

Good bureaucracies, bad bureaucracies, and the soft budget constraint

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Abstract

Every organization, be it a firm, an NGO or a government office, needs a hierarchy to run and coordinate its activities. Hierarchies of firms and governmental agencies develop rules and routines of operation, i.e., they become bureaucracies. Bureaucracy is a synonym for inefficiency. But since there are well-run firms some bureaucracies must be efficient. It depends on the incentives in the hierarchies whether organizations are efficient or not.

Any member of a hierarchy except the boss is a subordinate of superiors, who direct her activities and influence her career, and whom she is therefore motivated to please. The controlling stakeholders of organizations can therefore impose their objectives by the incentives by subjecting all members to detailed rules, bureaucratic rules, as well as by enforcing an appropriate incentive structure. Where the objectives are fuzzy—e.g., in most governmental bureaus—bureaucratic rules must per force become more extensive.

One reason why commercial organizations have an easier task than governmental bodies is that the objective of firms is fairly clear: they are to make profits. To understand the differences between different firms, the motivation of bosses have to be considered.

Bosses benefit when profits rise and lose when they decline. The cost of a fall in profits is not linear, and is especially severe when the firm's is bankrupt, because bankruptcy leads to the loss of employment and all benefits as well as a loss of reputation. Hence managers in danger of bankruptcy (and of takeover) are likely to give precedence to profits. This happens when the firm:

1. Has a hard budget constraint (HBC). A SBC, the knowledge that the organization will always have funds when needed, removes the danger of bankruptcy.
2. Is in a competitive market.

These conclusions are not novel, but they are based on an approach that is. The implications of this study that are discussed in the paper are that, a. state-owned firms are at a disadvantage, since their budget constraint is soft. b. Firms that are competitive should be privatized. The privatization of firms that are by nature monopolistic is much less desirable. But the most important message of the model is that it provides a general framework for the analysis of all firms, state-owned as well as private ones.

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Good bureaucracies, bad bureaucracies, and the soft budget constraint

Bureaucracies are ubiquitous. We tend to use the term when we refer to governmental agencies, but in truth firms of any size are also endowed with bureaucratic hierarchies. The term is a pejorative and bureaucracies do not have a good name. But big organizations need coordination and synchronization, and the latter are performed by groups of white collar workers who are organized in a hierarchical tree and who interact according to organization-specific rules. In other words, they form a bureaucracy. Many such bureaucracies are inefficient, yet many others are relatively efficient. Members of hierarchies, even those working in firms which are considered efficient, often complain of the bureaucratic red tape to which they are subject. I wish to enquire why some bureaucracies are more efficient than others, how they manage in effect to escape the damaging epithet of a bureaucracy. The conclusions are likely to be unsurprising, but I believe that the route is worthwhile and instructive. An important by-product of the better understanding of bureaucracies is to explain why privatization was only partly effective in transforming Eastern European state-owned enterprises (SOEs) into profit-seeking firms. But the most important aspect of this route is, arguably, that it provides a uniform platform for the analysis of all types of firms, state-owned as well as private ones.

In examining what makes hierarchies more or less efficient I shall look at the internal incentives in organizations, at the information superiors have regarding the activities of their subordinates, at the environment of the organization, and at the hardness of its budget constraint. These aspects will prove to differ among organizations in general and firms in particular, and they will also prove to be those characteristics that determine how effective an organization is likely to turn out to be.

The following section describes the role of hierarchical bureaucracies . Section 2 presents a simple model that explains why threats like bankruptcy may force managements to stick to the target of the organization rather than to their own interests. Section 3 examines the role of stakeholders in the operation of organizations. The following four section look at different types of organizations: private firms (section 4), government bureaus (section 5), state-owned firm (6), and state-owned enterprises in socialist economies (7). Section 8 examines the role of privatization, and section 9 concludes.

1. Hierarchies and bureaucracies—why are they needed and what do they do?

Modern production techniques of goods and services are complex and interrelated. Consequently an organization of any size needs a hierarchy to coordinate and synchronize its activities. To draw upon Coase (1937), the costs of coordination, and especially synchronization, through the market are much higher than by internal commands, because the market is particularly poor at synchronization (Milgrom and Roberts, 1992, 104ff). Coordinating hierarchies acquire work routines (Nelson and Winter, 1982) and a corporate culture that may be more or less rigid, but they will always involve some rules of procedure. Such rules are the hallmark of bureaucracy. Those of governmental agencies may be most inflexible and be most deserving of the epithet of *red tape*, but some red tape exists in all organizations, even the most flexible ones. In other words, bureaucracy is unavoidable in any organization. The question is only why some bureaucracies are more efficient than others.

