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Editors

# The Political Economy of Local Regulation

Theoretical Frameworks  
and International Case Studies

palgrave  
macmillan

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Studies in the Political Economy of Public Policy

ISBN 978-1-137-58827-2

ISBN 978-1-137-58828-9 (eBook)

DOI 10.1057/978-1-137-58828-9

Library of Congress Control Number: 2016949424

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Printed on acid-free paper

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# What Economic Theory Can (and Cannot) Say About Local Regulation

*Andrea Gallice*

## I INTRODUCTION

The analysis of regulatory issues through the lens of economic theory has by now a long tradition. The approach has proved to be particularly fruitful and led to a number of solid results and precise policy implications (see Armstrong and Sappington (2007) for a recent and comprehensive review). The reason for such a positive impact probably lies in the fact that the methodology and the tools that economic theory proposes appear to be particularly apt to capture the main ingredients of actual regulatory problems.

Consider for instance the classical problem of an authority that must regulate the activities of a profit-maximising firm (say, a provider of a public service). Such a situation can be naturally modelled in a principal-agent framework. The well-being of the principal (in this case, the authority who pursues the citizens' interest) is affected by the actions of the agent (the firm), the interests of the two entities are not perfectly aligned, and information is asymmetric because the agent privately knows his type (say, his cost structure). As a second example, consider the case of a regulatory body that must decide whether to allow a merger between two firms that operate in the same sector. Theoretical models of oligopolies are likely to

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provide relevant insights on the possible consequences that the proposed merger may have on the degree of competition in the market and thus ultimately on consumers' welfare.

A distinguishing feature of the method with which economic theory addresses regulatory problems is the explicit consideration of individual incentives as well as a detailed characterisation of strategic interaction. Indeed, the economic theory of regulation adopts a game-theoretic approach, and it is, therefore, inherently formal. This has some pros and cons. On the one hand, theoretical models of regulation can capture the key strategic forces at play and are thus fundamental in the design of the main structure of any regulatory policy, no matter its scale or the context in which it gets implemented. On the other hand, theoretical models are inevitably based on some assumptions about individuals' behaviour (say, full rationality of economic agents) that are not always fulfilled in reality.<sup>1</sup> Moreover, and by the very definition of it, a model cannot simultaneously capture all the specific details that define every single regulatory problem (for example, the institutional details, the relevant social norms, the idiosyncratic historical events, the level of social capital, and so on).

In this respect, an issue that the current body of literature has partially neglected consists in the analysis of the differences in agents' incentives and regulatory outcomes that may emerge when one scales the 'size' of the problem up or down. Existing theoretical models are usually silent about how regulation may differ at the local rather than at the national or supranational level. This shortcoming probably stems from the fact that economic models of regulation do not consider the scale of the interaction as being a relevant parameter of the analysis. Indeed, the total surplus available in a certain transaction (in other words, the size of the pie) is often normalised such as to simplify the analysis, under the implicit assumption that agents' incentives do not get modified if all payoffs are decreased or increased proportionally.

However, there are many possible reasons for which regulation at the local level may differ in relevant ways with respect to regulation that takes place at the national level. Public policy and regulation at the local level display some specific aspects that can affect the relationships between the public authorities, the regulatory bodies, the regulated firms, and the public. For instance, local monopolies are likely to be operated by firms that have close political ties with the local government and local politicians. Such proximity may distort the incentives of the regulators and increase the relevance of regulatory capture and 'revolving doors' mechanisms. Similarly,

firms that operate as local monopolies often face a soft budget constraint, and this may exacerbate the level of corruption and managerial slack.

In this chapter, we review some classical theoretical models of regulation (we focus in particular on the analysis of regulatory capture) and investigate how some specific features of local regulation may affect standard results. We find that, from a qualitative point of view, the main implications of the models remain valid both at the national and at the local level. However, some aspects of the local dimension, such as for instance a higher level of public monitoring or the existence of stronger interactions between the regulators and the regulated, affect the probability of regulatory capture and thus cannot be ignored in the design of effective regulatory policies.

The chapter is organised as follows. Section 2 reviews a standard model of regulation of a monopolist in the presence of asymmetric information. Section 3 enriches the model by investigating the role of an external regulator and allowing the possibility of regulatory capture. Section 4 discusses how some specific features that characterise regulation at the local level may affect the efficiency of the regulatory outcomes and the probability of regulatory capture. Section 5 draws the conclusions.

