De facto independence after delegation: A fuzzy-set analysis

Martino Maggetti

Institut d'Etudes Politiques et Internationales (IEPI), University of Lausanne, Lausanne, Switzerland

Abstract

The phenomenon of delegating public authority from elected politicians (or ministries headed by elected politicians) to formally independent regulatory agencies (RAs) is becoming increasingly widespread. This paper examines the relation between formal independence, as prescribed in the constitutions of agencies, and de facto independence. Toward this end, it conceptualizes and assesses de facto independence of RAs, and discusses organizational, institutional, and political explanations for divergence from formal independence. The complex relations between de facto and formal independence are examined with a cross-national, cross-sectoral comparison of 16 Western European RAs using fuzzy-set analysis. The results show that formal independence is neither a necessary nor a sufficient condition for explaining variations in the de facto independence of agencies. Other factors, such as the lifecycle of agencies, veto players, and European networks of agencies, have a decisive impact.

Keywords: fuzzy-set analysis, independence, regulation, regulatory agency.

Introduction

The role of bureaucracy is being profoundly reshaped in today's version of capitalism. Governments, especially those in Europe, are partially shedding their function as providers of goods and services and their direct interventions in the economy in favor of a more indirect regulatory approach (Majone 1994). Indeed, since 1980, no government activity has grown faster than regulatory functions (Jacobs 1999, pp. 1–2). In this context, politicians have to cope with a sociopolitical environment perceived as increasingly uncertain, contingent, and fluid, whereas the external imperatives deriving from an "internationalized economy" and a "risk society" require certainty, quick adaptation, and informed answers. Hence, these politicians are increasingly delegating regulatory functions to formally independent regulatory agencies (RAs) designed to improve the credibility and efficiency of policy-making by insulating it from short-term politics and by providing technical expertise. Independent RAs are "governmental entities that possess and exercise some grant of specialized public authority, separate from that of other institutions, but are neither directly elected by the people, nor directly managed by elected officials" (Thatcher & Stone Sweet 2002, p. 2). According to the empirical

literature, the shift in power to these bodies is quantitatively impressive and qualitatively relevant (Gilardi 2005). Independent RAs now are a main feature of the "new global order of regulatory capitalism" (Levi-Faur 2005; Levi-Faur & Jordana 2005).

Several questions about these developments are unanswered. We lack comparative data on the functioning of RAs, specifically on the effectiveness of their independence.[1] This problem appears to be fundamental to understanding the implications of the recent spread of regulatory capitalism. According to the fiduciary principle (Majone 2001), an effective independence is viewed as essential for credibility and a precondition for high-quality regulatory results used to justify the separation from the chain of democratic delegation (Strom *et al.* 2003, pp. 55–67).[2]

Starting from these premises, this study examines the relations between formal independence, as prescribed in the statutes of agencies, and de facto independence, and explains how the two types of independence may diverge from each other. The paper is structured as follows. First, I briefly propose a conceptualization of formal and de facto independence. Then, I present a theoretical discussion of factors influencing agencies' de facto independence. I develop five hypotheses about variations in de facto independence, illustrating how it can be expected to differ from formal independence. Next, I discuss data and methods before testing my theoretical expectations on 16 Western European regulators, using a fuzzy-set analytical technique. Results and conclusions follow. The main insight is that formal independence is neither a necessary nor a sufficient condition for explaining the de facto independence of agencies, and the divergence from statutory prescriptions reflects a significant range of causal conditions.

Explaining agencies' de facto independence

There are several definitions of independence (Verhoest *et al.* 2004), and few specifically treat the problem of its effectiveness. According to Gilardi (2002), *formal independence* refers to a series of prescriptions, enshrined in the constitutions of agencies, which should guarantee independence from elected politicians.[3] Formal independence is the key factor to consider when investigating delegation to RAs because it corresponds to the intentions of the decision-makers regarding providing credibility to regulatory policies.

Conversely, the notion of *de facto independence* characterizes the effective independence of agencies as they manage day-to-day regulatory actions. This notion is crucial for the study of the consequences of "agencification" on the political system and the regulated sectors. We can conceptualize de facto independence starting from Majone's seminal paper (1997, p. 152), in which he identified RAs as "highly specialized organizations enjoying considerable autonomy in decision-making." Autonomy means, above all, to be able to translate one's *own* preferences into authoritative *actions,* without external constraints (Nordlinger 1987, p. 361).[4] Therefore, I assume that the de facto independence of RAs can be seen as a synthesis of two components: the self-determination of agencies' preferences, and their autonomy throughout the use of regulatory competencies, that is, during the activity of regulation.

Moreover, not only has the informal aspect of independence been somewhat neglected in the literature, but the role of actors other than the politicians has been underestimated (apart from Pedersen 2006). In view of the process of the delegation of regulatory competencies, it is plausible to consider RAs as "intermediary organizations" (Braun 1993) that act as mediators between the politicians and the regulatees (the

representatives of the sectors targeted by regulation). Indeed, even if agencies enjoy operational autonomy to promote the "public interest" as defined in their constitutions, they have to interact regularly with those being regulated to gather relevant information and to ensure the implementation of their decisions. As such, the politicians *and* the regulatees are the relevant external actors; both may be able to mold the regulatory action of agencies.

Hypotheses

The complex relationship between formal independence and de facto independence of agencies can be affected by several factors.[5] First, the level of formal independence should explain only partially the variations in de facto independence from politicians (Stern 1997; Thatcher 2002a,b,c; Wilks & Bartle 2002). Given that any institutional framework allows a certain amount of discretion (March & Simon 1958; Friedberg 1997), de facto independence from politicians will not necessarily always be consistent with statutory prescriptions. On the one hand, agencies will develop their own strategies; on the other, elected officials are likely to retain controls after delegation (Braun 2002). At this stage, even if it is premature to look for detailed explanations, it is crucial to assess the extent of the possible disjuncture between formal and de facto independence, as it would have critical consequences for the effectiveness of the new regulatory order.

- *Hypothesis 1*. High formal independence should be neither a necessary nor a sufficient condition for a high level of de facto independence from politicians.

Second, we would expect independence to be *time dependent*. RAs, probably even more than other organizations, enjoy a certain degree of discretion, permitting the evolution of their relationships with politicians and with regulatees, beyond those envisaged in their constitutions. Olson underlined the increasing influence of groups over time – the accumulation of collusions that are detrimental to the "public interest" (Olson 1982). More specifically, according to Kahn, regulatory commissions may go through a lifecycle, setting out as protagonists of the public interest and then gradually becoming standardized and protective of the interests of the actors they are supposed to regulate (Kahn 1988). Similarly, Martimort, by means of a transaction-cost framework, argues that RAs evolve over time: Agencies start by acting in the public interest and then might become increasingly bureaucratized and influenced by private interests (Martimort 1999). In that sense, agencies' functioning should be understood as a dynamic game in which politicians, interest groups, and RAs interact repeatedly within regulatory institutions. Collusion might be self-enforcing, as the two partners, who share information that is not available to the political principals, may prefer the future benefits derived from continuing to cooperate to the current gains derived from non-collusive behavior.

These studies lead us to expect that an older RA will be more independent de facto from politicians and less independent from the regulatees than will be a younger one. However, according to the notion of "multiple and conjunctural causation" (Ragin 2000), I consider that another condition should be jointly required for explaining the outcome of high de facto independence of agencies. Indeed, independence should also be a function of the number (and, implicitly, distance) of *veto players* (Tsebelis 2002) in the political system, which should imply a reduction in the steering capacity of the politicians. Indeed, divided principals will be less capable of monitoring, controlling, and influencing the agent.

- *Hypothesis 2.* The combination of conditions that might give rise to high de facto independence from politicians is expected to be the old age of agencies and the presence of many veto players.