The very fact that bureaucratic coordination is a substitute for market coordination, i.e., that bureaucracies coordinate by command rather than through the market, means that they have to be structured hierarchically, with a head or a boss

who is the only member who has no superior. The superior has an important influence on the well-being of subordinate members of the hierarchy: she instructs him what to do and affects his remuneration. These two are closely related: her commands would have little weight without the power to remunerate. The remuneration is often not immediate: the hierarchy has a memory, and it is the member's long-run career prospects that are usually shaped by his superiors.

Each member of such bureaucracies has his/her (and I will use either of these pronouns interchangeably) own interests at heart, and the key question is how the organization as a whole functions in *its* own interests, assuming that such exist. I shall detail four criteria that characterize the working of organizations:

1. Who are the stakeholders that control the organization? Different stakeholders will have different aims, and if there exist stakeholders who control the organization, they will apply incentives and sanctions to the organization's management that may lead it to favor their aims.
2. Does the organization have clear and quantifiable objectives, e.g., maximization of profits or the value of the organization or firm? The objectives of organizations vary, and profits are by no means the dominant objectives of all organizations.
3. Can management wield effective incentives and sanction over its subordinates? Not all managements have effective control over their subordinates, some because different stakeholders work at cross purposes, others because of ineffectiveness, e.g., because the necessary information does not flow up.
4. Are there extreme sanctions that come into force when the organization fails to attain its objectives? Examples are the sanctions of bankruptcy,

when the firm fails, or takeover, when alternative owners believe that they can displace the incumbent management and run it better. Such threats galvanize all significant actors to do their best to improve the performance of the organization.

It is obvious that many private firms have shareholders as their ruling stakeholders (point 1), who impose profit-seeking on the CEOs they select (2), who are able to impose the same target on all departments of the firm (point 3), and who are aware of competition that may endanger their incumbency if they slip up and fail to use the resources they control to approach maximum profitability (4). But this is not the case with all private firms, and certainly not with non-private ones. As for organizations that are not firms—there the nature of these characteristics differs significantly, and as a result the aims of these organizations differ.

2. Theoretical framework

Consider the following simple hierarchy:

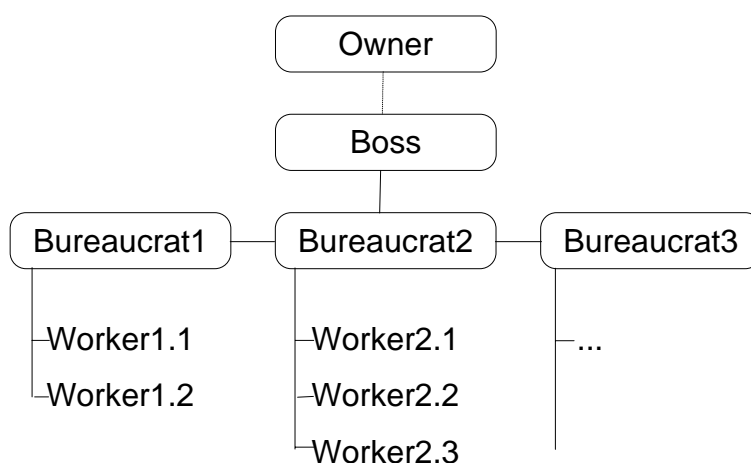


Figure 1: A simple hierarchy

The hierarchy of Figure 1 is a three-level hierarchy, composed of a boss or CEO (denoted by a superscript C), his deputy bureaucrats (superscripted by B), each in

charge of a department peopled by workers (W superscript). In addition we have the owner (superscript: O) who is entitled to the fruits of the organization, i.e., to the net cash flow created by the hierarchy.

The firm produces each period revenue, R_t in period t , and the wages of the CEO (\bar{w}^C), the n^B bureaucrats (\bar{w}^B) and the n^W workers (\bar{w}^W) are its only costs. The resulting net revenue, the firm's cash flow π , is the owner's income:

$$\pi_t(\ell^O, \ell^C) = R_t \left(\ell^W \left(\ell^B \left(\ell^C \left(\ell^O \right) \right) \right) \right) - \bar{w}_t^C - n^B \bar{w}_t^B - n^W \bar{w}_t^W,$$

where ℓ_i , $i = O, C, B, W$, is the actor's exertion (the term *actor* will be used to cover the owner, the CEO, bureaucrats and workers). In other words, it is assumed that each actor's efforts, with the exception of the CEO, depend only on her superior's exertion. The CEO's effort depends on that of the owner but also on his own initiative.