## 2 A STANDARD MODEL OF REGULATION

Consider the problem of an authority, say a national or local government, that must regulate the activities of a monopolist who is in charge of the provision of a public service (at the local level, examples include water and gas distribution, district heating, urban waste collection and disposal, and public transportation).<sup>2</sup> More precisely, the authority must decide the price  $p \geq 0$  at which the monopolist can sell his product to consumers. The authority is benevolent and aims at maximising consumers' surplus.<sup>3</sup> As such, the authority and the monopolist have conflicting preferences, as the former prefers lower prices (consumers' surplus is decreasing in  $p$ ), whereas the monopolist prefers higher prices (in the relevant interval of choice, i.e., between the competitive equilibrium and the monopolist's optimal price, profits are increasing in  $p$ ).

Consumers' demand is common knowledge and is denoted by  $Q(p)$  where, in line with the law of demand,  $Q'(p) < 0$ .<sup>4</sup> The monopolist has the cost function  $C = F + c \cdot Q(p)$  where  $F \geq 0$  are fixed costs and  $c$  is marginal cost. Firm's profits are given by:

$$\pi(p) = p \cdot Q(p) - F - c \cdot Q(p) = (p - c) \cdot Q(p) - F$$

We further assume that the regulator can make a transfer  $T$  to the monopolist, such as for instance to compensate him in case he incurs losses. The monopolist's rent thus takes the following form:

$$R(p) = \pi(p) + T$$

If both  $F$  and  $c$  were known to the authority, then the latter could implement the first-best solution, namely compensate the firm for its fixed costs (i.e.,  $T = F$ ) and impose a price that equals marginal cost (i.e.,  $p = c$ ). More formally, the authority would offer the first-best contract  $C^{FI} := \langle T^{FI} = F, p^{FI} = c \rangle$  (we use the superscript FI to denote the full information outcome) and the monopolist would accept it. Such a solution would mimic the competitive equilibrium, nullify the monopolist's rent (but still cover its fixed costs, such as not have him leave the market), and maximise consumers' surplus.

Regulation would thus be trivial in a context of perfect information. However, such a condition is rarely met in reality given that, when compared with the authority/regulator, the firm clearly has superior knowledge about some of its characteristics, such as the status and efficiency of its plants and its cost structure. Therefore, to make the model more interesting as well as more realistic, let the situation be plagued by the presence of asymmetric information, a situation that can be very common at a local level. More precisely, and following the classical article by Baron and Myerson (1982), assume that the regulator does not know the monopolist's marginal cost  $c$  with certainty. Indeed, from the regulator's point of view, the monopolist can have a low marginal cost  $c_l$  with probability  $q \in (0, 1)$  and a high marginal cost  $c_h$  with probability  $(1 - q)$ , where  $0 \leq c_l < c_h$ . For future reference we define  $\Delta c = c_h - c_l$  with  $\Delta c > 0$ .

In such a situation, the regulator cannot fully rely on the firm's self-assessment of its cost structure, as a more efficient monopolist (that is to say, a monopolist with low marginal costs) has an incentive to pretend that he actually sustains a high marginal cost of production. To see this point, assume that the regulator is naïve and offers the monopolist the possibility to choose between the following two contracts (we use the superscript N to denote the contracts that a naïve principal would offer):  $C_l^N := \langle T_l^N = F, p_l^N = c_l \rangle$  and  $C_h^N := \langle T_h^N = F, p_h^N = c_h \rangle$ . Given such a menu of contracts, a low-cost monopolist would obviously choose  $C_h^N$  and thus obtain a rent  $R_l^N(p_h^N) = (p_h^N - c_l) \cdot Q(p_h^N) = \Delta c \cdot Q(p_h^N)$ , where

clearly  $R_l^N(p_h^N) > 0$ . With respect to the full information outcome, consumers' surplus would thus get damaged whenever the monopolist is of the low-cost type.