Third, the "varieties of capitalism" approach distinguishes between two ideal types of institutional model of the *coordination of the economy*: the coordinated market economies (CMEs) model, based on extra-market coordination between economic and political actors, and the liberal market economies (LMEs) model, in which the architecture of markets ensures coordination (Hall & Soskice 2001). The related concept of institutional complementarities underlines the fact that a nation with a particular type of coordination in one sphere should tend to develop complementarities in other spheres. These considerations might imply that RAs created with similar formal competencies could nevertheless function in different ways, as the role they play depends on the relationships they develop with other organizations and institutions. Specifically, in CMEs, the networks among the decision-makers, the regulators, and those being regulated should be denser than in LMEs because of the need for extra-market coordination.

Hence, an agency in a CME might be expected to have less de facto independence from the politicians and the regulatees than an agency in an LME. This relation would, nonetheless, be shaped by specific sectoral patterns, given that political events and organizations are frequently described as *path dependent* (Pierson 2000). The underlying assumption is that of "increasing returns;" that is, the dynamic of growth arising from the cost of switching from one alternative to another over time. This approach is helpful in the context of our discussion about RAs, as it assumes that an earlier mode of regulation is likely to continue operating to a certain extent because of, for instance, the persistence of informal linkages among the relevant actors. Therefore, we may suppose that when an RA is created (or reformed), the old regulatory arrangement will partly determine its functioning. For instance, we can suppose that when an RA is created in a sector that was formerly under government control, it will be less de facto independent from the politicians.

- *Hypothesis 3.* A highly coordinated economy and sectoral path dependency will be two concomitant conditions for the low de facto independence of agencies from both the politicians and the regulatees.

Fourth, the European Union has set out to coordinate the implementation of regulatory arrangements in member states and to harmonize regulatory governance through *agencies' networks* (Coen & Thatcher 2006). The institutionalization of these networks varies across countries and sectors. It is plausible that new networks of regulators may reinforce the national agencies (by providing a range of resources in terms of expertise, information, and so forth) and alter the relationships between RAs, the politicians, and the regulatees. Incorporation into a network of agencies is therefore expected to enhance the independence of RAs from those they are regulating, depending upon their *organizational strength.* Indeed, according to the classic argument of capture theory, the organizational strength of the regulatees may diminish agencies' actual independence (Stigler 1971; Pelzman *et al.* 1989). Accordingly, Olson (1982) stated that small and cohesive groups, such as coalitions of producers, have an incentive to form lobbies and influence regulatory policies in their favor. Here, a good indicator of the organizational strength of

the regulatees is whether the regulatory action of RAs is sectoral rather than general. In the former case, highly organized regulatees are likely to reduce the de facto independence of agencies.

- *Hypothesis 4.* Intense participation of agencies in European networks and the organizational weakness of those being regulated are expected to lead to high de facto independence from the regulatees.

Finally, when RAs are conceived as *intermediary agencies*, we might suppose that their de facto independence from politicians and regulatees should be related. Following Bernstein (1955), who rejected a functional approach to regulation early on, we might argue that a lack of political intervention is the reflection of political disinterest in regulation and that as a result, the agency could not rely upon its political principals for support vis-à-vis the regulated industries, thus favoring a captured process.

- *Hypothesis 5.* In cases of high de facto independence from the politicians, a "footloose" agency could be captured by other relevant stakeholders (i.e. the regulatees).

Analysis

The fuzzy-set qualitative comparative analysis (fs/QCA) assumes not only that the research environment of political science is extremely rich (too many variables, not enough cases), but also that the connections between variables are better described in terms of multiple and conjunctural causation (Ragin 2000, pp. 4–10, 104–109). These considerations are specifically challenging for studies involving a small to medium number of cases where, on the one hand, the standard qualitative method for comparison is currently judged to be too unsophisticated, and on the other hand, mainstream statistics provide little reliability and robustness (Hall 2003). An fs/QCA should combine the advantages of case-oriented qualitative studies (in-depth knowledge of cases and attention to multiple, singular, or deviant patterns of causation) and the precision, transparency, and systematic accuracy of a variable-oriented quantitative approach (Rihoux 2006, pp. 680–687). This research strategy attempts to underscore heterogeneity and difference in kind and degree, using a "configurational approach" to social phenomena that allows researchers to conceive each case as a combination of causal conditions (i.e. set memberships) (Smithson & Verkuilen 2006, pp. 2–4). The fs/QCA is especially suitable for this study. First, I am interested in subtly examining the causal connections between formal and de facto independence, not only in studying general patterns of covariation of the two variables. Second, I focus on a variety of causal mechanisms leading to the assessment of multiple causal paths (e.g. "equifinality;" see Bennett & Elman 2006, p. 457). Third, fs/QCA is particularly helpful when dealing with a small to medium n, balancing intensive and extensive investigation, while focusing on exploration and discovery.

Methodology

The first analytical step after coding data is to discover all causal conditions (i.e. "independent variables") with membership scores that are consistently greater than or equal to outcome (dependent variable) membership scores (Jackson 2005). This allows us to determine all necessary conditions. The second step is to examine sufficient conditions by means of the comparison of membership scores in the outcome with the scores of all possible combinations of conditions. A condition or combination of conditions is

considered sufficient for an outcome if membership in the cause is reliably less than or equal to membership in the outcome (i.e. the condition is a subset of the outcome). In this study, tests for sufficiency and necessity of conditions are based on the higher meaningful level; that is, a proportion of positive cases exceeding 72% de facto independence from the politicians and 75% from the regulatees with a significance level of 0.05.[6] The fs/QCA software is used for all calculations (Ragin *et al.* 2005).

Two distinct analyses are applied. First, I test explanations about the de facto independence of agencies from politicians (defindpdm): formal independence, age, veto players, coordination of the economy, sectoral path dependence, and the effect of agencies' networks. Second, I test hypotheses regarding the variations in de facto independence from the regulatees (defindreg). This time, I use de facto independence from the politicians as an additional explanatory factor, whereas I exclude formal independence and veto players that refer only to the relationship with politicians. I also add another variable, namely, the organizational force of regulatees.

The selected cases are 16 formally independent RAs in 10 Western European countries and three sectors.[7] The purpose is to obtain a relatively homogeneous universe with a consistent internal variety concerning the relevant variables. The main criterion for including a case in the dataset is consistent comparability within the agencies' organizational models (chairperson or director – board or similar body – own secretariat). The other crucial criterion is the focus on the most institutionalized agencies and those that benefit from the greatest powers and the broadest array of regulatory competencies, especially concerning rule-making. I started from Gilardi's (2002, 2005) dataset on formal independence of agencies focusing on three sectors: a long-standing privatized sector (banking and finance), a former public sector (telecommunications), and a general domain (competition). I sent a detailed questionnaire to all selected agencies' chairpersons; I refined data with written and electronic documentation, and interpreted it with the help of electronic and telephone interviews with the agency personnel.