The firm is tradable on the capital market, and has a value V_0 in period 0. V_1 depends on the accumulated investment and the expected future net cash flow:

$$V_1(\pi_0 + \pi_1 | \theta) = V_0(\pi_0) + \Delta R_1(\ell^O, \ell^C) + \theta, \quad (1.1)$$

where θ is a zero-mean symmetric random variable whose probability distribution is Φ and density ϕ . In other words, both external circumstances, θ , and actions of the owner and the boss can affect the value of the firm. V_0 assumes that the effort of both owner and CEO will continue at its present level, i.e., that $\ell_1^i = \ell_0^i$, hence that $\Delta R_1 = 0$.

We come now to elements of timing in the model. There are two periods, $t = 0$, the present, and $t = 1$, the future, and the two need not be equal; we can think of a brief present and a longer future. There is no interest. The firm exists during both periods, unless it goes bankrupt at the end of 0, in which case it is dissolved, all actors' ties with it are ended, and the expected incomes are lost. In real life there is also a

possibility of take-over, which leaves the owner with the proceeds of the sale but removes the CEO, but this case is not analyzed here. Thus the actors exert themselves at 0, and receive their income at 1, provided $V \geq 0$, i.e., the firm is not bankrupted:

$$w^i = \begin{cases} \bar{w}^i, & V_1 \geq 0 \\ \underline{w}^i, & V_1 < 0 \end{cases}, \quad i = C, B, W \quad (1.2)$$

where \underline{w}^i is a low alternative income. Observe that the probability of the firm being bankrupted at $t = 1$ is $\Phi(- (V_0 + \Delta R))$. By the symmetry of θ ,

$$\Phi(- (V_0 + \Delta R)) = 1 - \Phi(V_0 + \Delta R).$$

The actors use their assets or income— V for the owner and \bar{w}^i for the other actors—for consumption:

$$c^O \leq V_1, \quad c^C \leq w^C, \quad c^B \leq w^B, \quad c^W \leq w^W. \quad (1.3)$$

The actors' utility functions are

$$U^i = v(\ell^i) + E_{\theta} [u(c^i)], \quad i = O, C, B, W, \quad (1.4)$$

where $u' > 0, v' < 0, u'' < 0, v'' < 0$.

Figure 2 illustrates $1 - \Phi(V_0 + \Delta R)$ and $\phi(V_0 + \Delta R)$, using a simplified notation of $1 - \Phi(V)$ and $\phi(V)$; the latter are clearly variables of key importance in the analysis of the main actors' decisions. $1 - \Phi(V)$, at very high values of V , converges to 1 and is roughly constant; at low values it declines sharply, ending up at 0.5 (since ϕ is symmetrically distributed) when V sinks to zero.

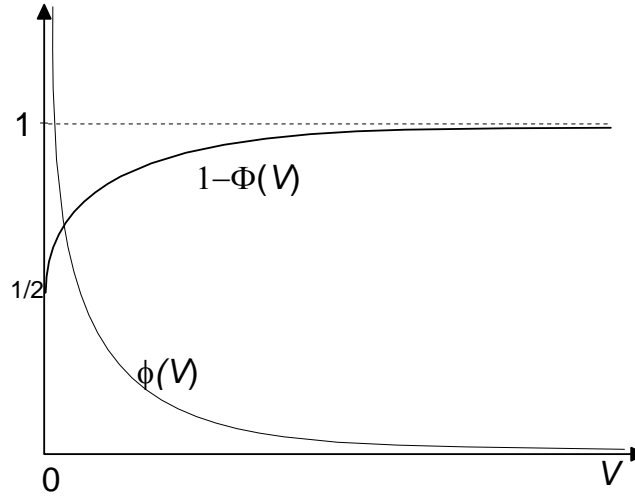


Figure 2: Probability of firm's bankruptcy as a function of its value

Only the CEO's choice of activities will be analyzed below. The maximand is equation (1.4) for the CEO, i.e.,

$$U^C = v^C(\ell^C) + E_{\theta} [u^C(c^C)], \quad (1.5)$$

subject to constraint (1.3),

$$w^C - c^C \geq 0. \quad (1.6)$$

(1.5) can therefore be written

$$U^C = v(\ell^C) + \phi(V)u(\underline{w}^C) + [1 - \phi(V)]u(\bar{w}^C). \quad (1.7)$$

The first order condition with respect to ℓ^C is:

$$\frac{\partial U^C}{\partial \ell^C} = v' - \frac{\partial \phi(V)}{\partial \ell^C} (u(\bar{w}^C) - u(\underline{w}^C)) = v' - \phi' R_{\ell^C} [u(\bar{w}^C) - u(\underline{w}^C)] = 0,$$

and

$$v'(\ell^C) = \phi'(V) R_{\ell} [u(\bar{w}^C) - u(\underline{w}^C)].$$

In other words, if R_{ℓ} is independent of V , then the CEO's input of effort will be higher the closer the danger of bankruptcy. And the greater her own effort, the more will she enforce profit-seeking on her subordinates. The following proposition claims more

than has been proven so far but will receive a fuller proof at a more advanced version of this paper.

