PERFORMANCE MEASUREMENT IN THE PUBLIC SECTOR: IN THEORY AND PRACTICE

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by

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This thesis examines attempts to improve the efficiency of local authority bureaucracies during the 1980's. A number of significant policy initiatives such as the establishment of the Audit Commission, the pressure for local authorities to implement systems of performance measurement and the introduction of performance related pay schemes reflect this quest for improved value for money.

The thesis reviews existing economic theories of bureaucracy which show how inefficiency arises in the public sector. Two major hypotheses within this literature are identified; bureaus are inefficient because it is in the interests of bureaucrats either to produce too much output (allocative inefficiency) and/or to produce output at above minimum cost (X-inefficiency). The policy prescriptions arising from this theoretical framework suggest that strategies to reduce inefficiency must aim to change bureaucratic behaviour. One strategy seeks to induce bureaucrats to produce efficiently, whilst the other seeks to provide sponsors with the necessary information on costs to enable them to force bureaucrats to produce efficiently.

Performance related pay schemes, which aim to change bureaucratic behaviour, are concerned with eliminating labour X-inefficiency. Our research suggests that the diversity of current schemes reflects a lack of consensus over the definition of indicators of employee performance. The general result of the introduction of performance related pay has been increased salaries for senior officers.

Our assessment of the work of the Audit Commission in the area of value for money audits and our empirical research on the impact of performance measurement in local authorities indicates that a wealth of information has been generated in the form of performance indicators (PIs). However, the use of this information as a control device is limited as these indicators are clearly biased towards measuring X-inefficiency as distinct from allocative efficiency.
# TABLE OF CONTENTS

**Introduction**  
1

**CHAPTER 1  ECONOMIC EFFICIENCY**  

1.1 Introduction  
6

1.2 Allocative efficiency  
7

1.3 X-efficiency  
14

1.3.1 The causes of X-inefficiency  
16

1.3.2 The persistence of X-inefficiency  
18

1.3.3 Eliminating X-inefficiency  
20

1.4 Public sector efficiency  
23

1.4.1 Allocative efficiency in the public sector  
23

1.4.2 X-inefficiency in the public sector  
25

**CHAPTER 2  ECONOMIC THEORIES OF BUREAUCRACY**  

2.1 Introduction  
28

2.2 Bureaus are too large  
30

2.2.1 Are bureaucrats free to choose ?  
36

2.3 Bureaucrats and on-the-job leisure  
43

2.4 Cutting bureaus down to size  
48

2.4.1 Injecting competition into bureaucratic supply  
50

2.5 Conclusion  
55

**CHAPTER 3  THE THEORY OF PERFORMANCE MEASUREMENT**  

3.1 Introduction  
57

3.2 A plethora of Es  
58

3.3 Measuring these Es  
63

3.4 The work of the Audit Commission  
69

3.4.1 The impact of the Commission on Authority spending  
74

3.5 Conclusion  
79
# CHAPTER 4  THE PRACTICE OF PERFORMANCE MEASUREMENT IN LOCAL GOVERNMENT

4.1 The survey methodology 81
4.1.1 The structure of the questionnaire 84
4.2 Analysis of questionnaire responses 86
4.3 Summary and conclusions 125
4.3.1 How well are performance indicators performing ? 136
4.4 Hypothesis testing 141
4.4.1 The impact of size and political composition 153
Appendix A: Performance measurement in local government 155
Questionnaire
Appendix B: Performance indicators in local government 160
Initial Survey

# CHAPTER 5  MONEY, MERIT AND MOTIVATION: PERFORMANCE APPRAISAL AND PERFORMANCE RELATED PAY IN THE PUBLIC SECTOR

5.1 Introduction 164
5.2 Theory X and X-efficiency theory 167
5.3 Theories of human motivation 183
5.4 Performance appraisal and performance related pay 196
5.4.1 Designing an appraisal model 208
5.4.2 Performance appraisal in local government 213
5.5 Why introduce performance related pay ? 228
5.5.1 Types of payment systems 230
5.5.2 Trade union views 231
5.6 Will performance related pay improve performance ? 233

Concluding Comments 239
Bibliography 245
INTRODUCTION

During the past ten years, all levels of government and all sections of the public sector have attempted to improve their efficiency. One of Mrs Thatcher's first actions, on taking office in 1979, was to establish the Efficiency Unit on the advice of Lord Rayner who was appointed as an advisor on eliminating waste in central government departments. This was followed by the introduction of a host of new management techniques aimed at improving efficiency throughout the public sector - such as Rayner Scrutinies and the Financial Management Initiative (FMI) - and legislative changes - such as privatisation and the requirement for local authorities to contract out certain public services. Value for Money (VFM) audits have also been used extensively.

Although central government does not have the power to compel local authorities to adopt particular methods of improving their performance a major change in the way that their performance is audited has been brought about through the establishment of the Audit Commission for England and Wales. A result of this, and of the various techniques mentioned above, is that a series of new languages have been generated in an attempt to describe the concepts of 'efficiency'. The term has thus been employed in a multitude of confusing forms by various groups of users.
In considering the relationships between the economist's notion of efficiency and the various, and numerous definitions of efficiency employed in the public sector our aim is to clarify the present government's view of the nature of bureaucratic supply. Our review of theories of public sector supply then enables us to consider to what extent the policy prescriptions arising from these theories have influenced government policy. Thus, for example, the establishment of the Audit Commission, the growth of performance measurement, the spread of performance related pay schemes can be viewed as policies aimed at improving the efficiency of public sector supply and relate to a particular view of how inefficiency arises in the public sector. These policies are reviewed in detail with the aim of assessing their impact on local government efficiency.

The economist's notion of efficiency is precise and long established. In chapter 1, we present the economic definition of efficiency distinguishing between the two concepts of allocative efficiency and productive or X-efficiency. These two concepts are discussed first in relation to the private sector and then applied to the public sector. Within the public sector the concept of efficiency can be related to demand, supply or financing. Our interest lies in analysing the efficiency of the supply of public goods and services.

The causes and consequences of public sector inefficiency are examined in Chapter 2. Here we consider various models of
bureaucratic behaviour which incorporate allocative efficiency and X-efficiency into theories of public sector supply. These theories focus upon the behaviour of bureaucrats, aiming to define the bureaucrat's utility function and examining the implications of bureaucratic behaviour for the efficiency of public sector supply. To evaluate this background theory we survey a wide range of theoretical and empirical evidence and conclude the chapter with an examination of possible reforms to combat bureaucratic inefficiency. Such reforms include the introduction of performance related pay schemes to change the incentives of bureaucrats, and increasing competition in the public sector by greater use of private sources of supply, for example, the policy of contracting out.

The links between the concepts of both allocative efficiency and X-efficiency in the public sector and the concept of public sector "performance" are explored in Chapter 3. Here, we identify the many and varied dimensions of public sector performance and present a theoretical framework for measuring performance. In considering to what extent the policy prescriptions arising from the public choice models of bureaucracy, surveyed in Chapter 2, have been realised, we consider the impact of the Audit Commission on local authority performance.

Chapter 4 presents the empirical evidence collected from our survey of performance measurement in local government. We include a description of the methodology employed, the structure of the questionnaire and the survey sample. The
objective of this research was to carry out a detailed examination of the use of performance indicators (PI's) and the measurement of efficiency in local authorities. The main body of this chapter provides an analysis of the questionnaire responses.

Drawing from the literature on public sector performance, we compare previous experience of performance measurement in local government with current practice. We also consider how performance measurement in local government compares with the private sector style of management. The relationships between the size and political composition of local authorities and various aspects of performance measurement are examined through the testing of a number of hypotheses.

Having defined the various concepts of public sector efficiency in Chapter 1, and explored the theoretical links between these concepts and public sector performance in Chapter 3, we consider what types of inefficiency the systems of performance measurement are concerned with. Are the performance indicators currently in use related to indicators of X-inefficiency or allocative inefficiency?

In our discussion of X-efficiency theory, Chapter 2, we focused upon the labour input as the major source of X-inefficiency. It follows that a strategy for reducing this type of inefficiency will be concerned with the factors that influence the motivation of public sector employees. This provides the rationale for Chapter 5, in which we consider
the behavioural theories of motivation.

The concern with the performance of the public sector has stimulated the growth of performance related pay (PRP) schemes for public sector employees. As yet, the number of local authorities which have introduced such schemes is small, and no attempt has been made to consider the actual impact of PRP on performance. Here, we bring together the data collected from Section 3 of our questionnaire, the information collected from a number of detailed case studies and the behavioural theories of motivation in an attempt to assess the likely outcome of current appraisal schemes. We consider the main areas of interest: why have local authorities introduced performance related pay; who is covered by such schemes; what types of schemes exist; what types of payment systems have been implemented; and how is employee performance measured?

In conclusion, this thesis sets out to review the theoretical models of public sector supply, and through empirical research, consider how the nature of local government provision of goods and services has been influenced by the introduction of policies aimed at improving public sector efficiency.
CHAPTER 1

ECONOMIC EFFICIENCY

1.1 INTRODUCTION

With respect to the public sector, efficiency can be considered as a specific problem of demand, or of supply, or of financing. Alternatively, it can refer to a general model of the public economy which brings together all three elements and determines an optimal decision calculus for the public sector.

Efficiency problems of demand focus on the decision making process in a democracy, specifically, the voting mechanism and the role of political parties in generating public needs. Here, allocative efficiency is of primary interest.

The efficiency of financing the public sector centers on the micro- and macroeconomic effects of taxation. For example, the effects of tax financing on macroeconomic objectives such as full employment and low inflation, and the incentive effects of tax financing on labour and commodity markets.

Efficiency of the supply of public goods considers two problems. On the one hand, the process of political decision making is examined: do politicians, in taking their decisions, respect the wishes of the citizens and voters or do they follow their own interests? Here, the difficulties of adjusting public supply to collective demand are examined and therefore allocative efficiency is the main concern.
On the other hand, the behaviour of bureaucrats is explored: do bureaucrats really execute the policies of government or do they pursue their own strategic interests? Here, the internal processes of providing public goods and services are analysed, mainly form the viewpoint of production- or X-efficiency.

In this chapter we focus on defining the concepts of allocative efficiency and productive- or X-efficiency—hereafter referred to solely as X-efficiency. This provides a theoretical basis for examining, in subsequent chapters, the efficiency of the supply of public goods.

1.2 Allocative Efficiency

In this section we summarize the conditions under which the allocation of resources is efficient or Pareto-efficient. A situation is defined as Pareto-efficient if it is impossible to make one individual better off without making another worse off.
The marginal conditions can be summarized as follows:¹
Let X and Y be any two goods, K and L be two factors, A and B two consumers.

(a) equilibrium of consumption: a consumer maximizes utility where the slope of the indifference curve (the marginal rate of substitution of X for Y) is equal to the slope of the budget line, i.e.

\[ \text{MRS}_{XY} = \frac{P_X}{P_Y} \]

For consumers A and B who, in perfect competition, face the same prices, the condition for equilibrium is:

\[ \text{MRS}^A_{XY} = \text{MRS}^B_{XY} \] .......(1)

(b) equilibrium of production: this requires the efficient allocation of resources amongst firms. The firm is in equilibrium if it chooses the factor combination which minimizes cost i.e.