The operationalization of the causal conditions

I began by operationalizing seven explanatory variables (Table 1). The formal independence of agencies (hformalind) is measured with Gilardi's index (2002).[8] To keep the richness and significance of this causal condition almost intact, the data were coded on a seven-point ordinal scale with the value "0" for cases scarcely independent and "1" for the highly independent cases.[9] The measurement related to the age of agencies (oldage) was constructed by simply subtracting the year of the creation of the agency from the year of the data collection (2006). (Sources of creation dates are agencies' websites.) The number of veto players (manyveto) was determined by the Tsebelis dataset (2002) on a five-point scale to distinguish between relevant and irrelevant variation. The index created by Hall and Gingerich (2004) allowed us to measure the degree of coordination between national economies in Western countries (coordeco) on a seven-point scale that also relies upon our substantive knowledge of each case (Hall & Soskice 2001). The assessment of the mode of regulation used before the creation (or reform) of agencies led to a distinction between sectors (sectorpubl). I used "1" to code prior public ownership of the regulated industry, otherwise "0" (Conway & Nicoletti 2006). The variable "network" was coded "0" when the agency did not participate in European networks, "0.33" in the case of partial membership, "0.5" in the case of participation with one, and "0.67" in the case of inclusion in two official networks. The organizational force of those

Table 1 Causal conditions

Sector	Country	Case acronym	Formal independence		Old age		Veto players[†]		Coordination of the economy		Former public sector		Networks		Org. force of regulatees	
			Data	Scale	Data	Scale	Data	Scale	Data	Scale	Data	Scale	Data	Scale	Data	Scale
Banking and financial sector	Belgium	belgbk	0.47	0.5	72	1	4.47	0.75	0.74	0.67	Priv	0	2	0.67	Spec	1
	Germany	gerbk	0.34	0.17	4	0.17	2.23	0.5	0.95	1	Priv	0	2	0.67	Spec	1
	Finland	finbk	0.48	0.5	13	0.5	4.39	0.75	0.72	0.67	Priv	0	2	0.67	Spec	1
	the Netherlands	nethbk	0.53	0.67	4	0.17	2.58	0.5	0.66	0.5	Priv	0	1[‡]	0.33	Spec	1
	Sweden	swebk	0.54	0.67	15	0.5	1.82	0.25	0.69	0.5	Priv	0	2	0.67	Spec	1
	Switzerland	swibk	0.48	0.5	72	1	4	0.75	0.51	0.33	Priv	0	0	0	Spec	1
Competition	the Netherlands	netco	0.46	0.5	9	0.33	2.58	0.5	0.66	0.5	Gen	0	1	0.5	Gen	0
	Norway	norco	0.39	0.17	12	0.5	1.28	0.25	0.76	0.67	Gen	0	0	0	Gen	0
	Sweden	sweco	0.41	0.33	15	0.5	1.82	0.25	0.69	0.5	Gen	0	1	0.5	Gen	0
	Switzerland	swico	0.45	0.5	11	0.5	4	0.75	0.51	0.33	Gen	0	0	0	Gen	0
	UK	ukico	0.66	0.83	8	0.33	1	0.25	0.07	0	Gen	0	1	0.5	Gen	0
Telecommunications	Australia	austc	0.71	1	9	0.33	2	0.25	1	1	Ex-p	1	2	0.67	Spec	1
	Italy	itatc	0.71	1	9	0.33	4.94	0.75	0.87	0.83	Ex-p	1	2	0.67	Spec	1
	the Netherlands	nettc	0.62	0.83	9	0.33	2.58	0.5	0.66	0.5	Ex-p	1	1[§]	0.33	Spec	1
	Norway	nortc	0.52	0.67	20	0.67	1.28	0.25	0.76	0.67	Ex-p	1	0	0	Spec	1
	Sweden	swetc	0.64	0.83	14	0.5	1.82	0.25	0.69	0.5	Ex-p	1	1[§]	0.33	Spec	1

[†] Average years 1990–2000.

[‡] Only securities.

[§] Only telecommunications.

Priv, longstanding privatized sector; Gen, general regulator; Ex-p, former public sector.

being regulated (orgreg) was roughly approximated by a distinction between sectoral ("1") and general ("0") regulators. Finally, the operationalization of de facto independence from the politicians (conceived as a causal condition in the second model) is discussed in the next section.

The operationalization of the outcome conditions

Starting from our prior conceptualization of RAs as intermediary agencies, two distinct measurements of de facto independence of agencies are offered: one concerning the relationship with politicians, and one concerning the relationship with those being regulated. Within each dimension, as stated above, the de facto independence of an agency can be assessed through two components: the self-determination of preferences, and the autonomy of the activity of regulation.

First, agencies are fully de facto independent if their preferences are shaped only by the internal organizational dynamic, while we have a reduction of independence if the agencies' preferences are predefined by the interests of external actors beyond the official goals (Buchanan et al. 2004).[10] This is the case if an agency is colonized ex ante by the fundamental interests of other actors. Thus, to determine the level of independence, the researcher must open the organization's "black box." For this purpose, I shall focus on indicators of RAs' self-determination of preferences. I have drawn inspiration from different research fields, specifically, the literature on independence of central banks (Grilli et al. 1991; Cukierman et al. 1992), consequences of delegation to RAs (Thatcher 2002b), role of experts in public policies (Peters 2001; Papadopoulos 2003), independence of courts of justice (Breton & Fraschini 2003), capture theory (Stigler 1971; Pelzman et al. 1989), and independence requirements in corporate governance (IOSCO 2002; OCDE 2004). As a result, the nature of the relationship between an RA and the politicians is qualified by six indicators that are aggregated at the component level. First, I list indicators of employee autonomy: (1) the proportion of revolving door, and (2) the frequency of ad hoc contacts such as internships, collaborations, and regular meetings. Then, I list indicators about the autonomy of resources: (3) influence over the budget, and (4) over internal organization. The third category involves the autonomy of the board members, specifically (5) the weight of partisan membership in nominations. The last indicator concerns (6) the political vulnerability of the RA as it is related to early departures of board members.

For the relationship between the RA and the regulatees, I identify another six indicators. The indicators used for studying the first relation are, after some simple adjustments, once again useful in regard to the first category (1, 2). Then I consider the adequacy of (3) budget and (4) organization in relation to the regulated industries. The third category relates to the autonomy of the board, taking into consideration, first, (5) the closeness of the professional activity of board members as regards the regulatees and, second, (6) personal affairs or relationships. All indicators are presented in Appendix I, with related survey questions. Each indicator is presented on a seven-point ordinal scale from 0 (lowest level of independence) to 1 (highest level).

The second component of agencies' de facto independence is the ability to determine the activity of regulation; that is, to influence regulatory texts (ordinances, directives, resolutions, recommendations, etc.) and then make individual decisions (sanctions, etc.). Conversely, we have a reduction of autonomy if external actors, once the agency's preferences are established, can crucially manipulate the activity of regulation to override the will of the relevant RA. From this point of view, I now consider the agency as a black

box and I shall try to determine whether other actors can exogenously sway the regulatory process. Unfortunately, there is neither empirical feasibility nor theoretical basis for measuring the agency's independence directly during the procedures of controlling and sanctioning the target sector.[11] Therefore, I assess the independence of the activity of regulation in a slightly more indirect manner, namely, through the study of agencies' inner policy cycle (Howlett & Ramesh 2003). I propose to focus on active participation in the RAs' rule-making process to assess the extent to which the relevant external actors (the politicians and the regulatees) affect the regulatory texts. The basic idea is that the most prominent actors in the production of rules influence the activity of the RAs significantly during the investigated period. Conversely, the more exclusive the process is, the more factually independent the agency.[12]

Finally, results concerning (i) the self-determination of preferences, and (ii) the autonomy of the activity of regulation of agencies can be once more aggregated by simply calculating the mean value of the two components to obtain one measurement of de facto independence from the politicians (defindpdm) and one from the regulatees (defindreg) on a seven-point ordinal scale. I then obtain two "dependent" variables that will be tested separately with a comparative design. The case studies, based on detailed surveys, are briefly summarized in the appendices, with the corresponding degree of de facto independence (Appendix II, concerning the relationship with the politicians, and Appendix III, concerning the relationship with the regulatees).[13]

Results and discussion

I used the "inclusion" algorithm (with no fuzzy adjustment) to assess the necessity and sufficiency of each combination of causal conditions for the two distinct outcomes (Ragin 2000). I am especially interested in the analysis of sufficiency; that is, the identification of the combinations of causal conditions that are subsets of the outcome, given the restrictive criteria for testing necessity (Ragin et al. 2006, pp. 90–92).[14]

