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The Same, but Different

Central Banks, Regulatory Agencies, and the Politics of Delegation to Independent Authorities

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The Same, but Different. Central Banks, Regulatory Agencies, and the Politics of Delegation to Independent Authorities

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Résumé

Les phénomènes de délégation de pouvoirs à des banques centrales et à des autorités de régulation indépendantes sont similaires à beaucoup d'égards. Dans les deux cas, les agents sont rendus plus indépendants des politiciens à travers un design institutionnel spécifique. De plus, dans les deux cas cette indépendance a souvent été mise en relation avec trois éléments: le besoin des gouvernements d'augmenter la crédibilité de leurs engagements, leur désir de lier les mains des majorités futures, et la contribution du contexte institutionnel à la stabilité des politiques publiques. Cet article analyse empiriquement l'indépendance formelle des banques centrales et des autorités de régulation dans les pays d'Europe occidentale, et met en lumière deux problèmes empiriques qui mettent en doute la validité de ces explications. Le contexte institutionnel et l'incertitude des politiciens par rapport à leurs chances de réélection sont des facteurs pertinents pour expliquer à la fois la délégation aux banques centrales et celle aux autorités de régulation, mais de manière très différente. Pour mieux comprendre les phénomènes de délégation à des autorités indépendantes, il faut pouvoir rendre compte de cette anomalie.

Mots-clefs **:** délégation; autorités de régulation; banques centrales; veto players

Abstract

Delegation to independent central banks and to independent regulatory agencies is similar in many respects. In both cases, agents are deliberately made more independent from political principals through a specific institutional design. Moreover, it has been argued that delegation to both central banks and regulatory agencies is linked to the need for policy-makers to improve the credibility of policy commitments, to the wish of incumbent politicians to tie the hands of future majorities, and to the extent to which the institutional contexts safeguards policy stability. Through an analysis of the formal independence of central banks and regulatory agencies in Western Europe, this article identifies two empirical puzzles that cast doubts on the accuracy of current explanations. Veto players and the uncertainty of incumbent policy-makers with respect to their re-election prospects matter for delegation to both central banks and regulatory agencies, but in opposite ways. Making sense of these anomalies is necessary to achieve a better understanding of delegation to independent authorities.

Keywords : delegation; regulatory agencies; central banks; veto players

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Introduction

Recent reviews of the delegation literature have emphasized that credibility problems are at the core of many delegation relationships (Bendor, Glazer, and Hammond 2001; Miller 2005; Huber and Shipan 2004). The peculiarity of credibility problems is that their solution requires delegation arrangements that are counter-intuitive from a principal-agent perspective, namely an infringement of the "ally principle", which postulates that principals delegate to agents with similar goals. Delegation can increase the time-consistency and credibility of the policy choices of decision-makers who are subject to preference reversals, but only if the agent is not prone to the same kind of behavior *and* the principal has not the opportunity to influence his or her decisions. Thus, delegation to independent central banks has been seen as a solution for increasing the credibility of monetary policy commitments; similarly, delegation to independent regulatory agencies can be a means to make regulatory policies more credible. Therefore, not only do credibility problems lead to a violation of the ally principle, but in addition they also break a second law of principal-agent relationships, namely that if ex ante control is weak, then ex post controls should be increased to prevent moral hazard. The logic of delegation to independent authorities is thus different from that of delegation to bureaucracy in general (Lohmann 1998: 442), where "politicians typically delegate more discretion to bureaucrats when the bureaucrats are ideological allies and when *ex post* monitoring possibilities are most effective" (Huber and McCarty 2004: 482).

Credibility is not the only reason that may lead principals to give up the possibility to exert ex post control. A second motivation may be "coalitional drift" (Horn and Shepsle 1989; Shepsle 1992) or "political uncertainty" (Moe 1990), namely the fact that future decision-makers will be able to change the policies of current decision-makers, unless policy is insulated from politics, for example by making the agent more independent.

In both cases, the institutional context matters. In particular, delegation arrangements are likely to be influenced by the ease with which decision-makers can agree on policy change. This, in turn, depends on veto players: the stability of the status quo increases with their number and their distance in terms of preferences (Tsebelis 2002). There is a sharp disagreement, however, on the nature of this influence. On the one hand, some scholars argue that since more veto players[1] make change more difficult, policies will be more consistent over time, and therefore more credible and less subject to political uncertainty, in the presence of many veto players (Levy and Spiller 1994). In this view, veto players are a functional equivalent of delegation. However, other scholars argue that in systems with few veto players delegation itself is not credible and useless as a means to cope with political uncertainty, since it can be easily withdrawn (Lohmann 1998; Keefer and Stasavage 2003). In this view, veto players are a precondition for meaningful delegation.

In this article I show that both these views have empirical validity, but for different cases. Through an analysis of the formal independence of regulatory agencies and central banks in Western Europe, I show that an institutional

[1] For simplicity, throughout the paper "more" or "many" veto players imply also "more distant".

context protecting the status quo is a precondition for delegation to independent central banks, but a functional equivalent for delegation to independent regulatory agencies. In other words, central banks tend to be more independent in countries characterized by many veto players, while the reverse is true for regulatory agencies: they are more independent in countries with few veto players. In addition, I also show that the political uncertainty problem is relevant for delegation to both central banks and regulatory agencies, but again in a symmetric way. The formal independence of regulatory agencies increases as the risk for a government of being replaced by a coalition with different preferences (replacement risk) increases, while that of central banks decreases as replacement risk increases.

These results constitute anomalies for the delegation literature. Central banks and regulatory agencies are both non-majoritarian institutions (Thatcher and Stone Sweet 2002) for which the logic of delegation differs from that of general bureaucracy. In both cases, credibility problems play an important role in the decision of policy-makers to renounce to the "ally principle" of delegation and to consciously reduce, rather than maximize, formal controls. In many respects, central banks and regulatory agencies are thus very similar institutions. Yet the patterns of delegation are strikingly different. I argue that the acknowledgement of this anomaly is a necessary first step for improving delegation theories that miss an important part of the story since they cannot explain the puzzling differences between two similar types of independent authorities.