Proposition 1: *The closer a firm is to bankruptcy, the greater the exertion of the owner and the CEO and the more consistently will the whole bureaucracy seek profits.*

So far the actors' alternative to productive exertion has been inaction, *dolce vita* or sloth. But it is clear that the results can easily be extended to alternative aims, e.g., a desire to improve the workers' pay or serve the community (when these are not seen as indirect means of improving profitability). In other words, when conditions get tough, profits take first priority. When organizations are in danger of going under, they are likely to give priority to the target that may save them. Many firms, but by far not all, permanently exist under threat of extinction. Other types of organization are rarely under similar pressures. The following sections will deal with the reasons for these differences.

3. Stakeholders

It is not always obvious who the stakeholders of an organization are. For firms it is usually fairly simple to list the groups of stakeholders: owners, employees and customers are the standard stakeholders that every firm has, but there may be others. Thus those who are affected by a firm's externalities, be they positive or negative, join the list of stakeholders. The power that the various groups can exert on the firm's activities differs, and depends on the custom and law of the environment. In particular, the owner is only one of the stakeholders of the organization, and we cannot assume that owners are always able to impose their objectives on their organization. In some countries the owners, the shareholders, have a dominant

influence, and we may then assume that they do impose profit-seeking on the firm. But this is not always the case. Consider a firm operated by a small number of owners, all of whom are also its workers. Here we can assume that it is the wellbeing of these stakeholders that drives the firm, and the firm's maximand is related to their utility, which includes consumption on the job, i.e., labor conditions and hours of operation. The limits placed in many countries on the opening hours of firms often have their roots in the interests of private shop owners.

Not all firms are privately owned. There is a wide-ranging literature that is concerned with cooperatives and labor-managed firms (LMFs), where the ruling stakeholders are both owners and workers, and mere profitability is clearly not their aim. And then there are state-owned enterprises (STEs), whose owners are ill-defined and may have environment-dependent influence and interest. They clearly deserve the special discussion that will be provided below. Another special type of firm is owned by not-for-profit organizations, whose rules of the game again depend to a very large degree on the environment in which they function, and who will not receive here the full treatment that they deserve.

Finally, there are government agencies. Their ostensible owners, the citizenry at large, are unorganized and unable to exercise any direct pressure on government bureaus. There are, however, special interest groups that are organized and that exercise strong pressures on 'their' bureaus: see the example of ministries for agriculture, in section 5 below. The bureau's workers themselves are stakeholders, who sometimes have an enormous influence on its policies. Since they are often the conduit of information on their scope of activities, their own viewpoint and interests may color the information that filters up to the bosses. When control from above is weak, they may subvert the bureau to act in their own interests. This is the case of fire

and hygiene inspectorates in Russia, who often use inspections as an instrument of pressure on business in order to obtain bribes.

4. Objectives and incentives: private firms

A brief perusal of the organizations mentioned in section 1 will show that the usual assumption, that the objective of an organization is to maximize its value or its profits, may apply only to privately owned firms. But does it always apply to every private firm, regardless of place and time? A few examples will show that this is not the case. But let us look first at the four characteristics of section 1.

1. The owners of private firms are usually aided by formal institutions that on principle permit them to put up a system of rewards that may tie the interests of the firms' managers to that of the owners. But recent events have shown that the effectiveness of these sanctions may be limited. In particular, information which the market and the owners require regarding the running of the firm, is often not supplied by the accountancy system, which allows managers to run the firm for their own benefit rather than that of the owner: see the example of Enron, below. The situation may be more complex where, as in some European countries, unions have a strong representation on the boards of firms.¹
2. Objectives: owners hold shares in private firms as a part of their assets, and as such they are expected to maintain their value by promising profitability. Thus profits must be among their desiderata. But the assumption that private firms everywhere seek solely profits need not always be correct. Often other

¹ In Germany 50 per cent of the the members of the supervisory boards of large corporations are employee representatives. The supervisory board is intended to monitor management, but this has not alswy been succesful (http://en.wikipedia.org/wiki/Supervisory_board).

stakeholders, e.g., workers, impose strong constraints on plant closures and on firing and these may mean that the adjustment of labor input is not one of the parameters that can be used to raise profits. In other cases political constraints are imposed to please customers by maintaining low output prices, e.g., electricity in Kirschner's Argentina (Economist, 2007).