De facto independence from the politicians

As one can observe in Table 2, no necessary causes are identified for high de facto independence from the politicians. However, the fuzzy-set/QCA analysis generates two combinations of jointly sufficient conditions:

$$MANYVETO^*OLDAGE^*networks^*HFORMALIND$$
$$+ MANYVETO^*OLDAGE^*networks^*COORDECO.$$

We obtain two alternative paths of conjunctural causation (Ragin 2000, pp. 88–107) leading to the outcome of high de facto independence from the political decision-makers. The two paths can be combined into a single expression:

$$MANYVETO^*OLDAGE^*networks^*(HFORMALIND + COORDECO).$$

As high formal independence is neither a necessary nor a single sufficient condition for high de facto independence, we can confirm Hypothesis 1 about the causal disjuncture between formal and de facto independence. Indeed, agencies can enjoy a high level of de facto independence even without regard to formal independence (see, for example, the Bundesanstalt für Finanzdienstleistungaufsicht in Germany, the Norwegian Konkurransetilsynet, and the Konkurrensverhet in Sweden).

Table 2 Results – de facto independence of regulatory agencies (RAs) from the political decision-makers

Variable	Cause ≥ outcome (*n*)	Observed proportion	Binomial *P**
sectorpubl	11	0.69	
SECTORPUBL	5	0.31	
coordeco	9	0.56	
COORDECO	12	0.75	0.521
manyveto	10	0.62	
MANYVETO	9	0.56	
networks	11	0.69	
NETWORKS	8	0.50	
Oldage	10	0.62	
OLDAGE	10	0.62	
hformalind	8	0.50	
HFORMALIND	12	0.75	0.521

*P < 0.05. Number of cases tested (outcome >0): 16 (100.0% of total). Test proportion: 0.72.

Crucial conditions in both expressions leading to high de facto independence are the presence of many veto players and old age. Therefore, agencies are highly de facto independent when they are old and when the politicians have to cope with several veto players. This means that the presence of multiple veto players enhances the independence of agencies, as it becomes more difficult for divided principals to sway the regulatory action. Moreover, agencies may benefit from a process of autonomization when aging. This finding is clearly in line with Hypothesis 2 about the positive effect of veto players and old age of agencies. This is the case, for instance, with the Belgian Commission Bancaire, Financière et des Assurances. Interestingly, high de facto independence from the politicians is specifically observed when agencies are not fully included in European networks, possibly because those agencies are less likely to be entirely integrated in a supranational organization.

The three aforementioned conditions give rise to high de facto independence combined with either high formal independence or the presence of highly coordinated economies. In the first case, they play the role of facilitating the implementation of formal independence. However, quite surprisingly, the presence of highly coordinated economies turns out to be a causally equivalent condition to formal independence. Our theoretical expectations on this point are thus not confirmed. In contrast to Hypothesis 3, the presence of a coordinated economy comes out as a concomitant condition leading to high de facto independence from politicians (likewise the Rundfunk und Telekom Regulierungs in Austria and the Italian Autorità per le Garanzie nelle Comunicazioni). This is quite unexpected, as we may reasonably suppose that in a coordinated economy, the network of relationships among the politicians, the regulators, and the private actors will be denser, suggesting a lower de facto independence of agencies. Possibly, this variable is merely in a constitutive relationship with the outcome (Wendt 1998). However, an alternative explanation could be that the need for coordination among relevant stakeholders may constitute a reciprocal control, implying that the politicians cannot critically sway the agencies. Incidentally, note that the path dependence from the prior mode of sectoral regulation has no effect.

Table 3 Results – de facto independence of regulatory agencies (RAs) from the regulatees

Variable	Cause ≥ outcome (*n*)	Observed proportion	Binomial *P**
sectorpubl	11	0.69	
SECTORPUBL	5	0.31	
coordeco	4	0.25	
COORDECO	9	0.56	
networks	6	0.37	
NETWORKS	7	0.44	
orgreg	5	0.31	
ORGREG	11	0.69	
defindpdm	7	0.44	
DEFINDPDM	8	0.50	
oldage	8	0.50	
OLDAGE	4	0.25	

*P < 0.05. Number of cases tested (outcome >0): 16 (100.0% of total). Test proportion: 0.75.

De facto independence from the regulatees

Pertaining to explanations for high de facto independence from the regulatees, again, no necessary causes are included in the analysis (Table 3). Nevertheless, we obtain combinations of two jointly sufficient conditions:

$$\text{NETWORKS}^*\text{defindpdm} + \text{NETWORKS}^*\text{OLDAGE}.$$

The two expressions can be factorized as follows:

$$\text{NETWORKS}^*(\text{defindpdm} + \text{OLDAGE}).$$

NETWORKS appears to be a sufficient causal condition for de facto independence in combination with either low de facto independence from the politicians or OLDAGE.

First, agencies are de facto highly independent from regulatees if they participate in European networks of agencies. This condition confirms the pertinence of Hypothesis 4. (See, in this regard, the German Bundesanstalt für Finanzdienstleistungaufsicht, the Finnish Rahoitustarkastus, the Swedish Finansinspektionen, and the Dutch Mededingingsautoriteit.) Furthermore, the concomitant presence of the condition "defindpdm" is in line with the conceptualization of RAs as intermediary agencies: The relationship between an agency and the politicians and the relationship between an agency and those it regulates are mutually influential (Hypothesis 5). To be precise, it appears that an agency cannot be a servant of two masters: if it is scarcely independent from the politicians, it should be highly independent from those being regulated.

Second, it appears that official networks of agencies established at the European level may also support the independence of old agencies from the regulatees, such as the Commission Bancaire, Financière et des Assurances in Belgium. Perhaps those agencies are reinforced by the phenomenon of the diffusion of expertise, practices, and information coming from other regulators. In other words, networks seem to offer a range of technical and symbolic resources to RAs that enhance their emancipation from the regulatees. This is another interesting finding concerning the recent developments in the functioning of agencies in the regulation of capitalism.

Conclusions

A high level of agencies' de facto independence from politicians can be explained by two combinations of jointly sufficient conditions. First, formal independence combined with the presence of many veto players and old age leads to high de facto independence. Second, agencies can enjoy a high level of de facto independence, even without formal independence, when they are embedded in coordinated market economies. A high de facto independence from the regulatees can also be explained by two combinations of causal conditions. Agencies are de facto highly independent from those being regulated if they are part of networks of agencies at the European level. This is the case, first, when agencies are scarcely independent from politicians, corroborating the hypothesis about the conceptualization of RAs as intermediary agencies: an agency cannot be a servant of two masters. Second, consistent with our theoretical expectations, European networks of agencies reinforce the independence of agencies in combination with old age.

These results illustrate the heuristic power of fs/QCA and the advantages of the application of an ontological framework of complex causation on a small to medium number of cases. However, further research is necessary to build up a more general set of theoretical explanations, extend the number of cases, and obtain an in-depth understanding of the mechanisms for effective independence.

Three theoretical insights from this study are especially notable. First, this research suggests that formal independence alone is insufficient for explaining variations in the de facto independence of RAs. This point is critical for the study of the consequences of agencification, as a lack of effectiveness will make the formal separateness from the representative institutions and hence the democratic deficit problematical, and at the same time, the capacity to deliver "better" regulatory outputs might be compromised (because independence is seen as the precondition for high-quality regulation). Here, with a quite robust and parsimonious model, we can show that de facto independence matters, and divergence from formal independence reflects a significant range of causal conditions. Second, it appears that actors other than the politicians, namely, the representatives of the regulated sector, may have an influence on agencies' de facto independence, and possibly on the regulatory results. Third, the analysis shows that regulators are neither under direct political control nor are they systematically captured by the regulated industries, thus challenging a crucial argument of the economic theory of regulation (Stigler 1971; Pelzman *et al.* 1989). However, under some circumstances, external actors may be able to influence significantly the agencies' regulatory action.