The regulator can improve upon this situation by designing an incentive scheme that induces a monopolist to truthfully report his type (i.e., his cost structure).<sup>5</sup> A necessary condition for this to happen is that each type of monopolist has no incentive to pretend to be of a different type. Formally, this requirement is captured by the following incentive-compatibility constraints:

$$ICC_l : R_l(p_l) \geq R_l(p_h) \quad ICC_h : R_h(p_h) \geq R_h(p_l)$$

At the same time, the contracts that the regulator offers must ensure that the monopolist does not incur losses, as otherwise the monopolist would leave the market and this would ultimately harm consumers' welfare. Formally, this requirement is captured by the following participation constraints:

$$PC_l : R_l(p_l) \geq 0 \quad PC_h : R_h(p_h) \geq 0$$

It can be easily shown (see a more detailed proof in Armstrong and Sappington 2007) that the optimal contracts that the regulator must offer take the following form (we use the superscript AI to denote the first best solution when there is asymmetric information):

$$C_l^{AI} := \langle T_l^{AI} = F, p_l^{AI} = c_l \rangle \quad C_h^{AI} := \langle T_h^{AI} = F, p_h^{AI} = c_h + \frac{q}{1-q} \Delta c \rangle$$

Such that in equilibrium, a monopolist obtains the following rents:

$$R_l^{AI} = \Delta c \cdot Q(p_h^{SB}) \quad R_h^{AI} = 0$$

Notice that since  $p_h^{AI} > c_h$  then  $Q(p_h^{AI}) < Q(p_h^N)$  such that a low-cost monopolist obtains a lower rent with respect to the naïve solution, i.e.,  $R_l^{AI} < R_l^N$ .

### 3 REGULATORY CAPTURE

The term regulatory capture indicates a situation where the regulatory bodies end up serving the interests of the regulated firms rather than those of the public authority that appoints them.<sup>6</sup> As such, it is a form of corruption and misbehaviour, as a regulator that gets captured consciously acts against his original mandate. For instance, the regulator may stop properly inspecting the firm's plants or he may hide some relevant information from public authorities in case he finds that the firm is not compliant with the appropriate standards.<sup>7</sup>

To properly investigate the regulatory capture phenomenon, we enrich the previous model by opening the door to the possibility that the interests of the authority and the regulator may not be perfectly aligned. Indeed, in the previous section the public authority and regulator were assumed to be a unique agent such that their preferences trivially coincided. In this section, we instead describe a classical three-tier model à la Tirole (1986).<sup>8</sup> The model features three distinct economic agents: an authority, a regulator, and a monopolist. The authority may lack the expertise and/or the time to properly assess the monopolist's situation and thus delegates monitoring to the regulator. While the authority still aims at maximising consumers' surplus, the regulator pursues their own interests, i.e., the maximisation of his own income. As before, there is asymmetric information, as the cost structure of the monopolist (that is to say, the actual level of marginal cost  $c \in \{c_l, c_h\}$ ) is *ex-ante* unknown to both the authority and the regulator. However, the regulator may inspect the monopolist and possibly find out the actual level of marginal cost. Therefore, the government can benefit from the regulator's job, as, if the latter discovers the monopolist's actual type and reports it truthfully, asymmetric information disappears and the full information outcome can be restored. However, the model foresees the possibility that the regulator, in pursuing his own interest, may consciously decide to hide some relevant information that he acquired. In other words, and in line with Laffont and Tirole (1993), the regulator may decide to collude with the monopolist.

Let  $\lambda \in [0, 1]$  denote the exogenous probability that the regulator discovers that the monopolist has low marginal costs when indeed this is the case. Assume moreover that when the monopolist has high marginal costs the regulator cannot learn anything.<sup>9</sup> Once the regulator inspects the monopolist, he sends to the authority a report  $r \in \{c_l, \emptyset\}$ , where  $r = c_l$  indicates that the regulator informs the authority that he discovered that the firm has low marginal costs, whereas  $r = \emptyset$  indicates that the regulator



informs the authority that he could not assess the cost structure of the firm. Therefore, when the authority receives the report  $r = \emptyset$ , his beliefs about the event that the firm has a low-cost structure become

$$\hat{q} = \frac{q(1-\lambda)}{1-q\cdot\lambda}$$

such that  $\hat{q} < q$ .