This section provides only a brief summary of the marginal conditions for Pareto optimality. A comprehensive explanation can be found in most basic microeconomics text books, for example, Hirschliefer, J. (1984), Price Theory and Applications, (Englewood Cliffs, N.J.:Prentice-Hall), and Koutsoyiannis, A. (1979), Modern Microeconomics, (Macmillan)
\[ \text{slope of isoquant} = \text{slope of isocost line} \]

\[ MRTS_{KL} = \frac{w}{r} = \frac{MP_k}{MP_L} \]

where \( w \) and \( r \) are the factor prices prevailing in the market and \( MRTS_{KL} \) is the marginal rate of technical substitution between the factors of production, labour and capital. Also, the maximum value of output requires tangency between the production possibility frontier and the highest isorevenue line. At this point, the marginal rate of transformation (the amount of \( Y \) that must be given up to produce a marginal unit of \( X \)), \( MRT_{XY} \) will equal \( \frac{P_X}{P_Y} \), i.e.

\[ MRT_{XY} = \frac{MC_X}{MC_Y} = \frac{P_X}{P_Y} \]

The marginal rate of technical substitution between any given pair of factors should be the same in the production of all goods for which both factors are used i.e.

\[ MRTS^X_{KL} = MRTS^Y_{KL} \quad \ldots \ldots \quad (2) \]

Also, the marginal rate of substitution between any given pair of goods for any consumer should be the same as the marginal rate of transformation between these two goods i.e.

\[ MRS_{XY} = MRT_{XY} \quad \ldots \ldots \quad (3) \]
The conditions which satisfy these three equations are to be found under perfect competition making a general competitive equilibrium Pareto or allocative efficient. Those who believe in the free market system do so in the belief that such a system is allocatively efficient: it is impossible to make one individual better off without making another worse off.

We can also illustrate the general principle that a competitive economy leads to an efficient allocation of resources by making direct reference to supply and demand curves. This simple model is outlined below and expanded in Chapter 2 when we consider the equilibrium output level of a bureau.

The reason that the competitive market leads to efficiency is summarized by Stiglitz (1986) as follows:

"Competition leads to efficiency because in deciding how much of a certain good to buy, individuals equate the marginal benefit they receive from consuming an extra unit with the marginal cost of purchasing an extra unit, which is just the price they have to pay; and firms, in deciding how much of a good to sell, equate the price they receive with the marginal cost of producing an extra unit. Hence marginal benefits

\[ \text{marginal benefit} = \text{marginal cost} \]

---

2This section summarises the basic principles that are to be found in any standard economics textbook.
of consuming an additional unit are equated with marginal costs. (Stiglitz p.65)

Taking the example of an individual who benefits from consuming chocolate, the marginal benefit she receives is depicted in Figure 1.1 (a). The marginal benefit curve is downward sloping as the extra benefit from consuming an extra bar of chocolate declines.

<table>
<thead>
<tr>
<th>Marginal Benefit (in pence)</th>
<th>Number of bars</th>
</tr>
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<tbody>
<tr>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>250</td>
<td>2</td>
</tr>
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<td>200</td>
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<td>100</td>
<td>5</td>
</tr>
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<td>50</td>
<td>6</td>
</tr>
</tbody>
</table>

The individual will buy chocolate up to the point where the marginal benefit of the last bar just equals its cost. Thus the marginal benefit is the individual's demand curve and adding horizontally all these individual curves we get the market demand curve shown in part (c) of Figure 1.1, assuming 1000 identical individuals.

Part (b) of Figure 1.1 shows the marginal cost of producing one extra chocolate bar. Here we assume that as the firm produces more and more bars the cost of producing an extra bar increases.

<table>
<thead>
<tr>
<th>Marginal Cost (in pence)</th>
<th>Number of bars</th>
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<tr>
<td>50</td>
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<td>100</td>
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<td>200</td>
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The firm will produce chocolate up to the point where the
Figure 1.1

(a) Price of Bars

(b) Price of Bars

(c) Price of Bars

Figure 1.1

 marginal benefit (demand)

 marginal cost (supply)

market supply

market demand

1 2 3 4 5 6 Quantity of Bars

1 2 3 4 5 6 Quantity of Bars

1 2 3 4 5 6 Quantity of Bars

(1,000's)
marginal cost of the last bar just equals the revenue received - that is, price. So if the price is 100 pence the firm produces 2 bars and so on. Clearly, the marginal cost curve is also the firm's supply curve and adding up all these individual supply curves we get the market supply curve shown in part (c) of Figure 1.1, assuming 1,000 identical firms.

The supply and demand schedules show what buyers and sellers would do at any given price. Superimposing these curves in part (c) of Figure 1.1 gives the equilibrium price of 200 pence, at which the wishes of both consumers and producers are matched and the market clears.

Thus, the condition for allocative efficiency is that the marginal benefit from the production of one more good equals its marginal cost. If the marginal benefit is greater than the marginal cost, society would gain from producing more of the good; and if the marginal benefit is less than the marginal cost, society would gain from reducing production of the good.

We can define allocative inefficiency as a situation in which either output is below the Pareto-efficient level or above the Pareto-efficient level. This concept of inefficiency is explored in Chapter 2 within the analysis of the theory of bureaucracy.

As we have seen, in a situation of perfect competition (product homogeneity, many firms, many consumers, freedom of entry, perfect information, no collusion), allocation of resources is Pareto-efficient. In this situation, productive
or X-efficiency is not a problem, because all agents, producers and consumers, always optimize the use of their resources. Inefficiency in production means that too little output is being produced from a given bundle of inputs, however, a perfectly competitive equilibrium requires firms to chose the factor combination which minimizes cost and maximizes the value of output. Thus both allocative and productive efficiency are automatically realized.

The "perfect" situation does not exist. In the real world, allocative and X-efficiency are not automatically realized. Thus, the efficiency of the supply of public goods considers both allocative and X-efficiency. In Section 1.3 below we consider the problem of defining X-efficiency and in subsequent sections we apply these concepts to the public sector.

1.3 X-EFFICIENCY

The concept of X-efficiency was introduced by Harvey Leibenstein (1976) and is defined by him, as follows:

"We refer to the difference between maximal effectiveness of the utilization of inputs and the actual effectiveness as the degree of X-inefficiency."

(Leibenstein p.26)

One of the crucial assumptions embodied in the definition of allocative efficiency is that every firm purchases and utilizes all of its inputs efficiently. By definition, such a
firm is producing X-efficiently. In contrast, Leibenstein argues that efficient use of inputs is dependent both on the decisions made concerning input utilization and on actual performance based on these decisions.

In figure 1.2 X-inefficiency is represented by the distance ab, the difference between the actual quantity of inputs (Ka, La) used to produce output Q, and the minimum amount (Kmin, Lmin) that could be used to produce Q.

Leibenstein argues that X-inefficiency exists almost everywhere, that its magnitude is significant and that in comparison with X-inefficiency, allocative efficiency is often a relatively minor problem. Thus, the questions we are
concerned with are firstly why should X-inefficiency arise? Secondly, why should X-inefficiency persist? and lastly, what can be done to reduce X-inefficiency?

1.3.1 THE CAUSES OF X-INEFFICIENCY

X-inefficiency arises because the relation between inputs and outputs is not a determinate one i.e. for any given combination of inputs there exists a range of possible outputs. Taking labour as an example, the output of an individual is influenced by motivation and effort. Leibenstein identifies three reasons why given inputs cannot be transformed into predetermined outputs:

(i) contracts for labour are incomplete
(ii) The production function is not completely specified or known
(iii) not all inputs are marketed, or if marketed are not available on equal terms to all buyers.

Incompleteness of job contracts refers to the fact that job descriptions are vague and therefore open to interpretation. Not every aspect of the job is specified in advance and cannot be, either because the goals of the organization are not sufficiently well specified or because the precise activities required to fulfill the goals are unknown. Thus, the individual can chose the activities to be carried out, the pace at which to carry them out, the quality of the activities and the time sequence of activities. This bundle of choices is referred to as an APQT bundle and represents an "effort point". More than one effort point may be required as an
individual interpreting his or her job may want to respond differently to different demands made on his or her time. This set of effort points represents an effort position.

Given that a job is open to interpretation and individuals are free, to some extent, to choose the effort levels at which they work then individual productivity becomes a variable. Supposing this is true for all firm members there is no reason to believe that labour productivity is such that output is maximized for a given set of inputs. This implies that costs are not minimized and therefore X-inefficiency exists. The basic hypothesis of X-efficiency theory is that there is always a degree to which effort is a variable and it follows, therefore, that X-inefficiency exists, to some extent, almost everywhere.

The second reason for why X-inefficiency should exist is that the production function which relates inputs to outputs is not fully specified. In this case, the exact combination of inputs required to minimize costs is unknown as is the effect of changing the input ratios. Establishing the technical relationship between inputs and outputs in the public sector is especially difficult. Here we are faced with the problems of defining and measuring public sector output, which are discussed in chapter 3.

Finally, not all inputs are marketed or, if marketed are not available on equal terms to all buyers. For example, management knowledge or some types of market information both of which may be available to some individuals but are not purchasable in the market.
1.3.2 THE PERSISTENCE OF X-INEFFICIENCY

The persistence of X-inefficiency can be explained with reference to the concept of inert areas. An inert area is a set of effort positions whose levels of utility vary but once a specific effort position has been chosen an individual will not move to another position because the utility cost is greater than the utility gain. This is illustrated in figure 1.3 in which U represents the utility from effort, and the distance c - c' represents the utility cost of moving from one effort position to another.

![Utility Diagram](image)

Figure 1.3

Clearly, within the range of effort positions in the segment a to b the individual has no incentive to move. Any position within the inert area represents an equilibrium effort position that will not be changed unless there is a strong external influence. This is because in choosing an effort
position the individual has already taken into account the constraints he or she faces in terms of relationships with peers and superiors. These interpersonal relationships are such that each individual is influenced by all other individuals and thus, the condition for equilibrium of the organization is that everyone's influence on everyone else must be sufficiently small so as the chosen effort position remains within the inert area.

The theory of inert areas implies that X-inefficiency will persist because individuals are unlikely to change effort positions. Recalling that an effort position is a set of effort points, each of which represents an activity-pace-quality-time bundle, there is no reason to assume that any chosen effort point represents maximum effort. Indeed, X-efficiency theory is based on the hypothesis that effort is a variable and that individuals do not work as hard as they could. This is not to imply that individuals are simply lazy but follows from our initial assumptions concerning vague labour contracts, unspecified production functions and the existence of non-marketed inputs.

A further influence on choice of effort position concerns the principal-agent relationship, where "agent" may be defined as a person who acts on behalf of another person, group, or government and "principal" refers to the person who engages another to act as his/her agent. Applying these concepts to public sector organizations the principal is the government and all public sector employees are agents. More generally, we can refer to the supervisor-supervisee relationship as a principal-agent relationship. The point is that an individual
is likely to show a different degree of constrain concern in their behaviour depending on whether the same individual happens to be an agent acting on behalf of someone else, or, in the same circumstances, is a principal. An individual will be governed by a lesser degree of constraint concern if he/she is pursuing someone else's interests rather than their own.

The actual degree of constraint concern of an agent is likely to depend on the incentives that exist in the context in which decisions and actions take place. Such incentives depend in part on the degree to which principals can make their interests actually, or in appearance, coincide with the agent's interests and the extent to which the principal is able to employ other motivators.

The assumption that agents do not necessarily act in their principals' interests represents another possible source of X-inefficiency. Within a hierarchical structure, such as a public sector bureaucracy, in which the interests or aims of the principal may be unclear or even conflicting and where accountability and incentives are often non-existent, the possibilities for nonoptimal agent behaviour are increased.

1.3.3 ELIMINATING X-INEFFICIENCY

Leibenstein developed X-efficiency theory in relation to the private sector as a theory of the firm. In contrast to neo-classical theory, he assumes that firms do not seek to maximize profits but do operate under external constraints.
Under monopoly, for example, the major constraint is that imposed by the shareholders of an acceptable rate of profit. Leibenstein argues that under these circumstances "there is no need for especially low costs to exist in order for the firm to get along and survive" (Leibenstein 1976). Under competition, however, a number of constraints exist which force the firm to operate more X-efficiently such that the competitive equilibrium approaches that of neo-classical theory, in which competitive pressure forces firms to operate at the minimum point on their long-run average cost curve. Within a competitive market structure it is the fear of takeover or bankruptcy which forces firms to seek to produce at least cost. According to Leibenstein such pressures will be felt by individual members of a firm who react by seeking high productivity effort positions. In short, competitive pressures reduce the area of discretionary behaviour in terms of an individual's activity-pace-quality-time bundle.