The rest of the paper is structured as follows. In the next two sections I will briefly review the credibility and political uncertainty problems, and show their importance for both delegation to central banks and to regulatory agencies. I will then discuss the role of the institutional context, and show that two clearly contrasted views have been advanced. After a presentation of data and methods, I will then demonstrate that both views have empirical validity, but for different cases. In the conclusion I will speculate on possible solutions for the puzzles highlighted in this research.

Delegation, credibility, and the institutional context

The credibility problem is well known, and derives from the fact that the preferences of policy-makers may not be consistent over time. Time inconsistency is commonly understood to occur "when a policy announced for some future period is no longer optimal when it is time to implement the policy" (Bernhard, Broz, and Clark 2002: 705). Since policy-making is not a game against nature but against other rational actors, the time-inconsistency of preferences are likely to be anticipated by other actors (Kydland and Prescott 1977). The credibility problem consists in the fact that this anticipation may prevent policy-makers from achieving their goals. In the context of monetary policy, policy-makers may announce a conservative monetary policy at time t, but then have incentives to break this commitment at time $t+1$, for example so as to raise output and employment in the imminence of elections. However, this attempt is futile if economic actors anticipate this change and adjust their inflationary expectations, in which case the result of the policy-makers' decision is simply higher inflation. In this context, delegation to a conservative and independent central bank is seen as a means for policy-makers to increase credible-commitment capacity in the field of monetary policy[2] (Barro and Gordon 1983). Indeed, most empirical studies have found a negative relationship between central bank independence and inflation (see e.g. the review in Berger, de Haan, and Eijffinger 2001), which suggests that delegation is an effective pre-commitment device.

Credible-commitment capacity is a valuable political asset also in regulatory policy, especially in the aftermath of utilities privatization and liberalization (Majone 2001, 1997b; Levy and Spiller 1994; Spiller 1993). The problem in this context is that successful regulatory reform depends on the capacity to attract private investment. Policy-makers have thus clear incentives to promise prospective investors a favorable regulatory environment at the outset of reform (time *t*), but may be tempted to renege on this commitment once relatively irreversible investments have been made (time *t*+1). If investors anticipate this preference reversal, they may renounce to invest in the first place, which is a suboptimal outcome both for them and for policy-makers. Empirical evidence suggests that economic actors are in effect sensitive to the stability of the regulatory framework when deciding their investment strategies (Henisz 2002). In face of this problem, delegation to an independent regulatory authority is a means to improve the credibility of regulatory commitments, and therefore to ameliorate the prospects of successful regulatory reforms (Spiller 1993: 398).

In the European context, these arguments are especially relevant for regulatory reform in the field of utilities. In effect, until the end of the 1980s utilities were typically state-owned monopolies. In the 1990s, most European governments carried out extensive regulatory reforms that included the privatization of state-owned enterprises (SOEs) as well as the introduction of competition in utilities markets. While at the end of the 1980s only in a few countries telecommunications and electricity providers were not publicly-owned, barely a decade later most public assets had been sold to private investors (Levi-Faur 2003, 2004). These reforms have been part of a broader trend known as the "rise of the regulatory state" in Europe (Majone 1997a). In this context, credibility problems for policy-makers have been very important not only because of the high sunk costs of entry in utilities markets, which make investments relatively irreversible, but also because the former SOEs, after partial or total privatization, have remained powerful actors. Prospective competitors may thus legitimately fear that, in spite of their promises that regulation will not be biased in favor of the old SOEs, policy-makers will nevertheless be tempted to reserve a preferential treatment for them. Unless the commitment to fair and impartial regulation is credible, prospective investors may be put off by the danger of collusion between the powerful incumbent and regulators, and may thus renounce to enter the market altogether. Delegation of regulatory policy to an independent authority may thus be an attractive means to make regulatory commitments more credible (Spiller 1993: 398).

In both monetary and regulatory policy, therefore, credible-commitment capacity is a useful political asset, and in both cases delegation to an independent authority can be a means to boost the credibility of commitments. Delegation, however, is not carried out in a void: the institutional context matters, although scholars disagree with respect to *how* it matters. In the central banks literature, there is a consensus that delegation does *not* enhance credibility if it can be easily reverted, since in this case delegation itself is subject to credibility

[2] Fixed exchange rates are an alternative means to improve credibility, and actually consist in delegating monetary policy to a *foreign* central bank (Bernhard, Broz, and Clark 2002: 706).

problems. As Moser (1999: 1571) puts it, "the benefits of central bank independence depend on the existence of some costs of withdrawing the independence". In line with this view, Keefer and Stasavage argue that delegation increases policy credibility only if political institutions are characterized by many veto players: "the effectiveness of central bank independence in solving credibility problems depends on the presence of multiple veto players in government" (Keefer and Stasavage 2002: 751-752; see also Keefer and Stasavage 2003: 407). This point was forcefully made by Lohmann (1998), who argued that credible threats to revoke independence can be an effective means for politicians to influence central bankers, and that that credibility depends crucially on the ease with which the threat can be carried out. If lowering the independence of the central bank is difficult because the agreement of many actors with different preferences is required, then the threat is not credible and central bankers are likely to be able to resist political pressures.

To sum up, central banks scholars argue that veto players are a precondition for credible delegation: if delegation can be easily withdrawn it is useless for improving credible-commitment capacity. This argument is consistent with three different types of evidence. Firstly, central banks are significantly more independent in countries with "strong checks and balances" (Moser 1999), "strong bicameralism" (Bernhard 1998), or many veto players (Tsebelis 2002: 242-244; Hallerberg 2002). Secondly, the influence of central bank independence on inflation depends on checks and balances: "increased central bank independence has a negative effect only in the set of countries with relatively high levels of checks and balances" (Keefer and Stasavage 2002: 767; see also Keefer and Stasavage 2003). Thirdly, Lohmann (1998) has shown that the Bundesbank was more sensitive to political pressures when the preferences of the various veto players were closer, or in other words when the threat to revoke independence was more credible. On the other hand, in a recent longitudinal study Polillo and Guillén (2005) have found no effect of "checks and balances" on central bank independence. However, their measure for checks and balances is actually a measure of democracy rather than veto players (see Polillo and Guillén 2005: 1786).