Now, say that the regulator discovers that the monopolist's costs are low and he honestly reports this piece of information to the authority. The latter would then regulate the market price at the level  $p_l = c_l$  and this would nullify the monopolist's rent. Therefore, a low-cost monopolist that gets regulated as if he is a high cost monopolist has an incentive to offer the regulator a sum up to the amount of his current rent  $R_l = \Delta c \cdot Q(p_h^*)$  in order to convince the regulator not to truthfully report the monopolists type to the authority. However, payments to the regulator are costly, as they are illegal (they take the form of bribes) and thus entail some risk of being caught and face legal consequences. The literature models this feature by assuming that the firm's actual cost of paying the regulator amounts to  $(1+\gamma)$  where the parameter  $\gamma > 0$  captures the 'easiness' of bribing the regulator (in particular, the lower is  $\gamma$ , the easier, or less costly/risky, is the firm's attempt to lure the regulator). Therefore, the maximum amount that a monopolist with low marginal costs is willing to pay the regulator in order to convince him not to reveal the truth to the government is given by  $k = \Delta c \cdot Q(p_h) / (1+\gamma)$ . It follows that an authority that wants to ensure that the regulator behaves honestly must pay the regulator a wage  $w \geq k$ , which is detracted from consumers' surplus. Therefore, the probability that regulatory capture arises is increasing in the term  $k$  and thus decreasing in  $\gamma$ . In other words, the easier it is for the firm to bribe the regulator, the easier it is that regulatory capture may emerge, and the higher is the wage that the authority should pay the regulator to preempt their capture.

In such a framework (which we indicate with the superscript RC to denote that we refer to the case in which regulatory capture may emerge), optimal contracts take the following form (see Dal Bó 2006):

$$C_l^{RC} := \langle T_l^{RC} = F, p_l^{RC} = c_l \rangle$$

$$C_h^{RC} := \langle T_h^{RC} = F, p_h^{RC} = c_h + \frac{q}{1-q} \Delta c - \frac{q \cdot \lambda}{1-q} \left[ 1 - \frac{1}{1+\gamma} \right] \Delta c \rangle$$

In equilibrium, a monopolist thus obtains the following rents:

$$R_l^{RC} = \Delta c \cdot Q(p_h^{RC}) \quad R_h^{RC} = 0$$

Notice that  $p_h^{RC} > c_h$  such that, as before, the regulator sets a market price above marginal cost for the high-cost monopolist and leaves a positive rent to the low-cost type ( $R_l^{RC} > 0$ ). Indeed, by comparing the regulatory outcomes that emerge in the three scenarios that we have investigated so far (the one with full information, FI; the one with asymmetric information with no delegation, AI; and the one with asymmetric information with delegation and the possibility of regulatory capture, RC) the following ranking of equilibrium prices holds:

$$p_l^{AI} = p_l^{RC} = p_l^{FI} = c_l \quad \text{and} \quad p_h^{AI} > p_h^{RC} > p_h^{FI} = c_h$$

Given that the quantity that the monopolist sells is decreasing in the equilibrium price and that the monopolist's rent is given by  $R_l = \Delta c \cdot Q(p_h)$ , the resulting ranking in terms of rents is the following:

$$R_l^{RC} > R_l^{AI} > R_l^{FI} = 0 \quad \text{and} \quad R_h^{AI} = R_h^{RC} = R_h^{FI} = 0$$

In other words, and quite intuitively, the presence of an independent regulator has the potential to partially solve the problem of asymmetric information and thus leads to a less distortionary price in case the monopolist has high marginal costs. However, the equilibrium contract assigns a higher rent to a monopolist with low costs, and thus endows such a firm with more incentives and resources to lure the regulator.

Focusing on the difference between the price imposed to a high-cost monopolist in the AI and RC scenarios, notice that this is given by the

term  $\delta = \frac{q \cdot \lambda}{1 - q} \left[ 1 - \frac{1}{1 + \gamma} \right] \cdot \Delta c$  where  $\delta > 0$ . In particular,  $p_h^{RC} = p_h^{AI} - \delta$ . The

term  $\delta$  can be interpreted as a measure of the reduction in the distortion of regulated prices due to the presence of a regulator, no matter if this agent is potentially corruptible. Notice that  $\delta$  depends on the 'true' probability that the firm has low costs ( $q$ ), on the probability that the regulator discovers that the firm has indeed low costs ( $\lambda$ ), and on the parameter that captures the easiness with which the monopolist can bribe

the regulator ( $\gamma$ ). In what follows, we perform some exercises of comparative statics and study the effects that changes in these three terms may trigger. We then discuss how the peculiar features of local regulation may affect these terms and thus influence regulatory outcomes.

