TACKLING BUREAUCRATIC INEFFICIENCY THROUGH DIRECT ECONOMIC INCENTIVES

1. INTRODUCTION

All governments face the challenge of maintaining an honest and diligent bureaucracy which genuinely serves the needs of the society. Unlike the private-sector where players have to supply quality goods and services cost-effectively and profitably in order to survive stiff competition, the stakes are lower for public-sector agencies. As a result, complacency creeps into these agencies and their inefficiency costs the whole society. The bureaucrats take undue advantage of their job-security and don’t work optimally. Weeding out corruption and poor-performance from bureaucracies has been the government’s goal since long.

An organisational designer for bureaucratic agencies has the task of coming up with an incentive-system that motivates officials to carry out their duties conscientiously. Conventionally, the two methods for regulation of bureaucratic behaviour have been the rule-bound system and the system based on professionalism. The former specifies clear standards of conduct and leaves little to the individual judgement of officials. While this system solves the information-processing issue for the higher officials who are responsible for the apt functioning of the agency, it prevents officials from responding sensitively in unique or idiosyncratic situations. The latter relies on official’s professionalism to solve motivational issues. The bureaucrats are trained in technical competence and are infused with a sense of devotion towards their duty. There are no rigid agency rules as in bureaucracy; there is often uncertainty about best behaviour. The main aim is to exhort officials to perform well and further the goals of the agency. However, if professional norms have not been effective, this system can lead to laziness, inaccuracy and corruption.

1.1 A SYSTEM WHERE ECONOMIC INCENTIVES ARE DIRECTLY TIED TO BUREAUCRATIC OUTPUT

The conventional systems (like those mentioned above) don’t consider the possibility of relying on direct financial incentives to induce good performance. The economic incentives in both are indirect. Professionally trained officials get promotions or salary increments when they maintain a good track-record over a period of time. Those subject to a rule-bound system are offered similar rewards on good performance but are also fired, transferred to undesirable jobs and denied perks on flouting the set codes of conduct. However, here the incentives are subject to randomness. A bureaucrat’s honesty and efficiency may not be observable by superiors and he may not receive timely rewards for his good work. Hence, **economic rewards can be directly tied with bureaucratic output.** The current commitment of a fixed pay can be changed and the reforms introduced can be compatible with a civil service system which attempts to isolate officials from political pressures.

This paper attempts to take a look at different incentive-plans that can be incorporated into the bureaucratic system depending on the nature of services that different agencies render. Section 2 proposes a scheme where incentive payments are made to officials who succeed in accomplishing specific tasks. The scheme is illustrated with a simple model. This plan applies only when the superiors are capable of measuring the output of the officials. In cases
where this is not possible, we need to make use of consumers’ information regarding the quality of output they receive. Here, there are two cases—first is when the intentions of the consumer or client match the goals of the bureaucratic agency and the second is when the clients may be biased and have goals which differ from agencies’ objectives. The first case is dealt in detail in Section 3. Section 4 shows how provisions for appeals, lawsuits and overlapping jurisdictions can handle the case with biased clients.

While advocates of bureaucratic reforms through economic incentives are optimistic about its effectiveness, its pitfalls can’t be ignored. These market-like alternatives of bureaucratic regulation can work only if they are compatible with the officials’ knowledge and information-processing capabilities. This means that the bureaucrats must have a basic understanding of the link between their own choices and the outcomes which determine their rewards. The weak point of every plan has been pointed out in their respective sections and possible solutions have been offered. It is important not to overlook these cautionary notes and try to improvise the economic-incentive system further.

2. THE SIMPLE CASE when BUREAUCRATIC OUTPUT is MEASURABLE by SUPERIORS

Let us assume that the superiors can measure the output produced by officials and that the bureaucratic production function is well-defined. The agency heads can then reward the low-level bureaucrats who produce high-quality output. Given that there’s little uncertainty between effort-put-in by the officials and their resultant performance, they’ll respond positively to an incentive pay scheme to get higher average returns.

To illustrate this, let us suppose that the officials have been assigned the duty of inspecting the purity of milk. Assume further that the milk inspected can be either pure or impure (contaminated). Both correct approvals and correct rejections can be discovered by the superior ex post.

Let:

\[ x \rightarrow \text{number of batches of milk inspected each day} \]
\[ w \rightarrow \text{the fixed number of minutes in an official’s working day} \]
\[ t \rightarrow \text{the number of minutes actually spent by an official inspecting each batch} \]
\[ f(t) \rightarrow \text{proportion of correct decisions made as a function of } t \].