Arguments are completely different in the regulation literature, where an institutional context that favors policy stability is considered a functional equivalent of delegation. Levy and Spiller (1994: 206-207) state this point very clearly: "Utility regulation is likely to be far more credible – and the regulatory problem less severe – in countries with political systems that constrain executive and legislative discretion". In other words, to the extent that the political system "naturally" ensures policy stability and therefore credibility, delegation is redundant. Note that this view is implicitly present also in the arguments advanced in the central banks literature, which argues that the presence of many veto players makes delegation credible. If a certain institutional environment can increase the time-consistency of the choice to delegate, it is not entirely clear why it should not be able to do the same for other choices as well.

The idea that institutions protecting the status quo can supply pre-commitment capacity resonates with the arguments advanced by North and Weingast (1989), who showed that the institutional reforms brought by the Glorious Revolution in England, notably an increase in the number of veto players, improved the credible-commitment capacity of the Crown. This is a quite robust finding, since several studies have demonstrated that an institutional context preserving policy stability encourages various forms of private investment (Stasavage 2002;

Henisz 2000, 2002; Henisz and Zelner 2001). This supports the view that the institutional context can supply credibility; this evidence is in fact equivalent to that supplied by studies demonstrating a negative link between central bank independence and inflation. In addition, some analyses have also shown that utilities liberalization increases the probability that an independent regulatory authority is established, but only in countries with few veto players (Gilardi 2005b), where regulatory authorities are also less independent from elected politicians (Gilardi 2002, 2005a).

To sum up, credibility problems matter both in monetary and in regulatory policy, and in both cases delegation to an independent authority, respectively an independent central bank and an independent regulatory agency, can contribute to improving credible-commitment capacity. On the other hand, arguments diverge sharply with respect to the role of the institutional context. While in the central banks literature institutions preserving the stability of the status quo are seen as a precondition for credible delegation, in the regulation literature it is argued that they are a functional equivalent of delegation. As I will show below, both these views are consistent with empirical evidence, which raises a major puzzle on the role of political institutions in delegation processes. Before turning to the empirical analysis, however, it is necessary to discuss a second determinant of delegation to independent authorities, namely political uncertainty.

Delegation and political uncertainty

While credibility is the most popular explanation for delegation to independent central banks and regulatory agencies, a second factor is also important, namely political uncertainty[3]. A fundamental characteristic of democratic systems is the periodic alternation of elected politicians at top offices, so that any government can expect to exert authority over policy only for a limited period of time. When the partisan composition of government changes, policies are also likely to change, at least in part, and this is something incumbent policy-makers may want to avoid. Shepsle (Shepsle 1992; Horn and Shepsle 1989) called this "legislative drift", with reference to the more common "bureaucratic drift" that occurs when a bureaucratic agent implements a policy closer to its ideal point rather than that enacted by the political principals (in other words, moral hazard).

The political uncertainty argument is effectively synthesized by Moe (1990: 227-229):

> "Whatever today's authorities create […] stands to be subverted or perhaps completely destroyed – quite legally and without any compensation whatever – by tomorrow's authorities. Because the dangers of political uncertainty can be anticipated from the outset, however, today's authorities need not leave their creations unprotected. They can fashion structures to insulate their favored agencies and programs from the future exercise of public authority. In doing so, of course, they will not only be reducing their enemies' opportunities for future control; they will be reducing their own opportunities as well."

[3] Which, quite ironically, was called by Moe (1990) "the neglected side of the story" already fifteen years ago.

There are two important components in the argument. The first is that insulating policy from politics increases its duration, which is a desirable outcome from the point of view of incumbent policy-makers, while the second is that insulation limits the possibilities of control of all policy-makers, present and future, which in this perspective is a cost. In other words, insulation means both self-binding and binding others, and should thus be expected to be carried out when the benefits of the latter outweigh the costs of the former. This intuition is at the center of de Figueiredo's (2002) formalization of Moe's arguments, which shows that the most likely "insulators" are "electorally weak groups", namely those that happen to be in power at a certain moment, but do not expect to be able to regain soon after they lose it. In this case, insulation clearly means more binding others than self-binding, while for stronger groups, who can expect electoral successes in the near future, insulation carries a significant amount of self-binding. In support of these views, de Figueiredo (2003) found that in the States the line-item veto, which can work as an insulation technology for budgetary policy, is proposed by conservative legislators, but only when they think their electoral prospects are weak.

Very similar views have been advanced also for central banks. Lohmann (1998: 442) argues that, in addition to the credibility problem, a reason why politicians grant independence to the central bank is that "they anticipate that they might be in the opposition in the future", while in the words of Cukierman (1994: 56),

> "[…] when different parties competing for office disagree about the structure of government expenditures […] the party currently in office may grant some independence to the CB also in order to restrict the ability of the opposition (if and when it accedes to office) to spend on public goods which are in low priority for the incumbent party."

Similarly, in his study of the politics of central bank independence Goodman (1991: 346) comes to the following conclusion:

> "Politicians generally wish to maintain a high degree of freedom in their actions. However, they will be willing to change the status of the central bank to bind the hands of their successors, a decision they will make when they expect a short tenure of office. Binding the hands of one's successors, I have argued, is a critical element of any institutional change and a viable political strategy in the area of monetary policy."

Delegation to an independent central bank or regulatory agency can thus be a means to insulate policy from politics. In other words, delegation can be a means to solve the political uncertainty problem. Of course, political uncertainty and credibility are partially linked, since, all else equal, more political uncertainty leads to more credibility problems since alternation in government is one of the sources of change in the preferences of policy-makers. However, at the conceptual level the two problems are clearly different, since the incentives for delegation are clearly distinct (cf. also Pierson 2000: 491; Lohmann 1998: 442). In one case the goal is credible-commitment capacity as a means to achieve, respectively, low inflation and appropriate private investment; in the other case, the goal is protecting policy choices from future influence by policy-makers with different preferences.

In the regulation literature, a few studies have shown that both the probability that an independent authority is established and their formal independence are positively linked to the risk for governments of being replaced by coalitions with different preferences (Gilardi 2005b, 2005a). In addition, a prominent scholar of regulatory reform has argued that in the United Kingdom, the preference of the

Thatcher government for an independent telecom regulator was partly due to the desire to prevent future Labor governments to control it (Vogel 1996: 131). Empirical evidence is scarcer for central banks, but one study has found that their independence is negatively related with "party political stability", which to a certain extent is linked to political uncertainty (Bagheri and Habibi 1998). More generally, the political uncertainty hypothesis has found empirical support in studies of delegation in the US context (Volden 2002; Wood and Bohte 2004; De Figueiredo 2003).