It follows from the above that one of the ways of reducing X-efficiency is to promote competition between firms. The question is how we relate this to reducing X-efficiency within the public sector? Leibenstein's analysis is concerned with private sector firms but he does consider bureaucratic X-inefficiency in a later paper entitled "Motivations and Constraints in the Supply-Cost of Government: A Game Theoretic Analysis", presented at the 38th Congress of the International Institute of Public Finance (1982). He poses the following question:

"Can we substitute civil servants for employees, and bureau directors for private enterprise managers and
still get similar but certainly not identical results to those obtained in the private firm?"

The framework within which Leibenstein attempts to answer this question involves a game theory approach to effort determination. The basic idea is that the supply of government services depends on the supply of effort by members of the bureaucracy, and that effort supply is a game-theoretic problem\(^3\). This approach is developed by Leibenstein (1976), (1982) as applied to the private sector.

An alternative theory which incorporates the concept of X-efficiency into public sector supply is that developed by Peacock (1983). In chapter 2 we consider Peacock's model which incorporates X-efficiency by introducing leisure into the bureaucrat's utility function. The assumption is that bureaucrats have a certain amount of discretion, as the labour contract is not completely specified, and may engage in on-the-job leisure which normally involves complementary expenditure such as expense allowances. Peacock's model involves the maximization of a bureaucrat's utility function, making the usual assumption that every economic agent seeks to maximize personal utility, and defining the arguments of the objective function.

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1.4 PUBLIC SECTOR EFFICIENCY

So far, we have attempted to establish the precise meaning of the concept of efficiency, distinguishing between allocative efficiency and X-efficiency. These two dimensions of efficiency have been discussed in relation to the private sector and in the remainder of this chapter we focus on their application to the public sector.

1.4.1 ALLOCATIVE EFFICIENCY IN THE PUBLIC SECTOR

The problem of allocative efficiency in the public sector refers to the mix of goods and services produced (Brown and Jackson, 1986). Is it possible by reallocation of resources to increase the production of one good without reducing the output of another? A further consideration is the mix of output between the public and private sector. Is it possible by reallocation of resources from public to private goods to make one individual better off without making another worse off? Both of these questions relate to the following definition of allocative efficiency:

allocative efficiency - producing the level and mix of services which the electorate demands i.e. allocating resources according to the preferences and budget constraints of the consumers.

In practice, each individual will demand a different level and
mix of services and these wishes are expressed through the political system. However, there is no simple correspondence between an individual's preferences and the policies offered by politicians. Once the decisions about public outputs and taxes have been made, the final outcome, while representing the wishes of the "median" voter, is different from the outcome desired by every other individual. This is illustrated in Figure 1.4 in which D represents an individual's demand curve for a public good A.

Assume that the final outcome decision results in the public output level OQ and the tax price Ot. Given the demand curve, the individual who has to pay a price of Ot would have preferred to consume OQ' units of output. Similarly, if the individual has to consume OQ units of good A, he or she would have preferred to pay a price of Ot'. This represents allocative inefficiency as resources are not allocated in accordance with the individuals' preferences. The same argument applies to every individual and the extent of this
allocative inefficiency therefore depends upon the
distribution of preferences around the decision output. This
implies that any discussion of allocative efficiency in the
public sector must focus on the political process to assess
whether it represents the interests of the voters. Such
an approach concentrates on efficiency problems of demand.

In considering the efficiency of the supply of public goods we
look at the behaviour of bureaucrats and the nature of the
organizational framework in which they work. The models of
bureaucratic behaviour presented in Chapter 2 incorporate the
assumption that the demand function accurately reflects the
demand of the consumers. We focus, therefore on the
difficulties of adjusting public supply to this collective
demand. Here, allocative inefficiency is defined as a
situation in which output is below the Pareto-efficient level
or above the Pareto-efficient level, as discussed earlier with
reference to a simple model of supply and demand in a
perfectly competitive market.

1.4.2 X-EFFICIENCY IN THE PUBLIC SECTOR

A report from the House of Commons Treasury and Civil Service
Committee in 1982 defined efficiency as follows:

"given the objectives and the means chosen to pursue
the objectives, the minimizing of inputs to the
programme in relation to the outputs from it".

It follows from this definition that an operation could be
said to have increased in efficiency if either fewer inputs were used to produce a given amount of output, or a given level of inputs resulted in increased output. Clearly, this corresponds to Leibenstein's concept of X-efficiency which requires the minimizing of inputs in relation to a specified output level.

Leibenstein's analysis focuses on the incompleteness of job contracts as a major source of X-inefficiency. If individuals are free, to some extent, to choose the effort levels at which they work, individual productivity becomes a variable. The crucial point is that individuals will make decisions which will help to determine their effort levels and given that effort is therefore a variable, which cannot be completely controlled or determined, the assumption is that X-inefficiency will exist and will persist unless external factors destabilise the equilibrium. Similarly, assuming that public sector employees decide, at least partly, their own effort levels and that bureau managers cannot influence the effort levels chosen - given that in equilibrium everyone's influence on everyone else is so small so as the chosen effort position remains in the inert area - X-efficiency theory, which was developed as a theory of the private firm can be applied to a bureaucratic organization.

In Chapter 2 we consider models of bureaucratic behaviour which incorporate X-efficiency into theories of public sector supply. In addition to this, following Leibenstein's assumption that a major source of X-inefficiency stems from the indeterminacy of the input output relationship, particularly in relation to the labour input, we consider the
question of what motivates individuals in the choice of the amount of effort they put forth. Thus, in Chapter 5, we turn our attention to theories of individual motivation and consider to what extent the internal structure of the organization allows individuals discretion over their choice of effort levels.
2.1 INTRODUCTION

Bureaucracy: any administration in which action is impeded by unnecessary official procedures and red tape. (The New Collins Concise English Dictionary, 1985)

The above definition of bureaucracy is perhaps representative of a general view that has persisted for over two hundred years. Writing in 1764 Baron de Grimm and Diderot recall the words of M. de Goumay who described bureaucracy as follows:

"We have an illness in France which bids fain to play havoc with us; this illness is called bureaumania"

(in Albrow, 1970 p.16)

The idea of bureaucracy as a "disease" remains as popular today, the prevalent 'symptom' being identified as inefficiency and an ever increasing search for 'cures' including Efficiency Reviews, the Financial Management Initiative, Rayner Scrutiny Studies, Value for Money Audits and so on. Also, bearing in mind that death is the cure for all disease, the government has taken steps to kill off bureaucracy by, for example, reducing the number of civil servants, selling off public industry and introducing legislation forcing various parts of the public sector to contract out services.
Here, we are concerned with the economic theory of bureaucracy. Specifically, assuming that the demand for public sector output is given, we ask if the organization that produces that output responds to demand by providing outputs, first in accordance with the consumers'/voters' tastes, and second, at minimum cost. We begin by offering the following definition of bureaucracy: any non-profit organisation that is financed wholly or partly from a grant.

The economic theories of bureaucracy that will be explored are those taking a public choice approach. The paradigm example of this approach is Niskanen's classic book, Bureaucracy and Representative Government (1971). Thus, the first model of bureaucracy considered is that proposed by Niskanen (1967, 1975). Following on from Chapter 1, and our concern with the issue of allocative efficiency and X-efficiency, the second model considered is that presented by Peacock (1978) which indicates how X-inefficiency can arise in a public bureau.

Both models focus upon the behaviour of bureaucrats where a bureaucrat may be defined as a senior official in any bureau who makes decisions and is in control of the budget (referred to as the decision maker or D.M. by Peacock). Thus, the starting point in each analysis is to define the bureaucrat's utility function under the assumption that a bureaucrat, like any other economic agent, seeks to maximise his or her utility.
Niskanen assumes that the bureaucrats utility function will include salary, reputation, power, output of the bureau, ease of making changes and ease of managing the bureau. Although the last two variables are a negative function of the size of the total budget they are both reduced by increases in the budget. Thus, Niskanen contends that utility increases as the budget increases and the bureaucrat will therefore seek to maximise the size of the budget of the bureau, given demand and cost conditions, and subject to the constraint that the budget must be equal to or greater than the minimum total costs at the equilibrium output.

The second assumption made by Niskanen is that bureaus exchange a specific output for a specific budget which implies that the bureau is a monopoly supplier of the output. On the other hand, the sponsor i.e. central government is the sole purchaser of the output and therefore constitutes a monopsonist. Thus, the relationship between bureau and sponsor is one of bilateral monopoly. Such a relationship implies that the final outcome is indeterminate since it depends upon the relative power of the two sides. However, according to Niskanen the bureau is in a superior bargaining position such that the sponsor is unable to force the bureau to produce at the lower optimal output level. The source of the bureau's power lies not only in its monopoly of supply of the service but also in its monopoly of information concerning the relationship between inputs and outputs and knowledge of the cost function. The sponsor is at a disadvantage arising
from its position of ignorance, it is unable to recognise whether productive and/or allocative inefficiency exists let alone implement policies to combat such inefficiencies. Moreover, Niskanen argues that any committee set up to review a proposed budget is dominated by interest groups which have a relatively high demand for the service or who supply the factors used by the bureau. Thus, the aims of the review body tend to be consistent with those of the bureau, to expand rather than curtail the size of the budget. It follows, from the above, that the sponsor will accept the output level arising from the bureaucratic equilibrium.

To find the equilibrium output level Niskanen considers a bureau faced with linear demand and cost conditions, buying factors in a competitive market. Figure 2.1 illustrates the output levels that will be produced in two different situations: $V_1$ represents low demand conditions and $V_2$ represents high demand conditions.