Greater the value of \( t \), higher is the value of \( f(t) \).

\[ r \rightarrow \text{be the worth of every correct decision.} \]

\[ P(x,f(t)) \rightarrow \text{payment made to an official} \]

Then, the superior’s objective function can be defined as:

\[ Q = r \cdot f(t) \cdot x - P(x,f(t)) \]  \hspace{1cm} (1)

Laziness on part of the official will cost the superior as that will reduce the number of batches inspected i.e. \( x \). But at the same time, excessive speed can increase errors and since every correct decision’s worth is \( r \) more than every incorrect decision, thus both Type I (rejection of pure sample) and Type II (acceptance of impure sample) errors are equally costly. Hence, we need an incentive payment scheme which can eliminate both laziness and inaccuracy. To design such a scheme, the superior would need to know the official’s objective function.
Assume that our risk-neutral official has an objective function defined over money income and effort where the value of increased income is positive and that of increased effort is negative. The official values any free time on the job at \( k \) per minute (where \( k \) is the wage per minute on some other occupation). If \( C \) is the payment earned for every correct decision and \( y^* \) is fixed income per day, then:

\[
\text{Total Income, } Y = C[f(t) \cdot x] + k(w-tx) + y^* \tag{2}
\]

\( Y \) must be greater than or equal to \( kw \) (opportunity level of wage income) or else the individual won’t work for the agency.

Clearly, an official can add value to his income by lazing around (i.e. by decreasing the no. of batches inspected) or by trying to process many batches per day without caring about accuracy to benefit from the high volume. Both these types of bureaucratic misbehaviour could be tackled in the following manner.

The aim of the superior is to give the agent an incentive to work hard by making income rise with rise in work-load up to the maximum possible level of \( x^* = w/t \). Differentiating the official’s full income \( Y \) w.r.t. work-load \( x \) and determining the value of \( C \) for which the obtained expression is non-negative, we get:

\[
Cf(t) > kt \tag{3}
\]

Which means that the reward for processing an additional batch \( Cf(t) \), must be at least as great as the value of foregone leisure \( kt \). This eliminates laziness and now leaves only inaccuracy to take care of. Given some reward \( C \) satisfying (2), the official has to decide how quickly to work by maximising \( Y \) w.r.t. \( t \). The agent now trades off speed against accuracy in exactly the same way as the superior desires. Thus in maximising \( Y \), his choice also maximises \( Q \). This happens when:

\[
f'(t) = f(t)/t \tag{4}
\]

i.e. the change in accuracy for a change in time spent per batch equals average accuracy. Let \( t^* \) be the value of \( t \) satisfying (4). Then \( C^* \) is also determined by substituting this into (2). Finally it can be shown that for optimization, \( y^* \) has to be zero.

2.1 DRAWBACKS OF THE INCENTIVE MODEL

Though this policy looks lucrative, there are some pitfalls too. The most evident of all is the superior’s lack of adequate information. To set the optimal \( C^* \) the superior must know the relationship between time spent per inspection (\( t \)) and the accuracy of the process (\( f(t) \)). He also needs to know official’s opportunity wage (\( k \)). Thus, since all the knowledge that the official possesses has to be available with the superior, he can simply choose to give him a fixed wage and order him to spend \( t^* \) per batch and process \( x^* = w/t^* \) batches per day. This rule-bound system; however; doesn’t give the officials the incentive to be accurate. While they may spend \( t^* \) minutes on each batch arbitrarily to process \( x^* \) batches, they won’t judge the purity sincerely.

Besides, the superior may be unable to measure the official’s conscientiousness perfectly as while verifying the inspections ex post; some correct choices can appear to be mistakes while some mistakes may appear correct. For example, some people can get sick even when they consume pure milk while
not all those who consume contaminated milk will necessarily fall ill. This causes problems in measuring the bureaucratic output accurately.

Also, in some cases the link between effort and performance may not be understood well. For example, we can’t be sure if the crime levels in an area have dropped down because of stringent police patrolling. Here, risk-sharing needs to be taken into consideration where the officials; despite output based incentive-provisions; might be reluctant to put in extra effort because of the uncertainty associated with the resultant output. Then, the superior might as well resort to the traditional fixed-payment scheme which again leaves no incentive to work hard. In such situations, the incentive-payment-scheme should promise an expected income high enough to compensate for the uncertainty involved.

3. WELL-INFORMED, UNBIASED CLIENTS

Generally, superiors cannot observe bureaucratic output without incurring high costs. This defeats the goal of cost-effectiveness. However, clients sometimes have good knowledge of the performance of officials and possess the ability to measure the quality and quantity of output. Also, the clients may share the goals of the superior. If this is true, then it may be possible to do away with pure bureaucracy and rely on contracted private firms to provide public benefits. And, client-based-behaviour could be used to assure high level of services in the following ways.

3. 1 VOUCHERS AND PROXY-SHOPPING

Vouchers and proxy-shopping methods are realistic alternatives when a public need can be efficiently supplied by small firms in a simulated competitive market with no sources of monopoly power or economies of scale. The state can issue voucher tickets to eligible beneficiaries. The government can pay a fixed share of their total spending up to some maximum. Then, the beneficiaries will have an incentive to shop for inexpensive and high-quality services to gain optimally from their vouchers. The government will be able to keep track of their consumption patterns and learn about the efficiency-levels of the different firms. But, subsidized, needy clients may have no realistic choices while those consumers who pay on their own are well informed and have a wide range of choices. The challenge for the public-officials lies in using the choices of the paying customers to assure high-quality to the needy. This can be done through proxy-shopping where the private firms supply services to subsidized clients but don’t receive payment from the public-treasury unless they attract a substantial number of non-subsidized customers as well. Proxy-shopping is feasible only when: a) Paying customers are competent to evaluate the quality and have the same preferences as those of the subsidized clients, b) They don’t mind consuming services along with the subsidized clients, c) The system ensures that the suppliers don’t discriminate against subsidized clients, d) A fairly competitive market structure exists. This system introduces economic incentives not by removing public agencies but by doing away with them and using competitive private markets instead.