3. Managements of private firms are usually able to provide their bureaucratic subordinates with incentives that lead them to act in the firm's interests; but this too does not always work satisfactorily. It would seem that when the organization's target is profits, then the induced targets to sub-organizations and subordinate bureaucrats should be profits. It will be seen below that the situation is more complex: a few examples are provided below.
4. The extreme sanctions of bankruptcy and takeover force many firms to put a very high priority on profit-seeking. Yet, assuming that property rights are clear cut, this works for sure only where there is competition, and where the budget constraint is hard. The problems that arise where property rights are not assured are discussed in section 8.

Consider the first characteristic, management's incentives. Take first the case of the late Enron, which collapsed in 2001. It is clear that the object of the firm's managers was to maximize their own wealth rather than the value of Enron, and for that they had to raise its current share price by divorcing it from the expected value of future cash flow. This was done by parking assets and liabilities in offshore entities which were quite opaque to the capital market and to the firm's shareholders. This permitted the managers to hide losses and thus to maintain and raise share prices, to which their personal incomes were tied. The firm collapsed when its executives, who were aware of the firm's true state, started to unload their shares, thereby starting the

decline in its share price which eventually led to its bankruptcy

(http://en.wikipedia.org/wiki/Enron_Corporation#Accounting_scandal_of_2001).

What is clear from this example is that a firm's managers, i.e., the CEO and other bureaucrats, steer it, and that their strategies depend on their own incentives. Thus the molding of the incentive structure of the management is the key to the firm's behavior. But so does the information possessed by the owners and the market. Accountancy standards that enable managements to provide false profitability data to owners enable the managers to deviate from the latter's objectives. At other times it may enable dominant owners, who do control the management, to divert resources to their own pockets, as happened in the case of Parmalat (<http://en.wikipedia.org/wiki/Parmalat>). In other words, these examples show the importance of the information that the stakeholders in general and the owners in particular have on the firm's conditions and policies.

A glimpse at the third characteristic, incentives of lower rungs, demonstrates a basic lacuna. The very fact that lower tiers can be judged by their own profitability may be thought to assure a basic congruence with the aims of a profit-seeking firm. Take however a trader as an example. On the face of it, he is rewarded by the profits that he brings to the firm. Yet risk is the great Achilles heel: a big firm provides the trader with the ability to place bets that he would never be able to place on his own. If the bet is unsuccessful, his losses are strictly limited, but those of the firm can lead to its demise. This is the origin of several cases of banks going under (cf. the case of Nick Leason at Barings Bank, http://en.wikipedia.org/wiki/Barings_Bank) or suffering huge losses that place their continued existence in question. It can only be solved by a highly sophisticated control system that evolves continuously with changing nature of the articles of debt. In other words, the ostensible congruence

between the aims of the firm and those of the subordinate is misleading: the latter can impose risky bets on the firm from whose risks he is essentially immune.

5. Government bureaus

Government bureaus stand at a diametrically opposite pole from private firms, and it should be no surprise that the bureau itself is not judged by its profitability. We shall use the criteria of section 1 to discuss the interests of governmental bureaus:

1. Stakeholders: the effective stakeholders of bureaus are not the owners, the 'people', but often the bureau's clientele. Take for instance a ministry of agriculture. Its owners, the state or the population at large, are too dispersed and powerless to affect its operation. Its effective stakeholders are the farming population, and those parts among it that are well-organized strongly influence its operations. Its workers usually see their role as servants of the agricultural sector. The treatment of the BSE scare in the UK can serve as an example. When suspicions arose that a new disease, that may have been transferred to cows from sheep via feedstock, may have been killing humans, the information was suppressed so as not to upset the agricultural sector (and, naturally, the treasury which would have had to compensate it). In other words, the ministry of agriculture did not see itself the servant of the population at large but as the keepers of the interests of the cattle raising community (Economist 1998a, 1998b, 2000; Sheard, Sally and Donaldson, 2006). And the bureaucrats themselves may wish to control and impose their own agenda, and even baser interests that may lead to the sale of positions, as was customary under the Indian *License Raj* in its heyday.
2. Objective function: even when the objectives of a bureau are clear, e.g., a ministry for health that may see its mission in the reduction of morbidity, simple indices

that may quantify the quality of its operation cannot easily be found, and there is usually no single objective by which it can be judged. Take the debate about the British NHS in recent years regarding the targets that should guide the improvements in its services: when complaints over long waiting time for operations were loudest, the reduction of these queues was put as the main criterion of evaluation. This led to priority to easier operations and an even longer wait for the more serious ones, a symptom which is familiar from the experience of Soviet planning. In other words, where a reliable pricing system that provides relevant relative prices at each point in place and time does not exist, a 'synthetic' criterion, such as profits, cannot be used. Instead a vector of targets and priorities should be used, whose weights should be—but are not—adjusted over space, i.e., regions, and time (Economist, 2002). An internal competitive regime for the supply of alternative services has been suggested but not yet tried out.