Acknowledgments

Notes

1 The criterion of effectiveness (Blühdorn 2007) assesses the extent to which a process (here, the delegation of competencies to RAs profiting from formal independence) factually delivers its intended result (the implementation of a regulatory order that is factually independent from the politicians and from those being regulated).

2 In fact, following Majone (2001), delegation to RAs should not be understood in terms of a principal–agent relation that is structured to minimize any possibility of an agent's shirking. Instead, the need for credibility requires that the agency will be independent, according to a fiduciary mode of delegation. In the latter case, the principal's powers and competencies are factually delegated to the agency.

3 Hereafter, the term "politicians" is used in the sense of "political decision-makers."

4 We adopt Nordlinger's (1987) abstract definition of autonomy, leaving aside his conception of independence that refers to his typology of states' self-rule and strength. Rather, following Majone (2001), we use the term "independence" in the sense of separateness, developing the concept of de facto independence as a way to assess the independence of the agencies' day-to-day regulatory action, and operationalizing it through the two components derived from the abstract definition of autonomy.

5 In generating our hypotheses, we use a partially inductive approach (Schneider & Wagemann 2003, p. 10), leaving open the possibility of discovering other causal patterns and similar configurations.

6 I had first adopted a benchmark proportion of 0.75 for both models; that is, a reasonable level of significance, given the number of cases and conditions, as suggested by Ragin (2000, pp. 110–115). Then, as the analysis of de facto independence from the politicians was inconclusive at first glance, I gradually lessened the benchmark to 0.72, thus obtaining a meaningful result. (The outcomes remain virtually alike even if we again modify the benchmark to 0.71 or to 0.70, which must be considered the lowest valid point.) In this context, the difference of 0.03 is considered irrelevant. Indeed, as we can easily observe, a small change in the threshold does not alter the results significantly.

7 Countries are Austria (aus), Belgium (bel), Germany (ger), Finland (fin), the Netherlands (net), Italy (ita), Norway (nor), Sweden (swe), Switzerland (swi), and the UK (uki). The official names of the investigated independent RAs are as follows: Commission Bancaire, Financière et des Assurances (belbk), Bundesanstalt für Finanzdienstleistungaufsicht (gerbk), Rahoitustarkastus (finbk), Autoriteit Financiële Markten (netbk), Finansinspektionen (swebk), Eidgenössische Bankenkommission (swibk), Nederlandse Mededingingsautoriteit (netco), Konkurransetilsynet (norco), Konkurrensverhet (sweco), Wettbewerbskommission (swico), Competition Commission (ukico), Rundfunk und Telekom Regulierungs (austc), Autorità per le Garanzie nelle Comunicazioni (itatc), Onafhankelijke Post en Telecommunicatie Autoritei (nettc), Post- Og Teletilsynet (nortc), and Sweden Post & Telestyrelsen (swetc).

8 This index summarizes many different statutory features, such as the formal status of the agency head, the formal status of the members of the board, the formal relationship with government and parliament, the statutory financial and organizational autonomy, and the constitutional extent of regulatory competencies (Gilardi 2002).

9 For information about the construction of a fuzzy set with a seven-value scale, see Ragin *et al.* (2006, pp. 20–23, 67).

10 I am aware that because organizations are always open systems, agencies are never fully independent from, nor are they fully dependent on, their environment, and their preferences are always shaped by their social interaction with other actors. Yet the present conceptualization

of independence points out the extent to which preferences are mostly internally determined (or, conversely, externally shaped). The underlying assumption is that these – relative – levels, situated on a continuum between the two terms, may vary significantly among agencies but are never absolute.

11   Indeed, on the one hand, it is impracticable to highlight the informal pressures exerted by the politicians (or by those being regulated) relating to any particular decision, as no suitable trace of such pressures exists. On the other hand, how do we establish the influence on a specific decision or, more importantly, on a non-decision?

12   Concretely, I divide the inner policy cycle of agencies into six events: impulse, draft preparation, consultations, decision, monitoring, and sanctioning. Then, I assess the de facto independence of agencies from the politicians through the active participation of the latter in those events, considering involvement in no event as a proxy of very high independence ("7" on a seven-point scale) and participation in all events as a proxy of very low independence ("1"). At that point, I simply focus on the active participation of those being regulated in the agencies' rule-making process in a similar manner to that presented. If the regulatees participate actively in several events of the inner policy cycle, the relevant agency is considered scarcely independent from them, and vice versa, if they participate hardly at all, the agency is considered highly independent.

13   Sources of data concerning the "dependent variables" are as follows: (i) detailed questionnaires sent to the chairmen of the investigated agencies, received between June 2006 and March 2007; (ii) semi-direct interviews with agencies' board members between August 2005 and June 2006; and (iii) written and electronic documentation, that is, annual agency reports and agencies' websites.

14   When we apply the procedure described by Ragin (2006) to the study of consistency, we obtain similar combinations of jointly sufficient conditions (with some simple adjustments). The formula for the assessment of consistency indicating how closely the subset relation is approximated (i.e. the degree to which the cases sharing a given combination of conditions agree in displaying the outcome) gives the following results. Concerning high de facto independence from politicians, both expressions present an adequate level of consistency: OLDAGE, 0.80; MANYVETO*HFORMALIND, 0.85. Moreover, the consistency of the combination NETWORKS*defindpdm is very high (0.96), indicating an excellent approximation of the set relation explaining high de facto independence from the regulatees. Concerning the latter relation, OLDAGE also displays a good consistency (0.83).

References

Bennett A, Elman C (2006) Qualititative Research: Recent Developments in Case Study Methods. *Annual Review of Political Science* 9, 455–476.

Bernstein M (1955) *Regulating Business by Independent Regulatory Commissions*. Princeton University Press, Princeton.

Blühdorn I (2007) Democracy, Efficiency, Futurity: Contested Objectives of Societal Reform. In: Blühdorn I, Jun U (eds) *Economic Efficiency – Democratic Empowerment. Contested Modernisation in Britain and Germany*, pp. 1–16. Rowman & Littlefield, Lanham, MD.

Braun D (1993) Who Governs Intermediary Agencies? Principal-Agent Relations in Research Policy Making. *Journal of Public Policy* 13, 135–162.

Braun D (2002) Debate: State Intervention and Delegation to Independent Regulatory Agencies. *Swiss Political Science Review* 8, 93–96.

Breton A, Fraschini A (2003) The Independence of the Italian Constitutional Court. *Constitutional Political Economy* 14, 319–333.

Buchanan M, Tullock G, Rowley C (2004) The Calculus of Consent: Logical Foundations of Constitutional Democracy. Liberty Fund, Indianapolis, IN.

Coen D, Thatcher M (2006) Network Governance and Delegation: European Networks of Regulatory Agencies. Towards a European Administrative Space, Connex Second Thematic

Conference; 16–18 Nov, 2006, London. Available from URL: http://www.mzes.uni-mannheim. de/projekte/typo3/site/fileadmin/research%20groups/crosscutting/Papers_London_Nov2006/Coen_ Thatcher.pdf.

Conway P, Nicoletti G (2006) Product Market Regulation in Non-Manufacturing Sectors in OECD Countries: Measurement and Highlights. Economics Department Working Paper 530. Organisation for Economic Co-operation and Development (OECD), Paris.

Cukierman A, Webb S, Neyapti B (1992) Measuring the Independence of Central Banks and its Effects on Policy Outcomes. *World Bank Economic Review* 6, 353–398.