3. 2 COMPLAINTS

Some services are bound to have elements of natural monopoly where the voucher and proxy-shopping plans are not workable to ensure efficiency. For example: Public road maintenance, public
water or electricity supply, garbage collection etc. These services have to be centralised or else everyone would try to free-ride the purchases of others. The government can then put up an effective complaint system to which it is responsive. Citizens can report when the potholes on the roads of their locality are not repaired. Small rewards to those who make relevant complaints or compliments can act as an incentive for the citizens who then can effectively help the superiors monitor the bureaucratic output. But superiors must be cautious of frivolous criticisms and wait till several complaints accumulate before penalizing the civil servants involved.

4. INFORMED but BIASED CLIENTS

In many situations, the compatibility between the goals of the clients and the superior may not exist. Take the instance where a client approaches a bureaucrat for getting approval-license for constructing a commercial structure on a piece of land. A disappointed applicant’s claim of having been wronged by an official isn’t entirely reliable as his application might have been rightly turned down. The agency’s goal is to issue licenses for justifiable projects only. Here, our client is biased and only aims at obtaining a license. For this, there are provisions for rejected clients to reapply.

4.1 APPEALS and LAWSUITS

The people with complaints about the decisions of low-level bureaucrats can appeal to superiors or file lawsuits with administrative judges. An incentive pay system can reward or punish the concerned bureaucrats based on the outcomes of such appeals. However, care must be taken to avert the scheme from turning counter-productive where officials; out of fear; end up giving licenses to everyone. Such corner solutions where officials reject or accept all applications shouldn’t become the officials’ income-maximising points. For this, officials should be paid $ for every rejected applicant who’s also rejected on appeal and penalized m for each applicant who wins his/her appeal. The penalty and reward must be high enough to prevent; respectively; everyone’s rejection or acceptance.

While these proposals have merit, they can be costly too. The appeals and lawsuits require the appellants to bear legal costs. The state can offer them with publicly financed insurance provided their complaints turn out to be correct. Only this will make genuine appellants eager to get inefficient or corrupt bureaucrats punished. However, the state will have to bear the heavy expenses.

Moreover, the system requires relatively poorly informed officials (higher-level bureaucrats and judges) to evaluate claims brought by a biased set of clients whose personal goals clearly don’t match the agency’s broader objectives. Thus, other methods need to be looked into.

4. 2 OVERLAPPING JURISDICTIONS to CHECK CORRUPTION
Instead of giving a clearly defined monopoly control to each official over an administrative area of work, overlapping jurisdictions could be given where the client who is not well-served or fairly treated by one official can go to another one for getting the same service. This plan works well for agencies charged with dispensing licenses, subsidies or in-kind transfers. If applicants have a chance of obtaining bribe-free benefit from an honest official, then they would surely not comply with a corruptible bureaucrat’s bribery demands and take the risk of getting involved in an illegal act. Thus, corrupt incentives would get checked as the honesty of some officials would breed legality in others. For the system to work, the officials shouldn’t be able to differentiate between a first-time and a second time applicant. The superior would have that knowledge though. Overlapping jurisdictions can make some officials lazy too since he will know that there are others to take care of the job if he chooses to go through only a few of all applications. The clients; instead of waiting; would then switch over to another official. That way, the most efficient of all agents would end up receiving all clients. This can be naturally prevented when the bureaucrat’s pay is negatively tied to the number of applications that are turned down but subsequently approved and positively to the number of applications that are rejected the second time too. No extra payment should be associated with the first-time applications that are approved.

The feasibility of the idea could be checked by estimating the cost of multiple applications versus the cost of both an appeal and that of a conventional top-down monitoring. Also, any kind of collusive behaviour on part of the officials must be strictly checked.

CONCLUSIONS

Bureaucratic conduct can be regulated through feasible and effective incentive payments where the rewards are tied directly to the desired quality and quantity of output. Though the uncertainties associated with the links between effort and performance of officials and superior’s inability to accurately measure a bureaucrat’s conscientiousness may undermine the power of these incentive schemes, they should still given a thought over the general methods of in-breeding professionalism and of a rule-bound system. These conventional tactics have not; over the years; brought about any remarkable reforms in the bureaucratic system. The dearth of moral scruples spells risks in these systems based on trust and professionalism. The goals of the officials are most often different from those of the public agencies and hence it is wiser to devise effective systems of control keeping this fact in mind. The linking-up of economic incentives to performance of officials can bring about market-like efficiency and competence. The existing loopholes in the incentive system; however; need to be addressed through creative improvisations. And then, with time, it would be possible to tackle bureaucratic inefficiency objectively and achieve another triumph of economic rationality over analytical weaknesses of the fields of political science and public administration.
REFERENCES