![Figure 2.1](image_url)

The Equilibrium Level of Output
The demand functions $V_1$ and $V_2$ show the relation between the marginal value of a service as expressed by the sponsor and the level of the service. Since the preferences of the sponsor are assumed to accurately reflect the preferences of all citizens, the marginal valuation curves ($V_1$ and $V_2$) are taken to represent the sum of the citizens' marginal valuations of the services of the bureau. The marginal cost function $C$ is the marginal expenditures by the bureau at each level of service. Thus,

$$V = a - bQ$$  \hspace{1cm} (1)
$$C = c + 2dQ$$  \hspace{1cm} (2)

where $V =$ marginal value to consumers

$C =$ minimum marginal cost to bureau

$Q =$ output

The minimum total cost to the bureau $TC$ is

$$TC = cQ + dQ^2$$  \hspace{1cm} (3)

and the total budget of the bureau $B$ is

$$B = aQ - \frac{b}{2}Q^2$$  \hspace{1cm} (4)

To find the value of $Q$ at which the budget is maximised we set $\frac{dB}{dQ} = 0$

$$\frac{dB}{dQ} = a - bQ = 0$$

to give an upper bound of $Q = \frac{a}{b}$  \hspace{1cm} (5)

The constraint that the budget must be equal to or greater than total cost gives the lower bound of $Q$. 
setting \( B = TC \)

\[
aQ - \frac{b}{2}Q^2 = cQ + dQ^2
\]

+ by \( Q \)

\[
a - \frac{b}{2}Q = c + dQ \quad \text{or,}
\]

\[
a - c = \left(\frac{b}{2} + d\right)Q
\]

and \( Q = \frac{2(a - c)}{b + 2d} \) ............(6)

These two levels of \( Q \) are equal where \( a = \frac{2bc}{b - 2d} \)

Thus, the equilibrium level of \( Q \) is where

\[
Q = \frac{2(a - c)}{b + 2d} \quad \text{for} \quad a < \frac{2bc}{b - 2d}
\]

\[
Q = \frac{a}{b} \quad \text{for} \quad a \geq \frac{2bc}{b - 2d}
\]

These two levels of \( Q \) are equal where \( a = \frac{2bc}{b - 2d} \)

Returning to the diagram above, if the demand condition is represented by \( V_1 \) then equilibrium output is in the "budget constrained" region and is given by \( \text{eh} \). The total cost of the output is area 'ecfh' and the total budget is area 'ea\text{gh}' so that total value is equal to total cost. According to Niskanen this situation is efficient in so far as there is no "fat" in this bureau. This corresponds to the notion of \( X \)-efficiency or productive efficiency. However, this position represents allocative inefficiency as output \( h \) is higher than the social optimum, \( k \), where marginal valuation = marginal costs. At \( h \), marginal costs \( fh \) are greater than the marginal valuation \( gh \) of producing that level of output. Consumer surplus \( ca_{\text{m}} \) is used to expand output to \( h \) (\( a_{\text{cm}} = \text{mfg} \)).
If the demand function is $V = a - bQ$ then equilibrium output is in the demand constrained region represented by the level 'ej' where the marginal value of output is zero. The total budget is triangle 'ea_j' and total cost is area 'ecij'. Here, the total budget exceeds the minimum costs necessary to produce this level of service and "fat" or X-efficiency exists. i.e. the same output could be produced with a lower budget. Again, output is above the pareto-optimal level as marginal costs are equal to 'ji' and marginal value to consumers is zero. Here, there is a transfer of consumers' surplus to the bureaucrat in the form of an increase in output and a larger budget.

Niskanen uses his model of bureaucracy to compare the consequences of the bureaucratic organisation of economic activity with those of other forms of economic organisations facing identical cost and demand functions. Here, we consider one example by comparing a competitive industry with a bureau which buys factors on a competitive market. Each organisation faces the following demand and cost conditions:

$V = a - bQ = 200 - Q$

$C = c + 2dQ = 75 + 0.25Q$

The equilibrium position of the profit maximising industry will be where $MC = MR$ i.e. where $V$ (interpreted as the consumers marginal valuation function or demand curve) is equal to $C$ (the marginal cost or supply function to the competitive industry). Equating $V$ and $C$:

$200 - Q = 75 + 0.25Q$
thus, the value of $Q$, the output level of a competitive industry, is 100.

The equilibrium condition for the non-discriminating bureau, in this case, is in the budget constrained region as

$$a < \frac{2bc}{b-2d} \quad \text{i.e.} \quad 200 < \left\{ \frac{2 \times 1 \times 75}{1 - 0.25} \right\} = 300$$

and the equilibrium level of $Q$ given by

$$Q = 2\left(\frac{a - c}{b + d}\right) \quad \text{is} \quad \left\{ \frac{2(200 - 75)}{1 + 0.5} \right\} = 166.7$$

clearly, the equilibrium output of the bureau is two-thirds more than that of the competitive industry facing the same demand and cost conditions. Niskanen extends the above example, comparing the bureau with other industries in terms of output, revenue, costs, profits, and so on. In each case, the output of the bureau is higher.

If the bureau is able to exercise monopsonistic power in the factor market then both budget and output are higher than in the case examined above. In practice, bureaus do tend to be monopoly buyers of labour, for example, doctors, nurses, teachers etc, in which case, the marginal cost function is represented by

$$C = 75 + 0.25 Q$$
and the equilibrium value of $Q$ given by $Q = \frac{a}{b}$ is 200. Thus, the level of output supplied by the bureau is twice as large as that which would be produced by a competitive industry facing the same conditions.

The one most important general conclusion of Niskanen's model is that bureaus are too large. For given demand and cost conditions, they supply a quantity of services larger than would maximise the net benefits of the service.

2.1.1 ARE BUREAUCRATS FREE TO CHOOSE?

Niskanen's ideas have spawned a host of theoretical papers refining and modifying his theory. In addition to this, a number of papers have presented empirical tests of Niskanen's ideas. A recurring criticism of Niskanen's model, found in this literature, concerns his proposition that the bureau sponsor has little or no information about the production and cost functions of the bureau. Thus the sponsor is unable to recognize whether productive and or allocative inefficiency exists, let alone implement policies to combat such inefficiencies. Several authors have challenged this assumption. Breton and Wintrobe (1975), for example, argue


that the sponsor will not react passively to the bureau's output/budget offers but, instead, will use control devices—"including direct monitoring, overlapping bureaus, duplication of services, and the purchase and acquisition of information from alternative sources, including sources at lower levels in the bureau itself" (1975, p.199)—to reduce allocative and productive inefficiency. Breton and Wintrobe suggest that the sponsor will use control devices and will incur control expenditures up to the point at which marginal benefits are equal to marginal cost. Figure 2.2 illustrates their simple model of the costs and benefits of control.

The triangle OHJ is the difference between the budget preferred by a bureau and that preferred by a sponsor and is equal to the consumer surplus that would be appropriated by
the bureau at its preferred output and budget position. The line HJ is the marginal value of control devices to the sponsor, and the line LR is the marginal cost of these control devices. Breton and Wintrobe conclude that the sponsor will use OK units of control devices. At this point the bureau's budget is reduced by an amount OHIK, the total cost of control devices is OLIK, the increase in consumer surplus from the use of control devices is LHI, and the budget is KIJ. The total loss due to bureaucratic supply - the sum of the costs of control devices and the remaining discretionary budget - is OLIJ.

Breton and Wintrobe make a distinction between two different methods of acquiring information about the bureaus' production process - through shirking control devices and output control devices. The former type devices are directed toward the problem of a bureau producing a given output above least cost, whereas output control devices deal with the problem of over production. A necessary condition for control devices to be useful is that they be effective to some extent against both sources of inefficiency.

One implication of a model which takes account of the sponsor's potential use of control devices relates to whether oversupply of output or X-inefficiency is the likely source of inefficiency in bureaucratic supply. To eliminate overproduction, the sponsor needs only to acquire information about the bureau's actual cost curve; to reduce X-inefficiency, the sponsor needs that information plus an estimate of the true minimum cost of supplying the service. Since it is therefore costlier to police X-inefficiency than
to police oversupply, Breton and Wintrobe conclude that the major source of inefficiency in bureaucratic supply is X-inefficiency and not, as Niskanen's model implies, oversupply of output.

Spencer (1980), suggests that Niskanen's result that the bureau's chosen output is normally in excess of the Pareto optimal level represents an extreme case which "is plausible only if the trustees, which in Niskanen's case are a legislative committee, have no information on the minimum costs of operation within the bureau. There is no information on costs known "outside" the bureau" (Spencer 1980, p.228). Spencer shows that if trustees have "the minimal information that the average cost curve intersects the demand curve", they can limit the bureau's power to that of a simple monopolist. If the trustees have this information, there can be no presumption that output is too high, "rather there is a tendency for too low provision of output similar to the standard monopoly result on the private sector" (Spencer 1980, p.233). It is not clear, however, how the trustees obtain this information. Spencer's analysis illustrates that if information on per unit cost is available to trustees, their control over the bureau is greater than in situations in which information on cost functions is absent.

If information about the minimum costs of a bureau's services was costlessly available to its sponsor then the sponsor would be able to constrain the bureau to supply the optimal output at minimum cost. In reality, such information is costly and will only be used up to the point where its marginal value equals its marginal cost, as discussed above. The
availability to sponsors of cost information and, in turn, how this information affects the efficiency of bureau production is explored by Mehay and Gonzalez (1987). They test the hypothesis that the presence of outside cost information provides trustees with a control device that reduces the superior bargaining position of public bureaus.

Mehay and Gonzalez examine the value of outside information in the context of local government production. They look at the Lakewood system of intergovernmental service agreements under which municipalities purchase services from county government departments rather than producing them in-house. This system generates the type of information that sponsors are able to use to offset the superior bargaining position of bureaus. For example, a Lakewood county department that sells services has to "cost out" and to sell at a per unit price that covers cost. In order to retain customers or attract new ones, this price must be below what it would cost the purchasing city to produce the service in-house and this creates pressure to control production costs. Thus, "the information generated by contracting places the trustees in a position to chose their desired output level at the per unit contract price, ensuring that they receive a positive net benefit" (Mehay and Gonzalez 1987, p.64).

The empirical results presented by Mehay and Gonzalez support the hypothesis that outside cost information provides some constraints on the power of local bureaus. They conclude that

"in institutional structures where information is available at a sufficiently low cost, trustees appear
to be in a position to limit the rent-seeking tendencies of local public bureaus" (Mehay and Gonzalez 1987, p.71).

As we have seen outside information on cost provides trustees with a control device enabling them to offset the power of the bureau, and the conditions that generate this information are created under the Lakewood system. Toma and Toma (1980) consider an alternative institutional structure that is capable of solving the problem of bureaucratic overproduction; the adoption by states of tax limitation amendments (TLAs) similar to California's Proposition 13 (a limit of property tax rates). The purpose of these amendments is to give voters the right to determine the upper limits of government budgets. However, the effect of a TLA on voter welfare is shown to depend on the bureau's response to the budget ceiling.

A tax limitation amendment is a substitute for the output control devices proposed by Breton and Wintrobe (1975). These control devices can be purchased by a sponsor and used to reduce bureaucratic X-inefficiency and overproduction. Toma and Toma (1980) show that the effectiveness of an output control device, such as a TLA, depends largely on the sponsor's ability to control X-inefficiency. If, for example, the sponsor uses an output control device to reduce output, the bureau will simply respond by increasing X-inefficiency to such a degree as to eliminate the benefits of the control device. To be effective therefore, the output control device must be accompanied by control devices to eliminate X-inefficiency. Thus, "with control devices formally
introduced into the analysis, passage of a TLA implies that bureaucrats, exercising their monopoly powers, face constraints in both the output and shirking directions" (Toma and Toma 1980, p.345).

The basic conclusion derived from Niskanen's model that bureaucrats are free to choose the level of output, subject to the constraint that total costs are covered by total revenues, is derived from his assertion that bureaucrats have a monopoly on information. In our critique of Niskanen's model we have chosen to present evidence which strongly refutes this assertion. The essential point is that Niskanen has granted too much power to the bureaucrats, without considering fully the nature of the constraints which they face (Jackson 1982, p. 132). The sponsors, in practice, will have access to control devices and are under pressure from sectional interests to use such devices to influence bureaucratic behaviour. As Goodin argues, "if politicians really want more information, there are plenty of ways for them to collect it" (Goodin 1982, p.27). In section 2.7 we consider, in more detail, various institutional structures which generate information on the costs of a bureau's services such as the Lakewood system.

The refined models of bureaucratic behaviour, outlined above, also refute Niskanen's conclusion that bureaucratic behaviour generates oversupply of public goods and services, i.e. that bureaus are characterized by allocative inefficiency. Instead, several authors suggest that the major source of inefficiency is X-inefficiency. We now turn to a discussion of the model presented by Peacock (1979, 1983) which indicates
how X-inefficiency can arise in public bureaucracy.

2.3 BUREAUCRATS AND ON-THE-JOB LEISURE

Peacock's model of bureaucracy is similar to that proposed by Niskanen in that they both focus on the supply side of the Public Sector. Attention is given to the government bureaucrats who, it is argued, are not simply 'public servants', where bureaucracy is not the source of "inspired altruism and unselfishness" (D. Houghton in Bureaucracy: Servant and Master) but rather, bureaucrats are powerful, self-interested individuals with independent control over public resources whose actions may result in over supply and/or inefficient production methods.