Friedberg E (1997) *Le Pouvoir et la Règle. Dynamiques de l'Action Organisée, Essais*. Editions du Seuil, Paris.

Gilardi F (2002) Policy Credibility and Delegation to Independent Regulatory Agencies: A Comparative Empirical Analysis. *Journal of European Public Policy* 9, 873–893.

Gilardi F (2005) The Institutional Foundations of Regulatory Capitalism: The Diffusion of Independent Regulatory Agencies in Western Europe. *The Annals of the America Academy of Political and Social Science* 598, 84–101.

Grilli V, Masciandro D, Tabellini G (1991) Institutions and Policies. Political and Monetary Institutions and Public Financial Policies in the Industrial Countries. *Economic Policy* 6, 342.

Hall P (2003) Aligning Ontology and Methodology in Comparative Research. In: Mahoney J, Rueschmeyer D (eds) *Comparative Historical Analysis in the Social Science*, pp. 373–404. Cambridge University Press, Cambridge.

Hall P, Gingerich D (2004) Varieties of Capitalism and Institutional Complementarities in the Macroeconomy: An Empirical Analysis. MPIfG Discussion Paper 04(5). Max Planck Institute for the Study of Societies, Cologne, Germany.

Hall P, Soskice D (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford University Press, Oxford, New York.

Howlett M, Ramesh M (2003) *Studying Public Policy: Policy Cycles and Policy Subsystems*. Oxford University Press, Toronto, New York.

IOSCO (International Organization of Securities Commissions) (2002) Principles of Auditor Independence and the Role of Corporate Governance in Auditor's Independence. A Statement of the Technical Committee, IOSCO, Madrid. Available from URL: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD133.pdf.

Jackson G (2005) Employee Representation in the Board Compared: A Fuzzy Sets Analysis of Corporate Governance, Unionism, and Political Institutions. *Industrielle Beziehungen* 12, 1–28.

Jacobs S (1999) The Second Generation of Regulatory Reforms. Paper presented at the IMF Conference on Second Generation Reforms; 8–9 Nov, Washington, DC.

Kahn A (1988) *The Economics of Regulation: Principles and Institutions*. MIT Press, Cambridge, MA.

Levi-Faur D (2005) The Global Diffusion of Regulatory Capitalism. *The Annals of the American Academy of Political and Social Science* 598, 12–32.

Levi-Faur D, Jordana J (2005) The Making of a New Regulatory Order. *The Annals of the American Academy of Political and Social Science* 598, 6–9.

Majone G (1994) The Rise of the Regulatory State in Europe. *West European Politics* 17, 77–101.

Majone G (1997) From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance. *Journal of Public Policy* 17, 139–167.

Majone G (2001) Nonmajoritarian Institutions and the Limits of Democratic Governance: A Political Transaction-Cost Approach. *Journal of Institutional and Theoretical Economics* 157, 57–78.

March J, Simon H (1958) *Organizations*. Wiley, New York.

Martimort D (1999) The Life Cycle of Regulatory Agencies: Dynamic Capture and Transaction Cost. *The Review of Economic Studies* 66, 920–947.

Nordlinger E (1987) Taking the State Seriously. In: Weiner M, Huntington S (eds) *Understanding Political Development*, pp. 353–390. Little, Brown & Co, Boston.

OCDE (Organisation de Coopération et de Développement Economiques) (2004) Principes de gouvernement d'entreprise de l'OCDE. Les Editions de l'OCDE, Paris Cedex.

Olson M (1982) *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. Yale University Press, New Haven.

Papadopoulos Y (2003) Cooperative Forms of Governance: Problems of Democratic Accountability in Complex Environments. *European Journal of Political Research* 43, 473–501.

Pedersen L (2006) Transfer and Transformation in Processes of Europeanization. *European Journal of Political Research* 455, 985–1021.

Pelzman S, Levine M, Noll R (1989) The Economic Theory of Regulation after a Decade of Deregulation. *Brookings Papers on Economic Activity. Microeconomics* 1989, 1–59.

Peters G (2001) *The Politics of Bureaucracy*. Routledge, London, New York.

Pierson P (2000) Increasing Returns, Path Dependence, and the Study of Politics. *American Political Science Review* 94, 251–267.

Ragin C (2000) *Fuzzy-Set Social Science*. University of Chicago Press, Chicago.

Ragin C (2006) Set Relations in Social Research: Evaluating their Consistency and Coverage. *Political Analysis* 14, 291–310.

Ragin C, Drass K, Davey S (2005) *Fuzzy-Set/Qualitative Comparative Analysis 2.0*. Department of Sociology, University of Arizona, Tucson.

Ragin C, Rubinson C, Schaefer D, Anderson S, Williams E, Giesel H (2006) User's Guide To: Fuzzy-Set/Qualitative Comparative Analysis. Department of Sociology, University of Arizona, Tucson.

Rihoux B (2006) Qualitative Comparative Analysis (QCA) and Related Systematic Comparative Methods. Recent Advances and Remaining Challenges for Social Science Research. *International Sociology* 21, 679–706.

Schneider C, Wagemann C (2003) Improving Inference with a "Two-Step" Approach. Theory and Limited Diversity in fs/QCA. EUI Working paper SPS No. 2003/7. European University Institute, Florence.

Smithson M, Verkuilen J (2006) *Fuzzy Set Theory: Application in the Social Sciences*. Sage Publications, Thousand Oaks, CA.

Stern J (1997) What Makes an Independent Regulator Independent? *Business Strategy Review* 8, 67–74.

Stigler G (1971) The Theory of Economic Regulation. *The Bell Journal of Economics and Management Science* 2, 3–21.

Strom K, Müller W, Bergman T (2003) *Delegation and Accountability in Parliamentary Democracies*. Oxford University Press, New York.

Thatcher M (2002a) Analysing Regulatory Reform in Europe. *Journal of European Public Policy* 9, 859–872.

Thatcher M (2002b) Delegation to Independent Regulatory Agencies: Pressures, Functions and Contextual Mediation. *West European Politics* 25, 125–147.

Thatcher M (2002c) Regulation after Delegation: Independent Regulatory Agencies in Europe. *Journal of European Public Policy* 9, 954–972.

Thatcher M, Stone Sweet A (2002) Theory and Practice of Delegation to Non-majoritarian Institutions. *West European Politics* 25, 1–22.

Tsebelis G (2002) *Veto Players: How Political Institutions Work*. Russel Sage Foundation/Princeton University Press, Princeton.

Verhoest K, Peters G, Bouckaert G, Verschuere B (2004) The Study of Organisational Autonomy: A Conceptual Review. *Public Administration and Development* 24, 101–118.

Wendt A (1998) On Constitution and Causation in International Relations. *Review of International Studies* 24, 101–118.

Wilks S, Bartle I (2002) The Unanticipated Consequences of Creating Independent Competition Agencies. *West European Politics* 25, 148–172.

