatory agencies.

As for the effect of different sectors' conflicting policy objectives in reducing the prospects for agency integration, other cases might be considered. In fact, this could be a reason why we find, for example, a small number of cases of integration of food and pharmaceutical regulatory agencies, or telecommunications and electricity regulation. Food and pharmaceuticals are substantially different in relevant respects. The same is true of telecoms and electricity. In both electricity and in pharmaceutical regulation, *ex ante* risk regulation usually goes a step further than in telecommunications and food regulation. This and other differences might easily create policy conflicts within a multi-sector regulatory agency. It is interesting to note also that there are significant differences between Europe and Latin America with respect to these combinations, suggesting a possible discrepancy in how policy objectives are valued on each side. Another case of limited MSA is water regulation, in contrast with popular combinations like telecommunications and post within the utilities. Although there are few cases that combine water with other utilities (Costa Rica, Uruguay, Slovakia…), the peculiarities of water regulation (competition is very limited, and universal service obligations are strong) may generate some policy conflicts with other utility sectors that have much more market potential.

The area of regulation in which problems of potential conflicts among policy objectives been examined most extensively is finance, where possible policy discrepancies between central banks and financial authorities are very salient (Copelovitch and Singer, 2008). Central banks were the pacesetters in regulatory governance. From a policy sector perspective, central banks were essentially the sector that gave birth to the regulatory state. Nowadays, in a number of countries central banks have regulatory tasks in finance in addition to their main responsibilities related to the macro-management of monetary policy. They form a particular case of regulatory governance, often rooted in long-term institutional developments. Table 4 reveals that financial integration more often than not excludes the central bank: while there is 81 percent MSA in financial services, only 29 percent of central banks have responsibilities for other sectors – a signal that their regulatory complementarities are not obvious. In addition, we find that most multi-sector agencies involving the central bank are quite old (9 out of 14 were established before 1990), suggesting some path-dependence effects in the persistence of these cases.

Moving in a different direction from integration with the central bank, from the late 1980s, and in parallel with large transformations in global financial markets, it was possible to observe the beginnings of a new architecture for financial regulatory supervision, based on the integration of different sectors (banking, insurance, securities, and pensions). While this pattern first emerged in Norway, Iceland, Sweden and Denmark, it was the 1997 decision of the United Kingdom to transfer banking supervision from the Bank of England to a new agency with responsibility for all financial areas that represented a turning point in the diffusion of this new institutional model (Masciandaro and Quintyn, 2009). However, this integration process did not always move towards the unified model for financial services, insofar as national traditions were also very relevant to shaping new institutional developments (Lütz, 2004). Some other countries merged only two sectors, rather than the whole financial area, in a single agency (Herring and Carmassi, 2008). Also, as said, in a number of countries central banks were responsible for financial supervision, shaping a different institutional architecture. In fact, it has been argued that the persistence of separate agencies for each sector is most likely when the central bank has responsibility for banking supervision, a result that has been identified as the "central bank

fragmentation effect" (Masciandaro, 2006; Freytag and Masciandaro, 2007), and our results so far confirm Masciandaro's hypothesis about the fragmentation effect of central banks. The announcement of the British government in June 2010 that it would devolve regulatory powers for finance to the Bank of England, while creating at the same time two new agencies, one for prudential regulation and one the other for consumer and market protection, also represents to some extent a move towards greater fragmentation (but with a different rationale, based on financial issues and not subsectors).

6. Concluding Remarks

Our knowledge of the empirical determinants and characteristics of agency design is very limited. Mapping exercises that cover the various regulatory institutions of the state are rare and are usually confined to a small number of cases. This paper presents the first, modest step towards a better overview of the architecture of regulatory agencification and its characteristics across countries and sectors. Agency design represents a choice of diverse group of decision makers, including politicians, bureaucrats, legal advisors, international consultants who are responsive to international trends, local interests of various kinds and media pressures and framing exercises. Systematic knowledge about the institutional features that characterize these choices may allow us in the future to better understand the politics of choice itself. As demonstrated, we have found certain systematic patterns of variation across sectors, countries and regions. Multi-sector agencies are more common in European than in Latin America, in smaller countries than in bigger ones, and in economic sectors than in social sectors. We have also identified a general tendency, which appears to have emerged in recent years, towards an increase in the scope of regulatory agencies.

Most of the current multi-sector regulatory agencies were easy to establish probably also because no agencies had previously existed in the sectors involved. Cases of agency merger after creation are not common – and most such cases have been concentrated in finance. This is clear evidence of the importance of path dependence

in the establishment of multi-sector agencies. The costs involved in merger processes may rise after the creation of agencies, because of the organizational sunk costs involved and the institutions' and actors' constellations already created around the agency. In this sense, institutional path dependence of already existing agencies may represent an obstacle to new waves of agency merger in the future. The single-sector agencies that have been created since the 1990s will probably resist pressures to merge, particularly where the sectors involved have potentially conflicting policy objectives. Historical factors may also play a role in some cases, as for example when the prevailing role of the central bank in some areas of banking regulation is highly relevant to preventing the concentration of different areas of financial regulation. However, to make sense of the growing number of multi-sector agencies we need to understand, more than the pros and cons of multi-sector agencification identified by the literature, the general trend to regulatory agencification within the administrative state, which in fact in many instances boosted multi-sector regulatory institutions as a valuable option for agencification.

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