#### 4 REGULATORY CAPTURE AT THE LOCAL LEVEL

Many peculiar features of the local dimension become relevant when one tackles problems of regulation at the regional or municipal level. For instance, it is often the case that local monopolies are operated by firms that have tight political connections with local governments and politicians. Moreover, local monopolies usually face softer budget constraints and must comply with lower requirements in terms of accountability and transparency. Clearly, these aspects can potentially exacerbate the level of corruption and managerial slack (see Menozzi et al. 2012). Moreover, they can distort the incentives of the regulators and thus affect the incidence of regulatory capture. On the other hand, some other typical aspects of the local dimension may tend to increase the efficiency of regulatory policies. For instance, consumers are more sensitive to the price and quality of the service that they get and more closely follow and monitor the behaviour of local governments, regulators, and providers of some key public services.<sup>10</sup> Yet, on the other side local ties can be so intertwined to induce awe toward local authorities and hinder complaints and social opposition.

In this section, we interpret the theoretical results that we obtained so far in light of the specific aspects that characterise regulation when this takes place at the local level. We find that in general the qualitative implications of the models remain valid. However, the local dimension of regulation may affect the relevance of some effects.

We already saw that the condition  $p_h^{RC} = p_h^{AI} - \delta$  holds, where  $\delta = \frac{q \cdot \lambda}{1-q} \left[ 1 - \frac{1}{1+\gamma} \right] \cdot \Delta c$ . By inspecting the term  $\delta$ , one can easily verify that the following marginal effects hold:

$$\frac{\partial \delta}{\partial q} = \frac{\gamma \cdot \lambda}{(1+\gamma)(1+q)^2} \cdot \Delta c > 0$$

$$\frac{\partial \delta}{\partial \lambda} = \frac{q}{1-q} \left[ 1 - \frac{1}{1+\gamma} \right] \cdot \Delta c > 0$$

$$\frac{\partial \delta}{\partial \gamma} = \frac{q \cdot \lambda}{(1 + \gamma)^2 (1 - q)} \cdot \Delta c > 0$$

Where  $q \in (0, 1)$  is the probability that the monopolist operates with a low-cost technology,  $\lambda \in [0, 1]$  is the probability that the regulator discovers that the monopolist has low marginal costs when indeed this is the case, and  $\gamma > 0$  is a parameter that is inversely related to the 'easiness' of bribing the regulator.

Apart from the possible existence of proximity rents discussed in Becchis's chapter, there are no obvious reasons to postulate that the local dimension affects the probability  $q$ . As such, in what follows we focus on the effects that changes in the national versus local dimension of regulation may trigger on the parameters  $\lambda$  and  $\gamma$ . Concerning the effects on  $\lambda$ , the local dimension can in principle affect this probability in both directions. On the one hand, one may expect a lower  $\lambda$  when regulation takes place at a local level. Indeed, and as it has already been mentioned, this may be due to the fact that a local regulator may lack the technical skills and competencies to properly assess the firm's type. On the other hand, holding fixed the regulator's type (that is to say, his skills and moral attitudes), it is also conceivable to suppose that the local dimension of regulation may lead to an increase in  $\lambda$ . This could be the case when the physical proximity of the regulator and the firm implies that the former can more easily and frequently inspect the premises of the latter. The net effect of these two conflicting forces is likely to be negative, that is to say, the lack of skills and competencies on the side of the local regulator may easily surpass the potential benefits that physical proximity potentially engenders. The formulas above show that the marginal effect of  $\lambda$  on  $\delta$  is positive. Therefore, one may expect a less efficient and more distortionary equilibrium to emerge at the local level. In other words, there is lower benefit for a local government in delegating its monitoring and regulatory activities to an independent regulator.

How the local dimension influences the parameter  $\gamma$  appears more controversial. The physical proximity of the firm, the regulator and the politicians suggests a more frequent interaction between these agents. This can undermine the independency of the regulator.<sup>11</sup> At the same time, frequent interaction can lead to higher level of corruption (Shleifer and Vishny 1994), as it facilitates the possibility to arrange transfers (in the form of bribes) in a more efficient way. Moreover, the amount of these

transfers can be smaller than those that are necessary to bribe a regulator at the national or supranational level. As such, they may more easily pass unnoticed. These considerations suggest that at the local level the parameter  $\gamma$  can be smaller than at the national level. This in turn implies that a local regulator can more easily get captured.<sup>12</sup> However, there may be local institutions (say, consumers' groups, local media, or even political parties in the city's council) who can more easily verify rumours and concerns and bring the misbehaviour of local regulators and public servants to the public attention. The existence of these 'watch dogs' would make an attempt to lure the regulator more costly. As such, it increases the parameter  $\gamma$  and thus leads to a less distortionary regulatory outcome. In other words, public scrutiny and accountability strengthen the role of the regulator and thus ultimately benefit consumers' welfare.