Appendix I

Framework to assess the de facto independence of regulatory agencies (RAs)

Component	Indicators	Questions
(1) Relationship RA – politicians		
Indicators of self-determination of RA preferences	● Frequency of revolving door (in both directions)	- What proportion of the current employees of the agency's secretariat have previously worked in the public administration?
		- What proportion of the former employees of the agency's secretariat will work in the public administration in the future?
	● Frequency of ad hoc contacts (internships, expertise, and regular meetings)	- How frequently have employees of the agency's secretariat participated in internships related to the public administration?
		- How frequently does the public administration ask for the support of the agency for expertise purposes?
		- How frequent are meetings between the agency and the public administration?
	● Influence on budget	- To what extent can the government influence the budget of the agency?
		- To what extent can the parliament influence the budget of the agency?
		- To what extent can the public administration influence the budget of the agency?
	● Influence on organizational setting	- To what extent can the government determine the organization of the agency?
		- To what extent can the parliament determine the organization of the agency?
		- To what extent can the public administration determine the organization of the agency?
	● Weight of partisan membership on board members' nominations	- Do political parties play a role when deciding who should become a member of the agency's management board?
		- If yes, are the representatives of the political parties homogeneously represented on the board?
		- How are the powers distributed among board members?
	● Political vulnerability (earlier departures of board members)	- How frequent is the departure of a member of the management board before the end of its mandate?
		- When has there been a replacement of the management board's director (or chair of the agency) in the last 20 years?
Autonomy of the activity of regulation	● Active participation in the RA's rule-making process	- We are interested in the agency's rule-making process, namely, in studying the main regulatory texts issued by the agency to which the supervised institutions (companies, firms, etc.) should conform (more than one answer is possible):
		- Who inspired the basic principles of the main regulatory texts that institutions your agency supervises should satisfy?

Appendix I *Continued*

Component	Indicators	Questions
		- Who worked out the draft of the regulatory texts? - Who was consulted during the draft preparation of the regulatory texts? - Who decided on the adoption of the regulatory texts? - Who is monitoring the respect of the regulatory texts by the institutions that you supervise? - Who can decide on a sanction in case of non-respect of regulatory texts by the institutions you supervise?
(2) Relationship RA – regulatees Indicators of self-determination of RA preferences	● Frequency of revolving door (in both directions)	- What proportion of the current employees of the agency's secretariat have previously worked in the private sector? - What proportion of the former employees of the agency's secretariat will work in the private sector in the future?
	● Frequency of ad hoc contacts (internships, expertise, and regular meetings)	- How frequently have employees of the agency's secretariat participated in internships in the private sector? - How frequently does the agency ask for the support of the private sector for expertise purposes? - How frequently does the private sector ask for the support of the agency for expertise purposes? - How frequent are meetings between the agency and the representatives of the private sector?
	● Budget dimension (relative)	- To what extent can the private sector influence the budget of the agency? - Generally speaking, do you consider budgetary resources of the agency as sufficient/insufficient?
	● Organizational dimension (relative)	- To what extent can the private sector determine the organization of the agency? - Generally speaking, do you consider human resources of the agency as sufficient/insufficient?
	● Proximity of the former or current professional activity of board members (in relation to full-time or partial positions)	- At the moment, is the director of the agency's board hired full time? - If not, what is the current occupation of the director? - If yes, what was the former occupation of the director? - Are board members (except the director) hired full time? - If not, could you distribute 100 percentage points among the following current occupations of the board members (…)? - If yes, could you distribute 100 percentage points among the following former occupations of the board members (…)?
	● Personal relations	- Is there any conflict of interest (see official reports and written documentation)?
Autonomy of the activity of regulation	● Active participation in the RA's rule-making process	The same as for the first dimension

Appendix II

De facto independence of regulatory agencies (RAs) from the politicians

Case	Data (1): defindpdm	Code		
		Scale	Tot	Coded
belgbk	(i) The revolving door is moderate, likewise ad hoc contacts. The influence on budget and organization is low. However, the weight of partisan membership on board members' nominations is fairly high (even if members are homogeneously represented and enjoy equal powers). Finally, early departures of board members are rare.	4	5	0.67
	(ii) The interventions of politicians during the activity of regulation are very infrequent and concentrated only in the phase of decision.	6		
gerbk	(i) Revolving door is quite frequent, especially from public administration, but ad hoc contacts are rare. The influence on budget and organization is medium. Influence of political parties is quite low. Early departures and chair replacement are also very rare.	5	4	0.5
	(ii) The interventions during the activity of regulation are rather frequent, concerning the initiation, the draft preparation, and the adoption of regulations.	4		
finbk	(i) Revolving door is frequent, especially toward the public administration. Ad hoc contacts, like regular meetings, are very frequent. Conversely, the influence on budget and organization is low. The weight of partisan membership is also low. Early departures are rare, but the chair was quite often replaced during the investigated period.	4	3	0.33
	(ii) The politicians participate actively in several phases of the inner rule-making process: adoption, draft preparation, consultations, decision.	3		
netbk	(i) Revolving door is medium, and ad hoc contacts are quite frequent. The influence on budget is quite high, whereas the influence on organization is low. The weight of partisan membership is also low. Early departures of members are rare, but the chair was replaced frequently.	4	4	0.5
	(ii) The politicians participate in some phases of the rule-making process, that is, in decisions concerning the adoption of regulations.	4		
swebk	(i) Revolving door is frequent. Contacts are continuous, notably because swebk is considered part of the public administration. The influence on budget and organization is very high. Similarly, parties are very influential on board member nominations. The board is homogeneous in composition and in powers. Early departures are rare, however.	1	2	0.17
	(ii) The regulatory texts are to a certain extent influenced by the politicians, for example, in the course of the initiation, the draft preparation, and the decision to adopt them.	4		

Appendix II *Continued*

Case	Data (1): defindpdm	Code		
		Scale	Tot	Coded
swibk	(i) Revolving door is rare, whereas contacts are quite frequent. Influence of the politicians on budget and organization is quite high. Political parties are moderately influential and not homogeneously represented. Early departures are quite common, but the chair's position is stable.	4	4	0.5
	(ii) The politicians participate in some phases of the rule-making process, such as the initiation, the draft preparation, and adoption of regulatory texts.	4		
netco	(i) Revolving door and contacts are frequent. Moreover, the influence of political decision-makers on budget and organization is very high. The weight of partisan membership on board members' nominations is also high.	1	3	0.33
	(ii) The politicians participate in some phases of the rule-making process, specifically consultations.	6		
norco	(i) Revolving door is not very frequent, and ad hoc contacts are moderate. Influence on budget and organization is overall quite modest. The director general was replaced once in the investigated time period, and early departures of members are rare.	5	4	0.5
	(ii) The politicians affect quite intensively the regulatory activity: they participate actively in the initiation, the draft preparation, the consultation and the adoption of regulatory texts.	3		
sweco	(i) Revolving door is rather frequent, and ad hoc contacts are moderate. Influence on budget is fairly high, but influence on organization is very low. The director general enjoys a stable position, and early departures are rare.	4	5	0.67
	(ii) The activity of regulation, that is, the production of regulatory texts, appears to be autonomously executed by the agency.	7		
swico	(i) Revolving door is moderate, and ad hoc contacts are on average quite frequent. The influence of the politicians on the budget is high, but their influence on organization is quite low. Moreover, partisan membership is fairly important for nominations. Early departures are moderately common, and the chair was replaced quite frequently.	3	4	0.5
	(ii) The politicians do not significantly affect regulatory activity, except during the phase of consultations.	6		
ukico	(i) Revolving door and meetings are rather frequent. The secretariat is mainly composed of civil servants. The budget is entirely determined by the government, while its influence on organization is low. Partisan membership is irrelevant. Early departures are very rare, but the replacement of the chair is rather frequent.	4	4	0.5
	(ii) The political decision-makers are able to participate in the initiation and the adoption of regulatory texts.	5		
austc	(i) Revolving door is rare, whereas contacts are moderate. The influence on budget is low and, similarly, the influence on organization is very low. The influence of parties is also low. Early departures and the replacement of the chair are very infrequent.	7	6	0.83
	(ii) The public administration participates in some later phases of the activity of regulation, that is, in monitoring and sanctioning.	5		

(continues on next page)