To sum up, delegation to independent central banks and regulatory agencies may be due not only to credibility pressures but also to political uncertainty, since by insulating policy from politics it makes it more difficult for future policy-makers to change the policies that current policy-makers have enacted. We can also note that the institutional context should matter also for political uncertainty. On the one hand, delegation may be useless as an insulation technology if future policy-makers can easily withdraw it, as is the case if political institutions do not protect the status quo (veto players as precondition for delegation) (Moe and Caldwell 1994; De Figueiredo 2002); on the other hand, if institutions prevent significant policy change, then delegation may not be needed since policies are already protected by existing institutional arrangements (veto players as functional equivalent of delegation).

Data

The dependent variable of the analysis is the formal independence of central banks and regulators in seventeen European countries[4]. Since formal independence is relatively stable but does vary over time, ideally we would want to have longitudinal data tracing its evolution. Unfortunately, such data are available for central banks[5] but not for regulatory agencies. Therefore, it is currently not possible to integrate the time dimension in a comparison of the formal independence of central banks and regulatory agencies, and the analysis presented here is purely cross-sectional, like, it should be noted, most analyses of central bank independence (e.g. Bernhard 1998; Moser 1999; Hallerberg 2002).

For central bank independence, I use two types of measures. The first is an average of the most commonly used indices, with data taken from Franzese (1999; 2003). These data reflect the situation in 1990. Secondly, I use the Cukierman index of legal independence (Cukierman, Webb, and Neyapti 1992), which is probably the best known and most commonly employed in the literature (and is one of the components of the Franzese measure), with data taken from Polillo and Guillén (2005). Since their data are longitudinal, I take into account central bank independence both before and after the Maastricht Treaty, which established the European Monetary Union and imposed, as a condition for joining the Euro, significant strengthening of the independence of central banks. The Maastricht Treaty thus led to considerable convergence on the level of central bank independence in European countries. Even though it would in principle be

[4] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. Regulatory domains: telecoms, electricity, financial markets, competition policy, food safety, pharmaceuticals, environment.
[5] Polillo and Guillén (2005) have data for 71 countries from 1989 to 2000.

better to use the more recent data (i.e. for the post-Maastrich period), these are less informative on the country-specific factors leading to delegation to independent authorities, since the requirements of the Maastricht Treaty led to considerable convergence on the level of central bank independence in European countries[6]. While the impact of supranational organizations on domestic policy-making is obviously an interesting question that deserves consideration, from the perspective of this article the Maastricht treaty has "artificially" reduced the variation of central bank independence in European countries, and arguably limited the role of domestic factors in the decision to set the level of independence of central banks. Therefore, for the purposes of this study it may actually be more interesting to look at central bank independence in the pre-Maastricht period, when domestic factors were more "free" to influence central bank structures.

Turning to regulatory agencies, their independence is measured through the index developed by Gilardi (2002), which is based on the Cukierman index for central banks discussed in the previous paragraph. Data have been collected by the author.

All independence measures range from 0 to 1. About 20% of regulators actually have a score of 0, since no independent agency exists and regulation is carried out by government and general bureaucracy; by contrast, all central banks have an independence score greater than 0. Figure 1 shows how the different measures of formal independence vary across the countries and domains covered by the analysis.

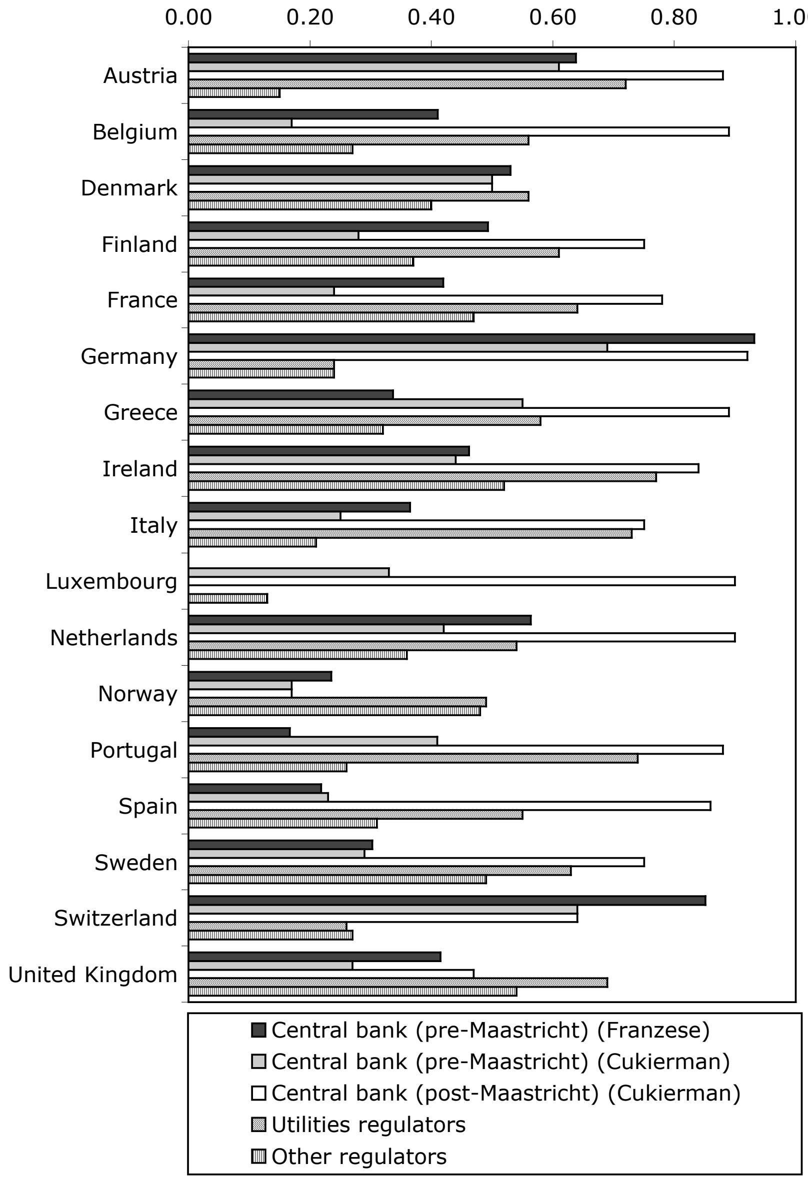
With respect to political uncertainty, I follow Franzese (2002) and operationalize it as the risk for a government of being replaced by coalition with different preferences (replacement risk). Replacement risk depends both on the probability of losing office and on the composition of the new government. Always following Franzese (2002), I measure it as the product of the inverse of actual duration of governments and of the standard deviation of their partisan composition (over seven years). This procedure gives annual values; since the analysis is cross-sectional, I have taken the average for the period 1960-2000. Data exhibit a good deal of variation, ranging from 0.03 for Austria to 0.57 for France. The mean is 0.25, which roughly corresponds to Norway, while the standard deviation is 0.17.