In this case, the net effect of these two forces on the parameter  $\gamma$  is difficult to assess ex-ante and ultimately depends on the local institutional climate and on the level of social capital. With respect to a regulation that takes place at the national level, the negative effect (that is to say, the local dimension increases the probability of regulatory capture) is likely to dominate in regions and municipalities where the level of corruption is high and the degree of public monitoring is low. At the opposite, the positive effects of the local dimension may turn out to be stronger in contexts that are more virtuous in terms of quality of local institutions and level of political participation.<sup>13</sup>

## 5 CONCLUSIONS

We investigated how some specific features of local regulation modify the incidence of regulatory capture. We showed that some of these features, such as for instance a higher level of public monitoring, can potentially lead to an increase in the efficiency and the effectiveness of regulatory policies. However, the local dimension of regulation has also a 'dark side' that often seems to prevail. In fact, the close ties among politicians, regulators, and firms can boost corruption and exacerbate the problem of capture, and the proximity rents can bias the competitive pressure. More generally, the level of social capital and the relevant social norms appear to be the main determinants of the quality of regulatory outcomes at the local level.

Our analysis showed that the main insights and policy implications that one gets from the economic theory of regulation remain valid also at the local level. However, a proper institutional and policy design cannot disre-

gard the idiosyncratic and context-dependent characteristics of the specific situation under scrutiny. In this respect, standard economic theory can guide the ‘gross’ design of regulatory policies, whereas other methodologies (say, case studies, comparative studies, and surveys) are necessary to fine-tune the policies with the actual context.

## NOTES

1. However, and in line with the development of economic theory as a discipline, some more recent contributions consider behavioral elements such as to account for the possibility that players may be boundedly rational and display some cognitive biases (see Sunstein 2014).
2. In the baseline model, the authority holds the regulatory power without delegating it. In other words, the authority is the regulator, as the two roles coincide. We will shortly extend the model such as to account for the possibility that the authority delegates regulatory tasks to a third party.
3. All the results that we will present continue to hold even if one assumes that the objective function of the authority is given by  $W(p) = S(p) + \alpha\pi(p)$  where  $S(p)$  denotes consumers’ surplus,  $\pi(p)$  are the monopolist’s profits, and  $\alpha \in [0, 1]$  is a parameter that acknowledges the fact that the regulator may attach a higher weight to consumers’ well-being rather than to the monopolist’s profits.
4. The assumption of common knowledge of the demand curve is standard in the literature. Notice however that such an assumption is likely to be particularly strong in a local context where indeed players often lack the skills or resources to properly assess the market situation and external actors that may provide such information (say, the research departments of national authorities) are missing.
5. By the revelation principle (Myerson 1979), a policy that implements such a scheme can do no worse than all other policies.
6. In the words of Stigler (1971): ‘...as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefits.’
7. Another channel through which a firm can capture the regulator is through the so called ‘revolving doors’ mechanism, i.e., the implicit or explicit possibility that the firm will hire the regulator (say, as a consultant) once they step down from their current role. Clearly, a regulator that is interested in such a possibility may be particularly lenient toward the firm, as the hypothesis of improper costs outlined in the Chapter by F. Becchis suggests. As such, and similar to regulatory capture, the conventional wisdom about revolving doors mechanisms is that they have a negative effect on the efficiency of regulation. Contrary to such a view, Che (1995) provides instead

- a model in which revolving doors may serve the interests of the government and have beneficial effects on regulatory outcomes.
8. Stigler (1971) and Peltzman (1976) introduce and discuss other influential models of regulatory capture.
  9. Such an assumption simplifies the analysis and entails no loss of generality (see Armstrong and Sappington 2007; Dal Bó 2006).
  10. Another interesting aspect of local regulation is that differences in the levels of strictness among neighboring municipalities or regions may affect the behavior of the firms, for instance concerning the decision about where to locate their activities. As such, the design and implementation of local regulation become a tool to attract investments in the area (see Glazer 1999).
  11. Helem (2006) stresses the importance of the independence of regulatory bodies as a way to preempt their capture.
  12. See Dal Bó and Rossi (2007) for empirical evidence about the relationships between corruption, accountability and efficiency in the context of electrical utilities. Abrate et al. (2013) investigate the same relationships in the case of local monopolies providing solid waste services.
  13. See Nannicini et al. (2013) and Drago et al. (2014), for empirical evidence about the positive relationship between the level of political participation, the amount of social capital and politicians' accountability.

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