Peacock introduces two features of bureaucratic leadership - caution and laziness into a model of bureaucratic behaviour, by including leisure within the welfare function of the utility - maximizing bureaucrat. He argues that the high degree of job security of senior officials, coupled with the lack of an explicit work contract enables the bureaucrat to indulge in 'on-the-job leisure'. The bureaucrat or decision maker in this model is defined as someone at the policy execution level of government who has security of tenure but does not expect further promotion. Whilst the work contract for such an official generally defines hours of work and leave conditions, within working hours the bureaucrat has scope for leisure which can be rationalised as "purposeful pursuit in the interests of the government". Examples of on-the-job leisure, cited by Peacock, include prestigious conferences in
desirable locations and attendance at official conferences.

The utility function in Peacocks model is specified as follows:

\[ U = U (N, L, S) \]

\[ (U_n, U_l, U_s > 0) \]  \hspace{1cm} (1)

Where \( N \) represents the number of administrative grade officials under the bureaucrats command, but only those who are potentially promotable to the decision maker's own level. It is assumed that utility increases with \( N \) as the bureaucrat derives increasing power and prestige as the number of such officials employed in the bureau expands.

\( L \) represents on-the-job leisure and \( S \) is the 'surplus' that remains after paying the salaries to the administrative grade staff. The higher the surplus the easier it is for the D.M to operate the bureau as better offices, equipment and secretarial help can be acquired.

The budget constraint is given by

\[ B = W \cdot N + S \]  \hspace{1cm} (2)

Where \( W \) represents the annual salary which is assumed to be fixed by central government.

The second constraint represents the relationship between leisure and the number of administrators employed (\( N \)).
\[ L = L(N) \quad \text{.............(3)} \]

with \( L_n < 0 \), and \( L_{nn} < 0 \)

An increase in \( N \) increases utility but decreases the amount of leisure as more time is spent on supervision, advising and assessment.

The problem is to maximise the utility function (1) subject to the constraints in equations (2) and (3). This is solved by forming the Lagrangian.

\[
W = U(N, L, S) + \lambda_1 \left[ L - L(N) \right] + \lambda_2 \left[ B - \bar{W} N - S \right]
\]

Giving the first order conditions:

\[
\begin{align*}
U_n - \lambda_1 L_n - \lambda_2 \bar{W} &= 0 \\
U_1 + \lambda_1 &= 0 \\
U_s + \lambda_2 &= 0
\end{align*}
\]

which simplify to:

\[
U_n + U_1 \cdot L_n = U_s \cdot \bar{W}
\]

The decision maker maximises utility by increasing \( N \) up to the point where the marginal utility obtained equals the marginal utility from using the wages of the marginal administrator for surplus (S). Once \( N \) is determined, then the amount of on-the-job leisure (L) is determined.

There is an upper limit on the expansion of output as increasing utility from an increase in \( N \) is offset by the decreasing utility from the resulting reduction in L. It is
therefore possible that the output level produced by the bureau is below the output level that would be produced by the profit maximising, competitive firm. As Peacock points out, this is in contrast with the Niskanen model in which the decision maker will consistently overproduce as compared with a competitive firm.

Peacock developed his model with the specific aim of indicating how X-inefficiency can arise in a public bureaucracy. The thrust of his argument is that the senior bureaucrat has the opportunity to choose non-cost-minimising positions in the process of utility maximization. This, deviation from the optimum "is more likely to take the form of producing output at well above minimum cost. This is because on the job leisure normally requires complementary expenditure such as expense allowances and other perquisites of office". (Peacock 1979, p.240)

The economic models of bureaucracy which adopt the utility maximisation approach are a variant of the utility maximisation models of the firm. These models developed most notably by Baumol (1959), Marris (1964) and Williamson (1964) are an alternative to the traditional profit maximisation hypothesis. Williamson, for example, assumes that managers derive utility from the size of the staff and that the additional expense resulting from over staffing means that output will be produced above minimum cost.

The idea that bureaucrats exhibit preferences for items beside output is also incorporated into the model of bureaucracy
constructed by Migue and Belanger (1974). In this model the bureaucrat derives utility from X-inefficiency which represents such 'costs' as leisure, perquisites and payments to lobbyists supporting the bureau. Thus, the maximisation process implies that bureaucrats produce at above minimum costs. Migue and Belanger predict that bureaus will exhibit both allocative inefficiency and X-inefficiency in contrast to the Niskanen model in which bureaus tend to produce output at minimum costs. Niskanen regards X-inefficiency as relatively unimportant, he argues that "most bureaus have an incentive to seek out and implement the most efficient combinations of factors and production processes for a given quantity of output" (Niskanen 1973 p.32).

The models of bureaucracy that have been considered offer conflicting results in terms of the likely form of bureaucratic inefficiency. However our aim, in this section has not been to resolve the question of whether bureaucratic inefficiency is most likely to take the form of allocative inefficient or X-inefficient or both. Rather, we have reviewed models that indicate how inefficiency can arise. The evidence suggests that bureaus are inefficient because it is in the interests of bureaucrats either to produce too much output and/or to produce output at above minimum cost. Bureaucrats are able to get away with such behaviour because the controlling sponsors, having little or no information on the true costs of production, are unable to force bureaucrats to produce the optimum output at least cost. Clearly, a strategy to reduce inefficiency must therefore aim either to change the incentives of bureaucrats, so as to make it in their interests to produce efficiently, or, to provide sponsors with the
necessary information on costs to enable them to force bureaucrats to produce efficiently. These types of strategy are now discussed.

2.4 CUTTING BUREAUS DOWN TO SIZE

The reforms suggested by Niskanen (1971, 1980, 1983) to combat bureaucratic inefficiency involve changes in the incentive system within the bureau and changes in the structure of the bureaucracy. To change the incentives of bureaucrats, Niskanen proposes a number of reward systems that could be implemented to induce bureaucrats to maximize, not the total budget, but the difference between the obtainable budget and the minimum total costs of the service. This, he argues, would reduce both the problem of X-inefficiency and oversupply. One such reward system is to allow the bureaucrat to retain a proportion of the difference between an approved budget, based on some expected level of output for each service, and actual costs. This reward system would only work in bureaus supplying services for which the output is relatively easy to measure. Niskanen suggests several services: the processing of welfare payments and tax returns and air traffic control.

Niskanen's proposals put forward in "Bureaucracy: Servant or Master?" (1973) published by the Institute of Economic Affairs, evoked a mixed response as is illustrated by the following quotes:

3Extracts from "Commentaries" in Niskanen, W. (1973), Bureaucracy: Servant or Master? (IEA) p 65-95
"The picture of senior civil servants 'feathering their nests' at the expense of service to the public, however false and grotesque, is not suitable for exhibition in London". (Houghton, 1973).

"...the idea of rewarding people by letting them keep some or all of the margin between the cost of providing a service and the sale price is the old impetus which started the Industrial Revolution, and which has sent the standard of living soaring through the roof over two short centuries". (Ridley 1973).

"Top civil servants in Britain are not in it for the money. They would recoil from any incentives' scheme on the lines suggested by Professor Niskanen". (Houghton 1973).

"Can people in Britain be cured of the belief that they are owed a living, when they have not earned it? The best way would be to start at the top - with the bureaucrats". (Ridley 1973).

The main obstacle that existed in the early 1970's to the implementation of any of Niskanen's proposals was the lack of information concerning bureaucratic organization and performance. As Ridley (1973) pointed out, referring to the civil service, "we know there are 700,000 bureaucrats; but how they are organized, what they do, and how efficiently they do it, we know not". However, since the early 1970's, and most visibly, since the return of the Conservative government in
1979, the performance of the public sector has come under increasing scrutiny. Incentive schemes along the lines suggested by Niskanen under the banner of "performance related pay" have been introduced into various public sector organizations including the civil service, the National Health Service and local authorities.

In our discussion of X-efficiency theory (see Chapter 2), we focused upon the labour input as the major source of X-inefficiency. We can summarize the discussion as follows: as labour contracts are incomplete, individuals are free, to some extent, to choose their effort levels and therefore individual productivity becomes a variable. This implies that costs are not minimized and X-inefficiency exists. It follows that a strategy for reducing this type of X-inefficiency will be concerned with the factors that influence the motivation of individuals in their choice of effort position. Here, reward systems have a clear role to play in reducing X-inefficiency by influencing individual behaviour. In Chapter 5 we consider theories of motivation in order to throw some light onto the question of what motivates individuals at work. We also consider the implications of these theories for the design of effective reward systems.

2.4.1 INJECTING COMPETITION INTO BUREAUCRATIC SUPPLY

The second type of reform suggested by Niskanen to reduce bureaucratic inefficiency involves changing the structure of the bureaucracy by: (i) increasing competition among bureaus supplying similar public services and; (ii) increasing
competition to the bureau by greater use of private sources of supply. According to Niskanen, competition among bureaus supplying similar services reduces X-inefficiency as competition provides the stimulus for bureaus to seek out efficient production processes and increases the amount of information available to the sponsor. As we noted above, information on cost provides sponsors with a control device enabling them to offset the power of the bureau. Similarly, increasing competition by greater use of private sources of supply reduces the monopoly power of the bureau and generates information on costs which may be used by the sponsor as a control device.

Toma and Toma (1980) also emphasize the importance of competition either in the form of competing bureaus or from outside public or private agencies as a way of increasing the amount of information available to the sponsor. In addition to this, a number of authors have discussed the various types of information required by the sponsor to monitor allocative and X-inefficiency. Information about the bureau's actual cost curve is required by the sponsor wishing to control allocative inefficiency in the form of oversupply. Once it knows more than one point on the actual total cost function, the sponsor can make some inference concerning marginal cost. If marginal cost exceeds marginal valuation at the current output level, taxpayers will benefit from a reduction in output. The sponsor may obtain this information

---

4 See, for example, Breton and Wintrobe (1975) and Toma and Toma (1980).
through, for example, an investigation of the recent cost-output record of the bureau and does not require information from other bureaus supplying similar goods and services. However, information on the bureau's actual cost function is not sufficient to control X-inefficiency. Here, the sponsor requires additional information concerning the minimum cost of production. Such information is more readily available where a number of suppliers provide similar output.

The effect of the structure of supply on the budgetary equilibrium of a bureau has been modeled by McGuire et al (1979). They also consider how information about a bureau's cost helps the sponsor but conclude that information about cost and competitiveness of structure of supply are substitutes i.e. an increase in one reduces the contribution of an increase in the other. For the sponsor, a competitive supply structure is best. The presence of a number of bureaus supplying substitute products forces each bureau to compete for the sponsor's funds by offering more net benefits than it otherwise would. If the sponsor possesses information it can then direct a bureau to produce an output that provides net benefits above those produced by competition alone. Here, outside information is less useful the more a bureau is forced to reveal by competition (McGuire et al 1979).

The main emphasis of studies directed by the public choice approach, is on the lack of competition in the public sector as compared to the private sector. These studies conclude that a more competitive supply structure reduces both allocative inefficiency and X-inefficiency. Empirical evidence from Deacon (1979) and Mehay and Gonzalez (1985) on
the effects of alternative supply structures tends to confirm this view. Both studies look at the impact of the Lakewood Plan (see section 2.1.1) of service provision. This provides an interesting example of American cities who purchase a wide range of public services under contract from public and private vendors.

Deacon (1979) tested the hypothesis that cities who purchase services from outside suppliers spend less than do otherwise similar, producing cities. To test this hypothesis empirically, Deacon examined 64 cities in Los Angeles County, of which approximately one-third had adopted the Lakewood Plan. The major services purchased by these cities were street maintenance and engineering (supplied by both public and private enterprises) and police protection (supplied almost exclusively by public enterprises).