3. Effective incentives to lower levels: such incentives should stem from the objectives of the organization at large, and once the superior level does not have clear objectives, lower levels' incentives are hard to specify. But when the organization receives a target that is not profits, the induced targets of sub-units may differ considerably from those of the organization at large. This makes the fashioning of the incentive system for lower levels of the hierarchy more complex. More about this below. Furthermore, these incentives are usually highly circumscribed by both the need to keep governmental resources from being taken over by bureaucrats and by strong trades unions (strength that has its roots in the bureaus' monopolistic situation) that make it very difficult to sanction civil servants. In particular, tenure often protects them from dismissal. How do governments see to it that bureaucrats serve the public and not their own interests?

Corruption and state take-over are common in many bureaucracies, not only governmental ones. Similar constraints restrict the bureau's choice of rewards to the SOEs under its control: see section 6 below.

4. Government bureaus never die, never pass away. It is therefore very difficult to force bureaucracies to adjust themselves to changing circumstances. This is a basic cause of their frequent inefficiency.

To sum up: governmental bureaucracies are doomed to be inefficient due to their inherent monopolistic position, and their next to eternal longevity. It is extremely difficult to let bureaus compete, because there is no objective measure of comparison between the competitors: try, for instance cost—but then the quality of the service, which by its nature is not easy to compare, will suffer. Only their superiors can monitor them effectively, provided the latter have not too much on their agenda. This is an important argument for small government, i.e., a government whose operations can be monitored effectively by superiors aided by public opinion.

6. Objectives and incentives: state-owned firms

The environment in which SOEs function has an essential influence on their nature. Some are highly efficient: Renault, government-owned for 50 years since WW2, has been one of the successful car producers in Europe, yet its partial privatization that started in 1995, indicates the realization that private ownership would enable it to become more agile and cost conscious (<http://en.wikipedia.org/wiki/Renault>). An opposite example, also French, is Crédit Lyonnais, which nearly went under when it became a state-owned bank (http://en.wikipedia.org/wiki/Crédit_Lyonnais).

1. There are four groups of stakeholders that usually have real influence over the policies of SOEs: politicians, the government bureaus that control the SOE, their customers and their workers, possibly represented their unions. The putative

owners, the populace at large, have no way of exercising their rights over these firms. The aims of the workers are quite plain: high incomes and good working conditions.^{2,3} The aims of the politicians are less clear: profitability may be one of them, but there are others too, e.g., 'jobs for the boys' or obtaining the political support of a set of customers by setting low prices for the firm's output. Both latter aims clearly run counter to profitability. The balance between the high profits and low prices will change over time, depending on the real situation, e.g., on the budgetary situation, or on political fashion. Often governments privatize SOEs when they decide that profitability should obtain a higher weight.

2. It may seem that an SOE must seek profits, and one would have to grant that this must be one of its aims. But very frequently their controlling stakeholders have quite different objects in view, and these, as argued in 1 above, are imposed on the enterprise, and managers know that promotion depends on the fulfillment of the desiderata of the controlling stakeholders, e.g., the government bureau.
3. The effectiveness of internal incentives in SOEs depends on those of the managers. It is easier to monitor subordinates and assess their performance when the aims of the SOE are profits. Internal controls may be less effective when different aims are imposed on the firm.
4. An SOE may sometimes die, but death is in the hands of its political masters, and is determined on political grounds which may at times include economic considerations. Sometimes the government decides to impose profit-seeking on its SOEs, e.g., by threatening to privatize. In these cases—and there have been many such instances in recent times—British Steel (Aylen, 1988) in the UK, Poland in

² Workers, especially workers in non-socialist SOEs, are usually represented by unions, and the latter may have their own interests. I shall disregard them in this paper.

transition (Pinto et al., 1993, Pinto, 1995)—if the management believes the threat, the enterprise undergoes restructuring and rapidly sheds costs even before privatization.

Thus SOEs, even in western market economies, are frequently judged on criteria that may, but need not, include profitability. As a result an SOE is disadvantaged compared to private firms. This does not mean that it must always be inefficient, but that the likelihood of being efficient is lower than for private firms.