Appendix II *Continued*

Case	Data (1): defindpdm	Code		
		Scale	Tot	Coded
itatc	(i) Revolving door and contacts are moderate. Influence of politicians on budget is low, and it is very low on organization. The influence of parties is also low. Early departures of members or the chair are very rare, and the chair's position is rather stable.	6	6	0.83
	(ii) The politicians do not significantly affect the regulatory activity, apart from initiating the rule-making process.	6		
nettc	(i) Revolving door is quite frequent, likewise ad hoc contacts. Influence on budget is quite high, while it is low on organization. Parties have a certain influence on nominations. Early departures of members are very rare, and the chair was occasionally replaced during the investigated period.	4	3	0.33
	(ii) The politicians significantly affect regulatory activity: they participate actively in the initiation, draft preparation, consultations, and adoption of regulatory texts.	3		
nortc	(i) Revolving door is quite frequent. Ad hoc contacts are rather rare. Influence on budget is quite high, but the influence on organization is low. Weight of partisan membership on nominations is very low. The director enjoyed a stable position during the investigated time period.	5	5	0.67
	(ii) The politicians participate in some phases of the rule-making process, namely, initiation and monitoring.	5		
swetc	(i) Revolving door and contacts are frequent. Influence on budget is very high. Concerning organization, this agency is perceived as part of the public administration. Weight of partisan membership on board members' nominations is fairly strong, parties are homogeneously represented, and members possess the same competencies. Early departures are, however, quite rare.	1	3	0.33
	(ii) The intervention of politicians during the activity of regulation is moderate and focused on the initiation of the rule-making process.	6		

Appendix III

De facto independence of regulatory agencies (RAs) from the regulatees

Case	Data (2): defindreg	Coded as		
		Scale	Tot	Coded
belgbk	(i) Revolving door and ad hoc contacts are not very frequent. Budgetary and human resources are regarded as satisfactory. The chair, full-time hired, is a former professor. Members are 4 of 7 full-time (2 of 7 former employees of the secretariat, 2 of 7 former professors) and 3 of 7 central bank directors.	5	5	0.67
	(ii) Those being regulated do not intervene significantly during the production of regulatory texts, apart from consultations.	6		
gerbk	(i) Revolving door is moderate and ad hoc contacts are medium. Budgetary resources are average, and human resources are largely sufficient. The president is full-time hired and was the director of another agency. Members, full-time hired, are former public officials (50%), employees of the secretariat (25%), and employees of a foreign supervisory authority (25%).	5	5	0.67
	(ii) The regulatees take part in only one phase of the activity of regulation, that is, active participation in consultations.	6		
finbk	(i) The revolving door is quite frequent. Ad hoc contacts are medium. Budgetary and human resources are considered to be very abundant. The chair and the members of the board are also public officials, not being full-time hired.	5	5	0.67
	(ii) Those being regulated do not intervene significantly during the activity of regulation, apart from the consultations.	6		
netbk	(i) Revolving door is intense in both directions. Contacts, such as consultations and meetings, are also very frequent. Budgetary and human resources appear medium. The chair, a former public official, is full-time hired. Members are 50% former civil servants and 50% managers in the private sector.	3	3	0.33
	(ii) Those who are regulated intervene moderately in the activity of regulation, specifically participating in the discussion and consultations concerning regulatory texts.	4		
swebk	(i) Revolving door and contacts are moderate. Budgetary resources are considered to be largely sufficient, and human resources are sufficient. The chair, a civil servant, is full time hired. Board members are not full time; a majority of them are public officials, 11% from the private sector, 22% are elected politicians.	5	5	0.67
	(ii) The regulatees do not have significant influence over the regulatory texts. They intervene only in consultations.	6		
swibk	(i) Revolving door and contacts are remarkably frequent. Budgetary and human resources are regarded as barely sufficient. The chair, full time hired, is a former executive in the private sector. Members are not full time and the board composition is as follows: 50% private sector, 17% liberal professionals, 33% professors.	2	2	0.17
	(ii) The regulatees intervene intensively during several phases of regulation activity: initiation of regulatory texts, consultations, monitoring, sanctioning.	3		

Appendix III *Continued*

Case	Data (2): defindreg	Coded as		Coded
		Scale	Tot	
netco	(i) Revolving door and contacts are medium. Human and budgetary resources are considered to be sufficient. The chair is a former judge, and is full time hired. Members are full time and are all former public officials.	5	5	0.67
	(ii) The regulatees do not influence very significantly the regulatory texts. They intervene only in the phase of consultations.	6		
norco	(i) Revolving door is not very frequent. Human and budgetary resources are abundant. The director general, a former public official, is full-time hired.	5	6	0.83
	(ii) The activity of regulation is autonomous from those being regulated. They do not participate in the production of regulatory texts.	7		
sweco	(i) Revolving door is the average, and contacts are not very frequent. Budgetary and human resources are considered to be abundant. The director general, a former public official and director of another agency, is full-time hired.	5	5	0.67
	(ii) The regulatees do not intervene significantly during regulation activity, apart from the consultations.	6		
swico	(i) Revolving door is high in both directions. Contacts are also frequent, especially regular meetings. Budgetary resources are considered to be modest. Human resources are considered to be barely sufficient. The chair, a professor and liberal professional, is not full-time hired. Board members are not full-time hired: 6% are public officials, 33% representatives of the secretariat, 22% representatives of producer associations, 66% professors.	2	3	0.33
	(ii) The regulatees intervene in some stages of regulation activities, especially concerning the initiation and consultations about regulatory texts.	5		
ukico	(i) Revolving door is frequent. Ad hoc contacts and meetings are medium. Budget and organization are considered to be abundant and not influenced by those being regulated. The chair, a former member of the board and liberal professional, is full-time hired. Members of the board, not full-time, are: public officials, employees of the secretariat, employees in the private sector, liberal professionals, and professors.	5	5	0.67
	(ii) The regulatees participate in the preparation of the draft of new regulatory texts and are involved in public consultations.	5		
austc	(i) Revolving door and ad hoc contacts are very frequent. Human and budgetary resources are considered to be largely sufficient. The chair and the members are all former executives in the private sector and full-time hired.	2	4	0.5
	(ii) The regulatees are not involved in the production of regulatory texts; therefore, the activity of regulation is autonomous.	7		
itatc	(i) Revolving door is quite frequent, and contacts are frequent. Budget is strongly determined by those being regulated and is considered to be sufficient. Conversely, human resources are regarded as insufficient. The chair, a former public official, is full-time hired. Members (80% from the public sector, 10% from the private sector, 10% professors) are also full-time hired.	3	4	0.5

(continues on next page)

Appendix III *Continued*

Case	Data (2): defindreg	Coded as		
		Scale	Tot	Coded
	(ii) The regulatees do not significantly influence the regulatory activity, apart from active participation in consultations.	6		
nettc	(i) Revolving door is medium. Contacts are moderately frequent. Budgetary and human resources are considered to be sufficient. The chair, who is a former liberal professional, is full-time hired. Members are not full-time hired, and 50% come from the private sector, 25% from a liberal profession, and 35% are professors.	4	5	0.67
	(ii) The activity of regulation is autonomous from the influence of those being regulated. They do not intervene in the rule-making process.	7		
nortc	(i) Revolving door is moderate, whereas contacts are quite frequent. Budget and resources are regarded as largely sufficient. The director, a former employee of the secretariat, is full-time hired.	5	5	0.67
	(ii) The regulatees do not have significant influence on the regulatory texts. They are integrated only in consultations.	6		
swetc	(i) Revolving door is quite modest. Contacts are fairly frequent. Budget and human resources are abundant. The chair, not full-time hired, is a public official and former professor. Members are also not full-time, and the board is composed as follows: 60% public officials, 10% employees of the secretariat of the agency, 30% professors.	6	6	0.83
	(ii) The intervention of the regulatees in the activity of regulation is moderate, basically limited to participation in consultations.	6		