Finally, for veto players I use George Tsebelis's own dataset[7]. Therefore, the United Kingdom has a single veto player, while the observed maximum is Switzerland with 3.87 veto players.

[6] Among the countries that have joined the Euro, the variance in central banks independence has decreased, while the mean has increased (both differences are significant at the 0.01 level).

[7] Downloadable at http://www.polisci.ucla.edu/tsebelis/.

Figure 1. The formal independence of central banks and regulators in 17 countries



Note: Bars indicate the independence of central banks and average independence of regulators in utilities (telecoms, electricity) and other domains (financial markets, competition policy, food safety, pharmaceuticals, and environment). Data not available for the central bank (Franzese measure) and utilities regulators in Luxembourg. Correlation between the two central bank independence measures pre-Maastricht: 0.734.

Source: central banks: Franzese (1999; 2003), Polillo and Guillén (2005); regulators: author's dataset.

Statistical analysis

The results of the analysis are presented in Tables 1 and 2. The former shows models that oppose central banks to regulatory agencies, while in Table 2, for reasons that will be discussed below, models oppose central banks and utilities regulators on the one hand, and other regulators on the other. Models are estimated through OLS, except models 1 and 5 where the tobit estimator was needed to correct for a sizeable clustering of the observations on 0[8] (see Sigelman and Zeng 2000). To facilitate the interpretation[9], the discussion follows Figure 2, which, in the spirit of King et al. (2000), displays predicted values along with estimates of the uncertainty of results.

Starting with the role of the institutional context of delegation, we see that, indeed, the effects of veto players are different for regulators and central banks. Regulators are more independent in countries with few veto players, while central banks are more independent in countries with many veto players. Or, more precisely, central banks *were* more independent in countries with many veto players, since, as shown by model 4, the link between political institutions and central bank independence has faded away in the post-Maastricht period, when the requirements for joining the Euro have forced most governments to revise central bank structures. But before the emergence of this external pressure[10], veto players constituted a precondition for delegation in monetary policy, as argued in the literature. This relationship is robust to different measures of central bank independence, as can be seen in models 2 and 3. On the other hand, in regulatory policy veto players are a functional equivalent of delegation.

This finding constitutes a major puzzle. In principle, incentives for delegation are very similar in the case of both central banks and regulators. As we have seen, the credibility problem is one of the main pressures for delegation in both instances: delegation can be a means for improving the credibility of commitments, which is an important aspect in both monetary and regulatory policy. If this is true, then we should expect the institutional context to play a similar, if not identical, role in both cases. The fact that the institutional context matters so differently for central banks and regulators indicates that we are missing something important in the dynamics of delegation to independent authorities.

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[8] All models estimated in Stata 7 for Macintosh. For tobit models I used the –intreg- command rather than the –tobit- command in order to obtain robust standard errors for clustering on countries.

[9] As is known, tobit coefficients cannot be directly interpreted since they do not represent marginal effects on the dependent variable.

[10] Of course, strictly speaking the Maastricht treaty is not an external pressure on Member States since it has been established precisely by those Member States. In the context of this article, however, the Maastricht treaty is an exogenous variable.

Table 1. Delegation to independent authorities: central banks vs. regulatory agencies (dependent variable: formal independence)

	(1) Regulatory agencies (tobit)	(2) Central banks, pre-Maastricht (OLS) (Franzese)	(3) Central banks, pre-Maastricht (OLS) (Cukierman)	(4) Central banks, post-Maastricht (OLS) (Cukierman)
Utilities	0.267***			
	(0.059)			
Replacement risk	0.610***	-0.829**	-0.832**	-0.075
	(0.142)	(0.268)	(0.204)	(0.231)
Veto players	-0.091***	0.155**	0.081*	-0.043
	(0.026)	(0.034)	(0.028)	(0.047)
Euro				0.410**
				(0.131)
Constant	0.368***	0.310*	0.382***	0.556**
	(0.081)	(0.102)	(0.072)	(0.124)
Wald chi2	35.42			
Prob > chi2	0.000			
R^2		0.49	0.51	0.66
F		10.6	8.89	7.28
Prob>F		0.002	0.004	0.005
N (censored)	100 (22)	15 (0)	16 (0)	16 (0)