7. The SOE in the socialist state

The essential characteristic which distinguishes between state-owned firms in a mixed economy and a SOE in a socialist economy is that the option of turning the latter into an alternative organizational form was unavailable: all firms—the minute exceptions to this rule need not concern us here—belonged to the state and were coordinated by it. No serious attempt was, or could be made to enlist a decentralized market in this enormous task, and it became per force the main task of the planning bureaucracy.

1. The putative owners, the people, had no power to influence the activities of enterprises. The monopoly over organized power was the party's, and the authority over all resources in the state was in the hands of its leading cadres. Their first task was to run the economy, and in this they did not wish to use a socialist market mechanism, supposing one were feasible,⁴ and resorted instead to bureaucratic allocation (see 2 below). Consider a Stalin, the *de facto* owner of the Soviet economy. He may wish to maximize a vector of outputs of the economy.

Theoretically there exists a price vector that, when used to maximize profits by the productive units could lead to the desired maximum. This price vector is however

³ Where the jobs become highly cushy, they become heritable, i.e., workers become part owners of the firm.

unknown and dynamic, given ever-changing circumstances. As a result the maximand he imposes on the economic units cannot be profits. The alternative is to specify targets for each of the members of this vector, i.e., specifying for each branch of industry a sales target. The so-called planning hierarchy was entrusted with the preparation of these targets, and *ipso facto* becomes vulnerable to any mishap that can be blamed on poor coordination.

2. The objectives of the firm under the socialist regime are inherent in the aims of its principal stakeholders, the party-government complex or their agents, the planning hierarchy. Since the latter are responsible for the smooth running of the economy, their main aim is to 'produce' a feasible, i.e., balanced, production plan, a plan that takes account of the myriads of interrelations between the sectors of the economy, because in its absence economic activity will grind to a stop and they may be blamed and punished. This leads to output based incentives of various kinds, on a low (and not necessarily negative⁵) weight to costs, and to the principal ills of the socialist system.
3. The same type of incentives, i.e., rewards tied to output targets, was extended to enterprises and lower rungs of the producing hierarchy. The stress on quantities—which goes back to the need to fulfill the interrelated production plan, and is easier to monitor—rather than of quality, with far lower weight on costs than on outputs, led to poor quality and high costs. The final results, the collapse of the socialist system, can be traced back to these problems.
4. Firms in market economies can die when nobody would lend them the funds they need to continue in operation. This is not a decision that concerns the central

⁴ And arguably it would not work: see Keren (1993).

⁵ Because high input prices may, by raising the official price of output, help plan-fulfillment (Zielinski, 1973).

authorities these economies, unless, of course, the harmful externalities of the firm's demise are considered to be too costly, as, for instance, in the recent case of Bear Stearns (Economist, 2008a, 2008b). In a socialist economy the decision to close down an enterprise is political, and has to be taken at the center. And the latter found it next to impossible to close down enterprises. First, the output of the enterprise was needed by its customers—this is why it was put up in the first place. Next, the hierarchy finds it difficult to wind down an enterprise which was founded by itself, since this would be a costly admission of error. And last, since enterprises were often the main employer in their locality, looming unemployment made closure a politically difficult decision. As a result enterprises had no fear of demise and no threatening competitors, because producers of substitutes were not competing with but cooperating with it in the satisfaction of their customers' needs. The enterprise did not have to innovate to bolster its market position. The benefits of innovation were slight and doubtful, while their costs—the riskiness of new production methods, the danger of delays in supplying their quota—were higher than in a market economy.

To sum up: the bureaucratic make-up of the socialist hierarchy is what doomed the system to low quality and high cost production and, even more important, to extreme technological conservatism. For that the fourth characteristic is responsible (see above).

8. Privatization—when and why is it relevant

If the centralization of ownership and control over the economy is the source of the problems of the socialist economy, then privatization should be the natural answer to these ills. Privatization forms the natural basis for decentralization and a market economy. Yet to force firms to give paramount priority to profitability, i.e., to adopt a

completely novel manner of operation, entirely new routines and a radical change in the internal pecking order, to give priority to customers' tastes rather than to superiors' whims, privatization is only a catalyst. It is neither a sufficient condition for restructuring nor a necessary one, but one that makes it easier to adjust to the market environment.