Deacon concluded that purchasing cities spend significantly less on public services than producing cities. He found that purchasing cities spend about 86 per cent as much on all services as do their producing counterparts. Figures for police protection and street maintenance were 58 percent and 70 percent respectively.

The study by Deacon focused on the impact of the Lakewood system of inter governmental contracting for the purchasing cities. A later study by Mehay and Gonzalez (1985) analyses the effects of contract supply on the county departments which supply the services. Mehay and Gonzalez analyse the differences in incentives to efficient production in a government department which supplies a portion of its services
on a contract basis versus a department which does not contract at all.

Under normal circumstances a county department provides a service only to its sponsor in exchange for an annual lump sum budget. In contrast, a county department that sells services to cites under the Lakewood Plan is forced to 'cost-out' each service and to sell the service at a per unit price that covers cost. This price must be charged to all cities and, in order to retain, and attract customers, the price must be below what it would cost the purchasing city to produce the service itself. This constraint on price creates a pressure for suppliers to control production costs. Furthermore, the price charged conveys information to the sponsor on the true costs of production and enables them to monitor the bureau more easily.

The Mehay and Gonzalez analysis implies that a county department supplying a given service on contract ('suppliers') will tend to experience lower per unit cost than a comparable county department producing the same service but not supplying it on contract to cites ('non-suppliers'). To test this hypothesis they examine 53 county sheriff departments in California that supply a significant amount of law enforcement services - general police and traffic patrol - on contract to

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5 Contract price are based on a formula that, according to state law, must include recovery of divisional and departmental overhead expenses, as well as the direct expenses of providing the service (Sonenblum et al., 1977).
municipalities. Their results support the hypothesis that contract supply produces some incentives for efficient production. For example, their findings indicate that average costs in supplier counties are nearly 20% lower than average costs in non-supplier counties.

In the UK local governments tend to be local monopolies for the goods and services that they provide – education, environmental services, housing, law and order etc. However, examples of alternative supply structures incorporating competing public and private suppliers are becoming increasingly common.

2.5 CONCLUSION

Our review of the public choice models of bureaucracy indicated that bureaucratic inefficiency arises because it is in the interests of bureaucrats either to produce too much output and/or to produce output at above minimum cost. The sponsor, who lacks information on the true costs of production, is unable to force bureaucrats to produce the optimum output at least cost. The remedies that have been suggested for these bureaucratic ills are (i) to change the incentives of bureaucrats, and (ii) to introduce competition into the supply of public goods and services. With regards to the latter option, competition amongst suppliers provides a constraint on price which creates a pressure on suppliers to control production costs. Competition also generates information for the sponsor who is therefore able to offset, to some extent, the power of the bureau. The asymmetries in information available to the sponsor may also be overcome by
the introduction of information gathering mechanisms.

The empirical evidence, noted above, on the effects of a competitive supply structure exemplified in the US by the Lakewood Plan, represents a very small selection from the mass of literature on the relative efficiency of private and public production. For an overview of this topic and a summary of the evidence see Spann (1977), Bennett and Johnson (1980), Blankart (1980), Borcherding (1982) and Millward (1983).
CHAPTER 3

PERFORMANCE MEASUREMENT IN THE PUBLIC SECTOR

3.1 INTRODUCTION

The attitude of the Conservative government towards the public sector was made clear in the 1979 election manifesto: the public sector should be cut back. Although short on how the public sector should be cut back, the manifesto referred to "a reduction of waste, bureaucracy and over-government". Over the succeeding ten years, this statement has been translated into a whole series of policies aimed at reducing the absolute size of the public sector and improving the performance of what has remained.

The rationale behind the desire to reduce the size of the public sector stems from the conviction that it is necessarily inefficient in the management of resources because it is exempt from the disciplines of the market. This conviction has led to policies aimed first, at transferring public sector organisations into the private sector where they will be directly subject to the disciplines of the market. Second, at importing the disciplines of the market into the public sector by finding substitutes for the forces of demand and supply which dictate the allocation of resources in the market economy, and for the profit motive and consumer choice which make the market tick.

The Conservative government's privatisation policy has been
extensively documented elsewhere. Here we are concerned with the second strand of policy; to improve the performance of the public sector. We begin by examining the meaning of public sector performance and value for money. Drawing on the definitions of public sector efficiency developed in Chapter 1, we explore the links between the concepts of both allocative efficiency and X-efficiency and the many and varied dimensions of public sector performance. In Chapter 4 we present the results of our study "Performance Measurement in Local Government - A National Survey" carried out during 1987. This empirical research provides a framework for assessing how the theory of performance measurement, presented here, compares with the practice of performance measurement with respect to a number of local authority services. Finally, we consider to what extent the policy prescriptions arising from the public choice models of bureaucracy, surveyed in Chapter 2, are realised through the implementation of performance measurement systems. For example, taking the "sponsor" identified in Niskanen-Tullock type models of bureaucracy, we ask whether the information provided by performance measurement provides a control device that enables the sponsor to counter the monopoly power of the bureau.

3.2 A PLETHORA OF ES?

The increasing trend towards measuring the performance of local government was stimulated by the establishment of the Audit Commission for England and Wales (herein after the Commission). The duties of the Commission, laid down in the Local Government Finance Act, 1982, were as follows:

59
to appoint auditors for all local authorities in England and Wales and ensure that bodies secure economy, efficiency and effectiveness in the use of resources and;

- to undertake or promote studies to improve economy, efficiency and effectiveness in local authorities.

The terms economy, efficiency and effectiveness, commonly referred to as the 3Es, are measures of performance which are combined in the "value for money" (VFM) concept. This phrase has been popularised by the Government to represent the notion that as taxpayers and consumers of local authority services VFM means we are getting a good deal.

In recent years, the traditional 3Es have been seen to be rather limited and additional dimensions of performance have been considered. Three further Es, efficacy, equity and electability have been added to the value for money framework. The precise definitions of all these Es has caused a certain amount of controversy and been the subject of numerous debates. However, following on from the suggestion by Flynn et al (1988), that "there is now a fair amount of agreement on technical definitions of the terms", we have compiled the following definitions:

ECONOMY: the terms and conditions under which an organisation acquires human and material resources; an economical organisation acquires these resources in appropriate quantity and quality at least cost.
EFFICIENCY: the relationship between the goods and services produced and the resources used to produce them; an efficient organisation produces the maximum output for any given set of resource inputs, or minimises the inputs necessary to produce a given quality and quantity of outputs.

EFFECTIVENESS: the extent to which the defined task or work programme has been accomplished in relation to overall aims.

EFFICACY: the impacts on the community of a programme. This differs from effectiveness in so far as effectiveness may refer to internal target achievement rather than the external impacts of a programme.

EQUITY: the concern, in the public sector, for the principle of administrative justice in which like cases are dealt alike.

ELECTABILITY: refers to the tension between management and politics; the politicians concern with the popularity of programmes in the eyes of the electorate.

Economic activity in the private sector will usually give value for money for the individual who spends it. In the perfectly competitive situation, as described in chapter 1,
there is perfect assimilation of economy, efficiency and effectiveness in production and consumption, since the demand for a firm's goods reflects consumer's assessment in terms of price and quantity. The confrontation of demand and supply, and the resulting price takes everything into account: economy, efficiency, effectiveness, quality ... Electability, equity and efficacy are redundant concepts in the private sector. Although the "perfect" situation does not exist, the profit objective in the private sector ensures a tendency toward allocative efficiency and X-efficiency. Even if we substitute the profit maximising theory of the firm by models which emphasise other managerial objectives, such as size of market share, good industrial relations or consumer satisfaction or with Baumol's (1964) sales revenue maximisation theory, in each case the pressure arising form the threat of bankruptcy or takeover focuses management's attention, at least partly, on profit. This is the crucial yardstick which is missing from the public sector.

Although profit is not the only indicator of performance in the private sector it features strongly, together with a handful of other indicators, within a set of key indicators used by management as a decision making tool. Performance measurement is the public sector equivalent providing a framework for measuring performance in terms of economy, efficiency, effectiveness, efficacy, equity and electability. Here we are concerned with how the Es of the value for money literature tie in with the economist's definitions of allocative efficiency and X-efficiency in the public sector that we identified in chapter 1 as follows:
ALLOCATIVE EFFICIENCY: producing the level and mix of services which the electorate demands i.e. allocating resources according to the preferences and budget constraints of the consumers.

X-EFFICIENCY: producing the maximum level of output from a given bundle of inputs.

Clearly, the concepts of X-efficiency, as defined by economists and efficiency, as defined within the value for money concept are identical. Economy is also subsumed under X-efficiency because efficiency in production requires organisations to chose the factor combination which minimises cost. However, whereas in the private profit sector there is an automatic tendency towards allocative efficiency because firms must produce the goods and services that correspond to consumer demand at prices that correspond to consumer willingness to pay, this is not the case in the public sector. Here, the preferences of consumers are expressed through the political process and there is no automatic tendency for public sector supply decisions to reflect these preferences. Thus, allocative efficiency in the public sector is considered a problem of demand where focus is on the voting mechanism and the role of political parties in generating public needs and a problem of supply where the focus is on the process of political and bureaucratic decision making.

The problem of allocative efficiency in public sector supply was explored in Chapter 2 within the framework of public choice models of bureaucracy. We concluded that allocative
inefficiency arises in the form of oversupply because it is in the interests of bureaucrats to expand production above the optimum level, and the sponsor, lacking information on the costs of production, is unable to force the bureau to produce the optimum output. To reduce allocative inefficiency the sponsor must acquire information about the bureaus' production process. Various options for generating the necessary information were also discussed in Chapter 2. One option, that of changing the structure of bureaucratic supply through, for example, competitive tendering which forces suppliers to reveal information about costs, is currently being realised through government legislation requiring local authorities to contract out services such as refuse collection, cleaning, laundry, security and maintenance.

As noted above, allocative efficiency of demand requires that public sector decision makers have information on the preferences of consumers, and that decisions to allocate resources reflect these preferences. Within the value for money framework allocative efficiency translates into effectiveness, which measures the level of benefits of various programmes in relation to overall aims, so long as the overall aims reflect the preferences of consumers. The higher the level of observed effectiveness, the closer we come to actually achieving an allocatively efficient solution.

3.3 MEASURING THESE Es

Having defined the value for money concept and explored its links to allocative and X-efficiency, we need to identify how
to measure value for money. Here, we concentrate on measuring the 3Es, economy, efficiency and effectiveness. The relationships between economy, efficiency and effectiveness and the ratios by which they are measured are shown in figure 3.1, reproduced from Jackson and Palmer, 1988.

\[
\begin{array}{ccc}
\text{Actual Output} & \text{Effectiveness} & \text{Planned Output} \\
Y & \frac{Y}{Y^*} & Y \\
\text{Actual Efficiency} & \frac{Y}{I} & \text{Planned Efficiency} \\
& \frac{Y^*}{I^*} & \\
\text{Actual Input} & \text{Economy} & \text{Planned Input} \\
I & \frac{I}{I^*} & I^*
\end{array}
\]

Where \( Y = \) Actual Output; \( Y^* = \) Planned Output
\( I = \) Actual Input; \( I^* = \) Planned Input

Figure 3.1 Economy, efficiency and effectiveness

Whereas efficiency is the relationship of quantity of output to input in a production process, effectiveness is the relationship of actual output to planned output. But, as the purpose of the organisation is not achievement as such, but the impact of this achievement, effectiveness measures attempt to measure the outcomes of the programme rather than outputs. Economy measures focus on the inputs to the production process, comparing actual input costs with planned or expected costs.
Measuring the inputs into a public sector production process is relatively straightforward. Inputs may be priced as they are often purchased in a market context or measured as a quantity, for example, labour hours. In contrast, measuring public sector outputs is fraught with difficulties. Outputs are not priced and are generally intangible. It is therefore useful to look at the production process in terms of inputs, intermediate outputs, outputs and outcomes. The inputs or factors of production - land, labour and capital, are combined to create a series of intermediate outputs, for example, school places and hospital beds. These intermediate outputs represent the ability to provide the services of education and health care and are relatively simple to quantify. Once used or delivered, they can be defined as outputs i.e. education given to an individual or medical care given to a patient.