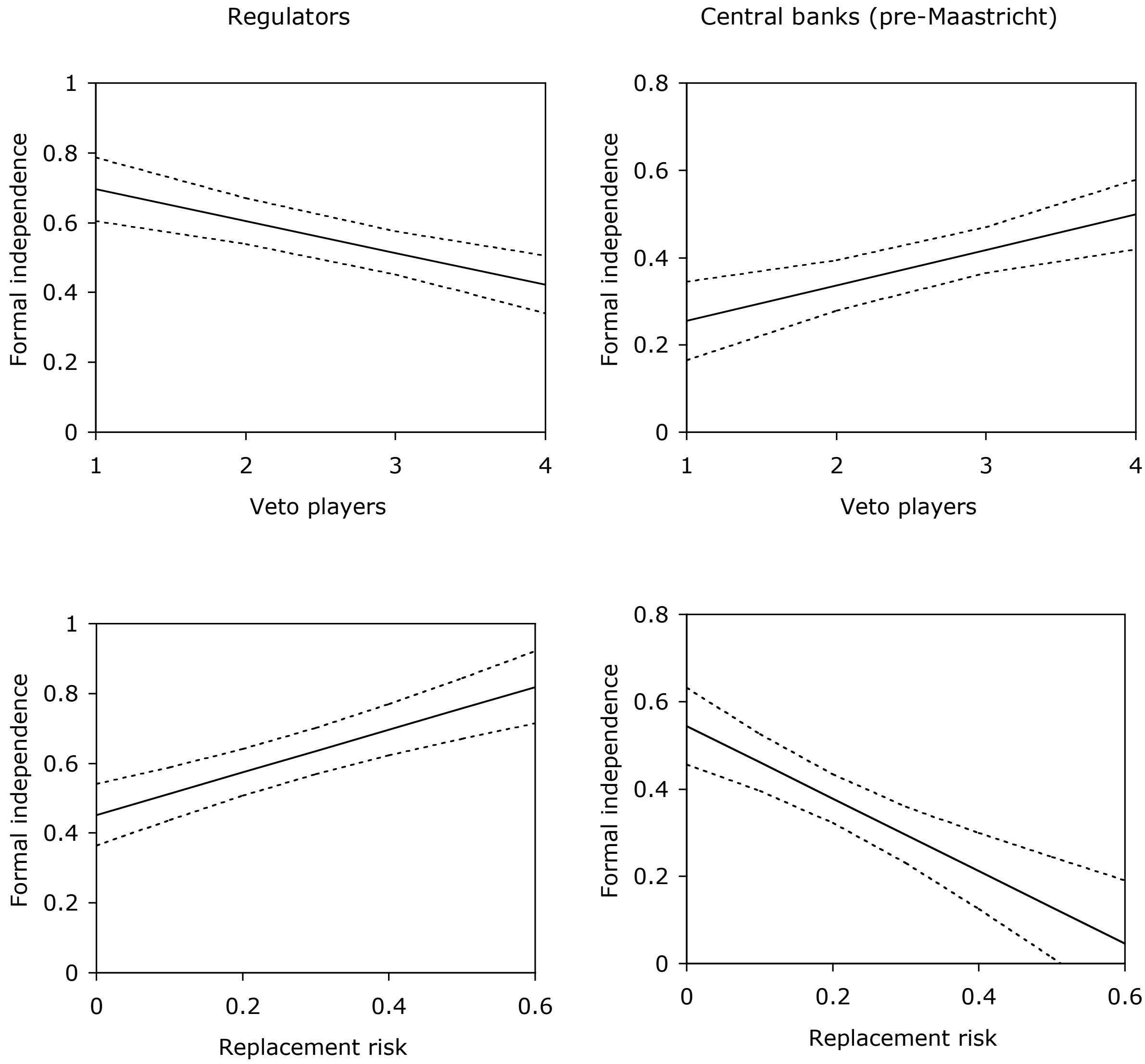
Standard errors in parentheses (model 1: robust standard errors for clustering on countries; models 2-4: robust standard errors); *p<0.05, ** p<0.01, *** p<0.001.

Table 2. Delegation to independent authorities: central banks and utilities regulators vs. other regulatory agencies (dependent variable: formal independence)

	(5)	(6)	(7)	(8)	(9)
	Regulatory agencies, without utilities (tobit)	Central banks (pre-Maastricht, Franzese) and utilities reg. (OLS)	Central banks (pre-Maastricht, Franzese) and utilities reg. (OLS)	Central banks (pre-Maastricht, Cukierman) and utilities reg. (OLS)	Central banks (pre-Maastricht, Cukierman) and utilities reg. (OLS)
Utilities		0.113	0.355*	0.209*	0.283**
		(0.091)	(0.131)	(0.072)	(0.087)
Replacement risk	0.639*	0.069	-0.829**	0.058	-0.832**
	(0.62)	(0.140)	(0.263)	(0.155)	(0.202)
Veto players	-0.088*	-0.009	0.155***	-0.033	0.081*
	(0.042)	(0.022)	(0.034)	(0.023)	(0.027)
Veto players * utilities			-0.246***		-0.172**
			(0.047)		(0.041)
Repl. risk *			1.347**		1.350**
utilities			(0.444)		(0.361)
Constant	0.346**	0.471***	0.310**	0.435***	0.382***
	(0.112)	(0.096)	(0.101)	(0.086)	(0.071)
Wald chi2	7.08				
Prob > chi2	0.029				
R^2		0.07	0.36	0.25	0.46
F		1.17	7.09	7.55	9.54
Prob>F		0.355	0.002	0.003	0.000
N (censored)	70 (20)	45 (2)	45 (2)	46 (2)	46 (2)

Standard errors in parentheses (robust standard errors for clustering on countries) *p<0.05, ** p<0.01, *** p<0.001.

Figure 2. The formal independence of regulators and central banks (predicted values)



Note: Predicted values are computed on the basis of model 1 (for regulators) and model 3 (for central banks) in Table 1. Dotted lines delimit 90% confidence intervals.

Secondly, political uncertainty also matters. As expected, the formal independence of regulators increases as replacement risk increases. This lends support to the argument that one of the motivations for governments to delegate powers to an agency they cannot directly control is the wish to limit the room for manoeuver of future governments with different preferences. But again, delegation to central banks is different. Replacement risk did influence delegation to central banks in the pre-Maastricht period (a finding that is robust to different measures of central bank independence, as can be seen in models 2 and 3), but in an opposite way: central banks were more independent in countries with high replacement risk. This result is puzzling because it cannot be squared with the political uncertainty arguments suggested by Lohmann, Cukierman and Goodman (Lohmann 1998; Cukierman 1994; Goodman 1991). It is another signal that we are missing something important in our current explanations of delegation to independent authorities. Again, in the post-Maastricht period country-specific factors have lost importance for central banks, as shown by model 4.

How can these striking differences between regulatory agencies and central banks be explained? Of course, a possibility is simply that central banks and regulatory agencies do not belong to the same population. In other words, delegation to central bank and to independent regulators may follow completely different logics. However, we have seen that theoretical arguments are very similar in that they stress the central role of credibility problems, a view that has empirical validity since regulators, as expected, are indeed more independent in utilities, where credible-commitment capacity is a crucial political asset, than in other regulatory domains. A second point that links central banks and independent regulatory agencies is the violation by political principals of some key principles of delegation, notably the explicit renouncement to a series of important formal controls. The idea that bureaucratic autonomy can be granted by politicians in a fully deliberate way is of course not new (Huber and Shipan 2002). In addition, the absence of formal controls obviously does not mean that no controls exist (McCubbins and Schwartz 1984). Yet, the specificity of both central banks and independent regulators is not that political principals fail to set up extensive controls; it is that political principals deliberately build institutional arrangements designed to remove a range of controls that would otherwise exist almost by default. Central banks and independent regulatory agencies, therefore, do seem to belong to the same population of independent authorities.