1. Stakeholders, insiders and outsiders. In transition, the transfer of ownership to insiders may seem the most equitable solution: it returns the people's property to the people, albeit unequally, because you become a part-owner of the enterprise in which you happened to work, and firms differ greatly in their profitability. But then firms may find it difficult to shed excess labor, even when it is in large surplus, a common condition in ex-socialist economies which tended to hoard resources in general and labor in particular. And outsiders may be oligarchs who are really out to build empires and amass a fortune and do not give precedence to the husbandry of the resources they already command.
2. Managers' incentives: evidence of a radical shift of managers' focus to cost cutting even before privatization in the west and even in transition economies was presented in case 4 of section 6: it was sufficient for managers to be convinced that the firm will be run as a profit seeking organization to start reforming their firm (Poland: Pinto et al., 1993, Pinto, 1995). This can be seen as managers' signals that they are fit to serve as managers under the new regime, a strategy that may allow them to prolong their incumbency. This shows that what is important is not the fact of privatization, but the realization that the criteria for evaluating managers have changed. But this did not happen everywhere. Where it was clear to the staff that the continued existence of their firm is not in danger, changes

were minimal. Much therefore depends on the realization that the firm may go under if it is not transformed.

3. The necessary changes in internal incentives and structure for a firm that is undergoing real transformation are quite radical, and will be undertaken only if owners and managers clarify to the staff that they are serious in their intent of radical change. Where property rights are insecure and owners are interested in gobbling up additional enterprises and in increasing their economic empire rather than in raising the profitability of what they have, chances are that little will change.
4. The soft budget constraint. It was not easy to wean enterprises, publicly or privately owned, from the life support of the state. The old paternalistic ties to the ministries and to local government were often maintained, and with them the channel that kept them alive by keeping the budget constraint soft as well as shielding them from competition. In many ways mass privatization was even worse: here a new bureaucracy was formed that institutionalized that could keep alive firms that had no chance of independent existence. But there are other actors that had an influence on the progress of transformation. In many cases firms were protected from competition by the mafia. In all these cases they were isolated from the dangers of a competitive environment. They could of course become profit seekers, but they were not forced to. Many did not.

Clearly, privatization should not be the first step: a privatized monopoly can often capture the bureaucracy to shield it against competition. Firms should be privatized only when their environment has become competitive and there is no danger of governmental bureaus continuing to support it.

Failures of privatization were not confined to ex-socialist economies. Consider rail privatization in the UK. Here the company that was to take care of the infrastructure of the rail system, Railtrack, was the only link in the privatization schema that remained a monopoly.^{6,7} It turned out to be the weak link in the industry, and was in effect renationalized in 2001 after several crashes which were blamed on it. The case of Telmex in Mexico presents a similar lesson (<http://en.wikipedia.org/wiki/Telmex>, World Bank, nd; Arbelaez, 1998). Clearly, an uncompetitive firm, which cannot be allowed to fail, is not likely to function better as a private firm than as a state-owned one.

9. Conclusions

The crucial difference between a model that puts the incentives of the organization's staff at the forefront, rather than one that regards the organization as a uniform body, a model that tries to gaze into the black box that is the firm, is the prominent position that this bestows on the threat to the incumbency of the organization's management. Let us narrow our perspective and think only of firms: the firm as such, if we can look at it as a 'person', has no alternative aims than profitability. But this is not the case with the people who make decisions in its name: they surely do have their own interests, and the harmonization of these with those of the firm's owners is not a simple matter that we may assume to have been solved once and for all. What has been shown above is that only a threat to managers' incumbency through the operation of a competitive market can assure their giving precedence to the firm's interests, those assumed by economists. In other words, where the budget constraint is soft,

⁶ See Murphy (p. 2), which illustrates clearly that Railtrack is a bottleneck on which all other privatized rail companies are dependent.

where there is no competition, where the incumbency of management is protected against takeover, managers are granted license to look after their own interests. And these often conflict with those attributed to the firm. Where the incumbency is threatened by weak property rights, owners will impose priority to guarding their property against predators—and possibly also use their property to gain control over additional assets, and not to transforming their existing properties.

This look at firms' behavior through the interests of their staffs explains why privatization did not always produce the advantages expected of it. In Russia during transition, especially during the early 1990s, many empirical studies showed that privatized firms were not necessarily more efficient, more advanced on their way to the market than unprivatized ones. The reason was simple: property right were not assured, the flow of funds to the well connected—and most owners of privatized firms were well-connected—continued, regardless of formal ownership, and protection from competition was provided, if not by the central or regional government then by the mafia.

Let me end with a theoretical point. The advantage of the present approach is that all firms, state-owned as well as private ones, become special cases of a more general theory of the firm. Competitive firms in market economies can be assumed as up to now, to be profit maximizers. But the same cannot be said of SOEs: the motives of the latter, especially those in socialist environments, can only be understood if we manage to pierce open the black box that has been hiding them.

⁷ Not everybody believes that this company was responsible for underinvestment in rail infrastructure, and the regulator too has been fingered (Murphy, nd; http://en.wikipedia.org/wiki/Privatisation_of_British_Rail).

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