Finally, the outcomes of the service refer to the effect that the service has on the recipients, in this example, educational standards and health of the population. The definitions of economy, efficiency and effectiveness and their relationship to the production process are summarised in figure 3.2.
Figure 3.2 Economy, efficiency and effectiveness in the production process.

This theoretical framework for measuring performance emphasises that services need to be measured along four dimensions: inputs; intermediate outputs; outputs; and outcomes. The resulting data provides the raw material for constructing performance indicators. Once performance indicators have been identified and measured, then performance can be monitored and assessed. That is the theory of performance measurement. The question of what happens in practice provided the focus for our survey of performance measurement in local government, discussed in Chapter 4.

We noted in the introduction to this chapter that the drive towards improving the performance of local government was stimulated by the establishment of the Audit Commission. We
now turn to an assessment of the work of the Commission, in the area of value for money, since its inception in 1982.

3.4 THE AUDIT COMMISSION

The Audit Commission is independent of central government and the source of its income is audit fees, the scale of which is based on the number of days required to carry out the work needed to meet the requirements of the Coode of Practice. The work undertaken by the Commission is split between value for money work carried out from November to March of each audit season and regularity auditing from April onwards. In this section we focus on the value for money work which covers five main areas:

- generating statistical Profiles of each authority
- national value for money reviews (known as Special Studies)
- audit flavours; value for money projects carried out by local auditors using centrally prepared audit guides based on the Special Studies
- local value for money projects on additional topics agreed by the auditor and the authority
- reviews of the management arrangements in place in an authority.

An authority's Profile brings together information drawn from the Census, Department of the Environment and the Chartered Institute of Public Finance and Accountancy (CIPFA). For a large authority this Profile includes 30 pages of charts and tables providing comparative information on local
demographics, social and economic indicators as well as staffing and expenditure levels on all the main government services: education, social services, council housing, police (outside London), fire services, museums, libraries, recreation and leisure and planning and environmental health. The Profile highlights those areas where either service provision or cost levels are greater or lower than those of the average for comparable authorities. The purpose is to highlight questions for further investigation.

Each year the Commission carries out a small number, 3 or 4, of Special Studies. These study, in detail, local authority services or costs and aim to define good practice and develop and test a practical audit approach on which to base the value for money projects for the following year. These subsequent audits are known as audit flavours to distinguish them from locally researched audit topics. The normal sequence is a Special Study in one year followed by an audit flavour in the next.

The Commission reviews the management arrangements in authorities by comparing the way an authority is managed with its model of good management practice in local government.¹ This approach was tested over the period 1984 - 1986 with five

¹The first edition of the handbook, Economy, Efficiency and Effectiveness (1983) sets out the Commission's views on what constitutes good management.
volunteer authorities and provides the "technology" for current management audits. During 1987/88 the Commission's role with respect to management arrangements focussed on "overall management arrangements" and on the cost and role of councils' central departments. Two major studies at individual authorities were undertaken:

Coventry. Work focussed on the role and cost of the council's central departments, in relation to their contribution to its front-line services. Acting on recommendations in the study report, the council has saved nearly 2 million pounds per annum.

Surrey. The report concentrated on four main areas of general management - policy planning, performance review, financial management and personnel management. The report concluded that management systems should be designed to delegate responsibility, set targets, help people maximise performance and monitor achievements.

The overall approach of the Commission is summarised in Table 3.2 below.
Table 3.2 Audit Commission approach to local government audits

<table>
<thead>
<tr>
<th>KEY STEPS</th>
<th>RESULTS</th>
</tr>
</thead>
</table>
| Regularity Audit  
  - Systems Review  
  - Balance Sheet Audit  
  - Objections and Questions | Audit Opinion |
| Analysis of Comparative information in Profiles | Management Letter to Authority |
| Review of Management Arrangements against Commission Model | Recommendations for Action |
| Selected Value For Money Projects | |

In the remainder of this section we focus on the Commissions audit flavors. Over the past six years the Commission has cared out 5,800 individual audit flavours in areas such as purchasing, refuse collection, care of the elderly, highway maintenance and services for the mentally handicapped. The full range of these audits is shown in Table 3.3. These are the value for money projects which call on auditors to satisfy themselves that authorities have made proper arrangements for securing economy, efficiency and effectiveness in their use of resources. To illustrate these audit flavours, we take the example of the Commissions study of local authority purchases.
<table>
<thead>
<tr>
<th>Phase 1: Education</th>
<th>Phase 1: Administration</th>
<th>Phase 1: Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990-90</td>
<td>1987-88</td>
</tr>
<tr>
<td></td>
<td>1993-89</td>
<td>1995-96</td>
</tr>
<tr>
<td></td>
<td>1994-85</td>
<td>1996-97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1998-99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1999-00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1993</td>
</tr>
</tbody>
</table>
carried out in 1983/84. At this time, local authority purchases, excluding utilities, cost approximately £3 billion per year.

The auditors approach, which is developed in the Special Study of the previous year, is to use the statistical profiles to make comparisons for each authority against the average. In the purchases audit, the Commission compared the prices paid for the same item by different authorities to identify which part of any differences could not be explained by factors such as quality, volume or distribution. To illustrate this, diagram 3.4 shows the spread of prices paid for a typical item, a packet of 100 envelopes of a particular specification.

The scale of opportunities for better value for money is identified as the difference between the average and more successful authorities. The purchasing audit surveyed the prices of 47 items paying particular attention to fuel oil, building materials, education and office supplies and identified potential gains of £200 million a year. Having identified these potential gains, the Commission reviews the purchasing arrangements of high spending authorities. This highlights weaknesses in, for example, taking advantages of purchasing scale, competition in the product market and management of storage and distribution. To ensure that authorities achieve improvements in the areas identified, the Commission continues to monitor implementation of improved purchasing techniques.

At the conclusion of each audit, an assessment is made by the
No of Authorities

Price of envelopes by number
auditor of the total annual financial savings which could arise from the recommendations made in the report. This is recorded in the system as the "value improvements identified figure". At least annually, auditors follow up the progress being made by authorities on all project work undertaken since 1983-84. An assessment is made for each project of the value improvements actually achieved, the "fulfilled" figure. Both the identified and fulfilled figures represent the improvements achievable annually.

THE IMPACT OF THE COMMISSION ON LOCAL AUTHORITY SPENDING

One way to assess the impact of the Commission is to calculate the value improvements that have been "identified" and "fulfilled" over the period 1983-87. Table 3.5 shows the value for money results over this period. These results show, for example, that overall 40% of all identified opportunities have been achieved. This represents fulfilled cost savings of £372 million annually.
Table 3.5 Value for Money Results 1983-1987

<table>
<thead>
<tr>
<th>AUDIT YEAR</th>
<th>VALUE IMPROVEMENTS</th>
<th>% FULFILLED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IDENTIFIED million</td>
<td>FULFILLED million</td>
</tr>
<tr>
<td>Central Studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983-84</td>
<td>142</td>
<td>85</td>
</tr>
<tr>
<td>1984-85</td>
<td>163</td>
<td>70</td>
</tr>
<tr>
<td>1985-86</td>
<td>176</td>
<td>71</td>
</tr>
<tr>
<td>1986-87</td>
<td>197</td>
<td>47</td>
</tr>
<tr>
<td>1987-88</td>
<td>46</td>
<td>6</td>
</tr>
<tr>
<td>Local Studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983-84</td>
<td>196</td>
<td>93</td>
</tr>
<tr>
<td>TOTAL</td>
<td>920</td>
<td>372</td>
</tr>
</tbody>
</table>

We are also interested in how the cost savings fulfilled by local authorities compare with the total cost of the Commission. Table 3.6 compares the annual operating costs of the Commission with the savings fulfilled each year.

Table 3.6 Covering the cost of the Commission

<table>
<thead>
<tr>
<th>Audit Year</th>
<th>Value Improvements Fulfilled (millions)</th>
<th>Operating Cost (millions)</th>
<th>Cost as a % of Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983-84</td>
<td>85</td>
<td>13</td>
<td>15%</td>
</tr>
<tr>
<td>1984-85</td>
<td>70</td>
<td>20</td>
<td>29%</td>
</tr>
<tr>
<td>1985-86</td>
<td>71</td>
<td>22</td>
<td>31%</td>
</tr>
<tr>
<td>1986-87</td>
<td>47</td>
<td>24</td>
<td>51%</td>
</tr>
<tr>
<td>1987-88</td>
<td>6</td>
<td>26</td>
<td>433%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>279</td>
<td>105</td>
<td>38%</td>
</tr>
</tbody>
</table>

Clearly, for the years 1983-84 to 1986-87 the value improvements fulfilled by local authorities far outweighed the
costs of the Commission. The anomaly for 1987-88 arises because of the time lag between identifying savings and fulfillment of these savings, which the Commission recognises may take 2-3 years. On average over this period the costs of the Commission represented 38% of the savings resulting from its audit flavours. Furthermore, as this represents only 50% of the Commissions work we can conclude that the cost of audit flavours is significantly outweighed by the fulfilled savings.

The above analysis focuses on the impact of the Commission on local authority spending. We are unable to identify, in summary form, the impact of the Commission on the effectiveness of local authority service provision. One very general indicator of effectiveness, as discussed previously, is the level of consumer satisfaction. A recent MORI poll found that there has been a favourable shift in levels of satisfaction between 1981 and 1986. Table 3.7 summarises the responses to the question: How satisfied or dissatisfied are you with the way the council is running this area?
Table 3.7 Attitudes to local government services

<table>
<thead>
<tr>
<th>Authority</th>
<th>Very or fairly satisfied 1981</th>
<th>Very or fairly satisfied 1986</th>
<th>Very or fairly dissatisfied 1981</th>
<th>Very or fairly dissatisfied 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner London</td>
<td>n/a</td>
<td>38</td>
<td>n/a</td>
<td>41</td>
</tr>
<tr>
<td>Metropolitan areas</td>
<td>41</td>
<td>47</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>Rural areas</td>
<td>52</td>
<td>56</td>
<td>30</td>
<td>24</td>
</tr>
<tr>
<td>Wales</td>
<td>n/a</td>
<td>43</td>
<td>n/a</td>
<td>30</td>
</tr>
<tr>
<td>Owner-occupiers</td>
<td>48</td>
<td>52</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>Council tenants</td>
<td>42</td>
<td>60</td>
<td>39</td>
<td>24</td>
</tr>
</tbody>
</table>

Although levels of users' satisfaction varied between services and from authority to authority, there was little difference between age groups, income levels or supporters of different political parties.

Another interesting approach is to compare the savings achieved by authorities with overall local authority expenditure. This is done in Table 3.8.

Table 3.8 Local authority expenditure and fulfilled savings

<table>
<thead>
<tr>
<th>Audit Year</th>
<th>Local Authority expenditure (millions)</th>
<th>Fulfilled savings (millions)</th>
<th>Savings as a % of expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983-84</td>
<td>36 533</td>
<td>85</td>
<td>0.23%</td>
</tr>
<tr>
<td>1984-85</td>
<td>38 488</td>
<td>70</td>
<td>0.18%</td>
</tr>
<tr>
<td>1985-86</td>
<td>40 242</td>
<td>71</td>
<td>0.18%</td>
</tr>
<tr>
<td>1986-87</td>
<td>41 998</td>
<td>47</td>
<td>0.11%</td>
</tr>
<tr>
<td>1987-88</td>
<td>45 479</td>
<td>6</td>
<td>0.01%</td>
</tr>
</tbody>
</table>
Although the savings fulfilled each year represent only a small percentage of total local authority expenditure these are recurring improvements, so that by 1987-88 the total fulfilled reached £279 million or 0.6%. The current identified figure of £920 million represents 2% of local authority expenditure.