Continuing on the idea that independent authorities constitute a heterogeneous population, it could be that the relevant boundary is not between central banks and regulatory agencies, but between sectors where credibility issues are very important, and sectors where they are less salient[11]. Since, as I have argued above, it is especially in utilities regulation that governments need to possess credible commitment capacity, it is possible that central banks and utilities regulators exhibit the same pattern, while other regulators are different. This idea is tested in the models shown in Table 2[12]. Model 5 analyzes regulatory agencies, but excludes utilities regulators. The findings remain robust, since replacement risk keeps a significantly negative sign, and veto players a significantly positive sign. Models 6 and 8 pool central banks and utilities regulators, and wee see that the effects of replacement risk and veto players

[11] I thank Chuck Shipan for this suggestion.

[12] Models 6 to 9 are estimated through OLS since only two observations are clustered on 0 for the dependent variable. Estimating the models through a tobit gives virtually identical results.

disappear. When studying central banks and utilities regulators together, neither replacement risk nor veto players seem to influence formal independence. This, however, suggests that delegation patterns may be different in the two sub-groups. This idea is confirmed by models 7 and 9, where we can see that both replacement risk and veto players do matter, but in different ways for central banks and utilities regulators. Therefore, it seems that the relevant difference is indeed between central banks on the one hand, and regulatory agencies on the other.

To sum up, the institutional context matters for delegation to independent authorities, but delegation to central banks is different from delegation to regulatory agencies. In the former, veto players constitute a precondition for credible delegation, while for the latter they are a functional equivalent of delegation. Why the same institutions have opposite effects for delegation processes that look so similar is indeed a puzzle indicating that our explanations are seriously incomplete. Political uncertainty is also important, but the findings raise a second puzzle, since replacement risk matters differently for regulators and for central banks. Again, what is so different in two delegation processes that seem so similar?

Conclusion

In this article I have shown that delegation to central banks and independent regulatory agencies is in many respects very similar. In both cases, credibility concerns are one of the main drivers of delegation, the institutional context matters, and so does the uncertainty of incumbent policy-makers with respect to their re-election prospects. On the other hand, both the institutional context and the political uncertainty created by alternation in government work in opposite ways for central banks and regulators. Many veto players are a precondition for delegation to central banks, but a functional equivalent of delegation to independent regulators. Delegation to independent regulators is most extensive when political uncertainty is high, while the opposite is true for delegation to central banks, which are most independent when political uncertainty is small. I argue that these inconsistencies are a clear indication that current theories of delegation to independent authorities are seriously incomplete. What kind of changes are necessary to make sense of these findings?

A possibility is that the role of veto players has not been properly conceptualized, neither in the central banks literature nor in the regulation literature. Tsebelis concluded his chapter on veto players and bureaucracy by noting, quite pessimistically, that "the theory presented in this book cannot account for the reasons that central banks are more independent in countries with many veto players" (Tsebelis 2002: 247). The present study has raised a further problem for veto players theory, since I have shown that the opposite relationship holds for independent regulators. Since there is little question that veto players matter, these findings call for a more sophisticated theorization of their role in delegation processes.

In conclusion, the contribution of this study has been to identify a puzzle concerning delegation to independent authorities. The institutional context and electoral prospects matter for delegation to both independent central banks and independent regulatory agencies, but in symmetric ways. Better explanations of delegation to independent authorities need to be developed that can account for this anomaly.

References

Bagheri, Fatholla M., and Nader Habibi (1998). "Political Institutions and Central Bank Independence: A Cross-Country Analysis", *Public Choice* 96:187-204.

Barro, Robert J., and David B. Gordon (1983). "Rules, Discretion and Reputation in a Model of Monetary Policy", *Journal of Monetary Economics* 12:101-121.

Bendor, T., A. Glazer, and T. Hammond (2001). "Theories of Delegation", *Annual Review of Political Science* 4:235-269.

Berger, Helge, Jacob de Haan, and Sylvester C. W. Eijffinger (2001). "Central Bank Independence: An Update of Theory and Evidence", *Journal of Economic Surveys* 15 (1):3-40.

Bernhard, William (1998). "A Political Explanation of Variations in Central Bank Independence", *American Political Science Review* 92 (2):311-327.

Bernhard, William, J. Lawrence Broz, and William Roberts Clark (2002). "The Political Economy of Monetary Institutions", *International Organization* 56 (4):693-723.

Cukierman, Alex (1994). "Commitment through Delegation, Political Influence and Central Bank Independence", in J. O. d. B. Wijnholds, S. C. W. Eijffinger and L. H. Hoogduin (eds), *A Framework for Monetary Stability*. Dordrecht: Kluwer Academic Publishers: 55-74

Cukierman, Alex, Steven B. Webb, and Bilin Neyapti (1992). "Measuring the Independence of Central Banks and Its Effect on Policy Outcomes", *World Bank Economic Review* 6 (3):353-398.

De Figueiredo, Rui J. P. (2002). "Electoral Competition, Political Uncertainty, and Policy Insulation", *American Political Science Review* 96 (2):321-333.

De Figueiredo, Rui J. P. (2003), "Budget Institutions and Political Insulation", *Journal of Public Economics* 87:2677-2701.

Franzese, Robert J. (1999). "Partially Independent Central Banks, Politically Responsive Governments, and Inflation", *American Journal of Political Science* 43 (3):681-706.

Franzese, Robert J. (2002). *Macroeconomic Policies of Developed Democracy*. Cambridge: Cambridge University Press.

Franzese, Robert J. (2003). "Multiple Hands on the Wheel: Empirically Modeling Partial Delegation and Shared Policy Control in the Open and Institutionalized Economy", *Political Analysis* 11 (4):445-474.

Gilardi, Fabrizio (2002). "Policy Credibility and Delegation to Independent Regulatory Agencies: A Comparative Empirical Analysis", *Journal of European Public Policy* 9 (6):873-893.

Gilardi, Fabrizio (2005a). "The Formal Independence of Regulators: A Comparison of 17 Countries and 7 Sectors", *Swiss Political Science Review* 11 (4):139-167.

Gilardi, Fabrizio (2005b). "The Institutional Foundations of Regulatory Capitalism: The Diffusion of Independent Regulatory Agencies in Western

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Goodman, John B. (1991). "The Politics of Central Bank Independence", *Comparative Politics* 23 (3):329-349.

Hallerberg, Mark (2002). "Veto Players and the Choice of Monetary Institutions", *International Organization* 56 (4):775-802.

Henisz, Witold J. (2000). "The Institutional Environment for Multinational Investment", *Journal of Law, Economics, and Organization* 16 (2):334-364.

Henisz, Witold J. (2002). "The Institutional Environment for Infrastructure Investment", *Industrial and Corporate Change* 11 (2):355-389.

Henisz, Witold J., and Bennet A. Zelner (2001). "The Institutional Environment for Telecommunications Investment", *Journal of Economics and Management Strategy* 10 (1):123-147.

Horn, Murray J., and Kenneth A. Shepsle (1989). "Commentary on 'Administrative Arrangements and the Political Control of Agencies': Administrative Process and Organizational Form as Legislative Responses to Agency Costs", *Virginia Law Review* 75:499-508.

Huber, John D., and Nolan McCarty (2004). "Bureaucratic Capacity, Delegation, and Political Reform", *American Political Science Review* 98 (3):481-494.

Huber, John D., and Charles R. Shipan (2002). *Deliberate Discretion? The Institutional Foundations of Bureaucratic Autonomy*. Cambridge: Cambridge University Press.

Huber, John D., and Charles R. Shipan (2004). "Politics, Delegation, and Bureaucracy". Manuscript, Columbia University and University of Iowa.

Keefer, Philip, and David Stasavage (2002). "Checks and Balances, Private Information, and the Credibility of Monetary Commitments", *International Organization* 56 (4):751-774.

Keefer, Philip, and David Stasavage (2003). "The Limits of Delegation: Veto Players, Central Bank Independence, and the Credibility of Monetary Policy", *American Political Science Review* 97 (3):407-423.

King, Gary, Michael Tomz, and Jason Wittenberg (2000). "Making the Most of Statistical analyses: Improving Interpretation and Presentation", *American Journal of Political Science* 44 (2):341-355.

Kydland, Fin E., and Edward C. Prescott (1977). "Rules Rather than Discretion: The Inconsistency of Optimal Plans", *Journal of Political Economy* 85 (3):473-491.

Levi-Faur, David (2003). "The Politics of Liberalisation: Privatisation and Regulation-for-Competition in Europe's and Latin America's Telecoms and Electricity Industries", *European Journal of Political Research* 42:705-740.

Levi-Faur, David (2004). "On the "Net Impact" of Europeanization. The EU's Telecoms and Electricity Regimes Between the Global and the National", *Comparative Political Studies* 37 (1):3-29.

Levy, Brian, and Pablo T. Spiller (1994). "The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation", *Journal of Law, Economics, and Organization* 10 (2):201-246.

Lohmann, Susanne (1998). "Federalism and Central Bank Independence. The Politics of German Monetary Policy, 1957-1992", *World Politics* 50:401-446.

Majone, Giandomenico (1997a). "From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance", *Journal of Public Policy* 17 (2):139-167.

Majone, Giandomenico (1997b). "Independent Agencies and the Delegation Problem: Theoretical and Normative Dimensions", in B. Steuenberg and F. van Vught (eds), *Political Institutions and Public Policy*. Dordrecht: Kluwer Academic Publishers: 139-156

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

McCubbins, Mathew, and Thomas Schwartz (1984). "Congressional Oversight Overlooked: Police Patrols versus Fire Alarms", *American Journal of Political Science* 28 (1):165-179.

Miller, Gary J. (2005). "The Political Evolution of Principal-Agent Models", *Annual Review of Political Science* 8:203-225.

Moe, Terry M. 1990. "Political Institutions: The Neglected Side of the Story", *Journal of Law, Economics, and Organization* 6 (Special Issue):213-253.

Moe, Terry M., and Michael Caldwell (1994). "The Institutional Foundations of Democratic Government: A Comparison of Presidential and Parliamentary Systems", *Journal of Institutional and Theoretical Economics* 150 (1):171-195.

Moser, Peter (1999). "Checks and Balances, and the Supply of Central Bank Independence", *European Economic Review* 43:1569-1593.

North, Douglass C., and Barry R. Weingast (1989). "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England", *Journal of Economic History* 69:803-832.

Pierson, Paul (2000). "The Limits of Design: Explaining Institutional Origins and Change", *Governance* 13 (4):475-499.

Polillo, Simone, and Mauro F. Guillén (2005). "Globalization Pressures and the State: The Worldwide Spread of Central Bank Independence", *American Journal of Sociology* 110 (6):1764-1802.

Shepsle, Kenneth A. (1992). "Bureaucratic Drift, Coalitional Drift, and Time Consistency: A Comment on Macey", *Journal of Law, Economics, and Organization* 8 (1):111-118.

Sigelman, Lee, and Langche Zeng (2000). "Analyzing Censored and Sample-Selected Data with Tobit and Heckit Models", *Political Analysis* 8 (2):167-182.

Spiller, Pablo T. (1993). "Institutions and Regulatory Commitment in Utilities' Privatization", *Industrial and Corporate Change* 2 (3):387-450.

Stasavage, David (2002). "Private Investment and Political Institutions", *Economics and Politics* 14 (1):41-63.

Thatcher, Mark, and Alec Stone Sweet (2002). "Theory and Practice of Delegation to Non-Majoritarian Institutions", *West European Politics* 25 (1):1-22.

Tsebelis, George (2002). *Veto Players: How Political Institutions Work*. Princeton: Princeton University Press.

Vogel, Steven K. (1996). *Freer Markets, More Rules. Regulatory Reform in Advanced Industrial Countries*. Ithaca: Cornell University Press.

Volden, Craig (2002). "Delegating Power to Bureaucracies: Evidence from the States", *Journal of Law, Economics, and Organization* 18 (1):187-220.

Wood, B. Dan, and John Bohte (2004). "Political Transaction Costs and the Politics of Administrative Design", *Journal of Politics* 66 (1):176-202.

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