Our critique of Niskanen's model of bureaucracy in Chapter 2 focusses on his proposition that the bureau sponsor has little or no information about the production and cost functions of the bureau. Various methods of acquiring this information were examined and we concluded that to reduce X-inefficiency the sponsor needs to acquire information about a bureau's actual costs plus an estimate of the true minimum cost of supplying the service. Our review of the work of the Commission suggests that it plays a vital role in gathering this information: the Profiles of local authorities highlight those areas where either service provision or cost levels are greater or lower than those of the average for comparable authorities; the Special Studies review, in detail, local authority costs and aim to define good practice.

By reviewing high spending authorities, making recommendations on how these authorities can reduce spending and monitoring the implementation of its recommendations, the Commission creates pressure for authorities to reduce production costs. Such cost savings are recorded as improvements in value for money. This translates, in economic terms, to a reduction in X-inefficiency. The creation of the Commission thus represents the introduction of a control device, along the
lines suggested by Breton and Wintrobe (1975), see Chapter 2. The value of this control device in any particular year, can be represented as the savings made by local authorities (Tables 3.5, 3.6, 3.8). The cost of this control device can be approximated with reference to the cost of the Commission (Table 3.6).

Taking the period 1983-84, the total operating costs of the Commission were £13 million. As the work of the Commission is split between value for money work and regularity auditing we can apportion half of the total to represent the cost of this control device, i.e. £6.5 million. The value of the Commission's work in 1983-84 can be represented by the 'value improvements fulfilled' by authorities, i.e. £85 million. As the sponsor will incur control expenditures up to the point at which marginal benefits are equal to marginal costs, the information provided in Table 3.6 indicates that as the marginal benefit of the Commission currently exceeds the marginal cost, it does represent an effective control device.

3.5 CONCLUSION

One of the aims of this chapter has been to examine the meaning of value for money and link this concept to economic definitions of efficiency. Taking as a starting point, the 3Es of economy, efficiency and effectiveness, we have seen that after a decade of performance measurement three further Es, efficacy, equity and electability have been added to the value for money framework. The numerous debates, seminars and conferences that our research has taken us to have highlighted
considerable controversy amongst academics and practitioners over the precise definitions of all these Es. From this, we have distilled the definitions presented here. Moreover, we have shown how the Es of the value for money literature tie in with the economist's definitions of allocative and X-efficiency, and presented a theoretical framework for measuring performance.

Our survey of the work of the Audit Commission illustrates their approach to identifying and promoting value for money in local authorities. Their role in generating information, defining good practice and monitoring the implementation of suggested improvements has been examined. Over the period 1983-88 the Commission carried out approximately 6000 value for money projects. As a measure of the impact of this on local authority performance we have assessed the impact of the Commission on local authority spending, and suggested that the Commission represents an effective control device in so far as the cost of this vfm work is significantly outweighed by the savings achieved by local authorities. In an attempt to assess the impact of the Commission on the effectiveness of local authority service provision we have noted the favourable shift in levels of consumer satisfaction with service provision between 1981 and 1986, but have stressed the crudeness of this indicator.
Prior to this survey, limited information was available on how local authorities set about measuring their performance; which dimensions of performance they were attempting to measure; and the uses to which performance measurement information was put. These questions formed the basis of the study. More specifically, we wished to find out:

- What performance indicators are currently in use in local government;
- how performance indicators are structured within the organisation;
- who uses performance indicators and why;
- how performance indicators are perceived by the users (are they seen as relevant, reliable etc)
- how performance indicators relate to management decision making at various levels of the organisation.

The services chosen for the study were: education, personal social services, highways, housing, and refuse collection.

A postal questionnaire was sent to the person responsible for each of these services in a sample of local authorities as shown in table 4.1.
Table 4.1 Survey sample

<table>
<thead>
<tr>
<th>AUTHORITY</th>
<th>SERVICE DEPARTMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner London Boroughs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sample size = 6</td>
<td>ILEA</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Social Services</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Highways</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Housing</td>
<td>6</td>
</tr>
<tr>
<td>Outer London Boroughs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sample size = 10</td>
<td>Education</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Social Services</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Highways</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Housing</td>
<td>10</td>
</tr>
<tr>
<td>Metropolitan District Councils:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sample size = 36</td>
<td>Education</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Social Services</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Highways</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Refuse Collection</td>
<td>36</td>
</tr>
<tr>
<td>Non-Metropolitan County Councils:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sample size = 39</td>
<td>Education</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Social Services</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Highways</td>
<td>39</td>
</tr>
<tr>
<td>Non-Metropolitan District Councils:</td>
<td>Housing</td>
<td>73</td>
</tr>
<tr>
<td>sample size = 73</td>
<td>Refuse Collection</td>
<td>73</td>
</tr>
<tr>
<td>Total number of service departments</td>
<td></td>
<td>466</td>
</tr>
</tbody>
</table>
This sample excludes Wales, and includes all of the Non-Metropolitan County Councils (39), all of the Metropolitan District Councils (36), a random sample of the 296 Non-Metropolitan District Councils (73), the Inner London Education Authority, a random sample of Inner London Boroughs (6), and a random sample of Outer London Boroughs (10). The sample was structured in such a way as to include approximately equal numbers of the 5 service departments covered by the survey.

The questionnaire is included as Appendix A. This questionnaire was aimed at gathering information on systems of performance measurement at the level of individual service departments.

The choice of conducting a survey by questionnaire was made for a number of reasons:

- postal questionnaires are a relatively inexpensive means of gathering information;

- it was possible to have a large sample size and therefore obtain national coverage of performance measurement systems;

- the questionnaires were designed so as to enable much of the quantitative analysis to be carried out using computer packages.

The questionnaires were extensively researched and piloted. This led to many changes not only in the design and layout but also in the questions included. Piloting was, as far as possible, carried out with people who either held positions of
responsibility within a service department or other relevant professionals and fellow researchers in related fields. In total, the questionnaires were piloted with 20 individuals whose advice was both invaluable and influential in the design of the final questionnaires.

A review of the literature on survey design, and questionnaire design in particular, also influenced both the format and content of the questions. Thus the majority of the questions were designed to be closed-ended offering either alternative choices for a single response, or the possibility of choosing a number of responses to a single question. In addition to this, respondents were urged to include comments and to elaborate on their answers.

Prior to our survey, as part of the same research project, a questionnaire was sent to a sample of 58 local authorities, requesting information on their use of performance indicators. The results of this study are shown in Appendix B. These results suggested that there was considerable interest in the use of performance indicators by local authorities: 32% of the respondents had plans to introduce performance indicators. However, in a large number of local authorities (around 50%), no use was made of performance indicators. Our study, considerably extends this initial work to cover a wider range of authorities with a more detailed method of inquiry.

4.1.1 The Structure of the Questionnaire

The questionnaire was divided into 4 main sections with questions grouped under the following headings:
(1) GENERAL

(2) USE OF PERFORMANCE MEASUREMENT INFORMATION

(3) PERFORMANCE MEASUREMENT OF STAFF

(4) ASSESSMENT OF SERVICE PERFORMANCE MEASUREMENT SCHEMES

GENERAL

The first set of questions were aimed at discovering: what performance indicators were collected by the department; how often performance was measured; why performance measurement was introduced and; who was responsible for doing the measuring.

USE OF PERFORMANCE MEASUREMENT INFORMATION

An important aim of the survey was to identify the various uses of performance measurement information. Here, the questions asked: what performance measurement information was used by the various levels of management within the department, i.e. departmental management teams and sectional heads/operational managers; what performance measurement information was reported to other internal departments and to external bodies and; whether PIs were used as a basis for service comparisons.

PERFORMANCE MEASUREMENT OF STAFF

A recent development in many public sector organisations has been the introduction of performance related pay (PRP). For example, both general managers in the NHS and high-grade civil servants receive performance related bonuses. This section of
the questionnaire was aimed at discovering not only if service performance measurement was a basis for PRP in local authorities, but also, if it was generally used to evaluate the performance of employees. Specifically, we were interested in how managerial performance was assessed.

ASSESSMENT OF PERFORMANCE MEASUREMENT SCHEMES

This final section included a simple question on whether the respondent felt PIs should be used more often, less often or not at all. The respondent was also asked to indicate what factors, for example, lack of time and problems interpreting the data, inhibited the use of performance indicators.

The literature on PIs identifies a number of areas in which performance indicators have a role to play such as evaluating outcomes, clarifying objectives and justifying the use of resources. Respondents were therefore asked, how satisfied they were that PIs had fulfilled such roles. The final question was open-ended and asked for suggestions on how performance measurement systems and/or their use might be improved.

4.1 ANALYSIS OF QUESTIONNAIRE RESPONSES

The overall questionnaire response rate was 66% (308 questionnaires). This can be broken down by service department as follows:

86
Ten of the questionnaires were returned completely blank. In addition, a number of questionnaires were only partially completed. The reasons given were either that the Department lacked the resources necessary to complete the questionnaire i.e. lack of staff time, or that the Department made virtually no use of performance indicators and felt unable to complete certain sections of the questionnaire.

In our analysis of the questionnaire responses the total of all responses across departments are examined. In general, respondents were offered the possibility of choosing a number of responses to a single question. For example, the section on assessment of service performance measurement systems included a question asking respondents to indicate what factors, such as lack of access to data and problems of data interpretation, inhibited the use of performance indicators. The percentage totals for each of these responses reflects the respondents' opportunity to choose more than one and thus the sum of the totals exceeds 100%.

Finally, the information provided by the questionnaires was used to test a number of hypotheses. We were interested in the relationships between the size and political composition of local authorities and (i) the regularity of measurement of

<table>
<thead>
<tr>
<th>SERVICE DEPARTMENT</th>
<th>RESPONSE RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>54%</td>
</tr>
<tr>
<td>PSS</td>
<td>81%</td>
</tr>
<tr>
<td>Housing</td>
<td>66%</td>
</tr>
<tr>
<td>Highways</td>
<td>54%</td>
</tr>
<tr>
<td>Refuse</td>
<td>48%</td>
</tr>
</tbody>
</table>
performance, (ii) the extent to which performance measures are used by internal decision makers and (iii) how satisfied respondents were that PIs provide useful information for management at various levels within the organisation.

SECTION 1: GENERAL

The initial set of questions (1) - (9), asked respondents whether the performance indicators (PIs), in their Department included the following indicators:

(1) cost indicators - eg total cost, unit cost

(2) productivity indicators - eg the amount of work done by staff in a defined length of time

(3) utilisation rates - eg the extent to which available services are used

(4) time targets - eg the average time taken to carry out defined units of work

(5) volume of service indicators - eg measures of work performed

(6) demand/service provision indicators - eg comparing volume of service with potential demand

(7) indicators of quality of service

(8) indicators of customer satisfaction

(9) indicators of goal achievement
Respondents were also asked to state whether targets are set for each indicator. The results are given in Table 4.2.

Table 4.2 Indicators used in local authorities

<table>
<thead>
<tr>
<th>Type of indicator</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cost</td>
<td>98.1</td>
<td>63.5</td>
</tr>
<tr>
<td>productivity</td>
<td>66.0</td>
<td>59.6</td>
</tr>
<tr>
<td>utilisation rates</td>
<td>67.3</td>
<td>35.3</td>
</tr>
<tr>
<td>time targets</td>
<td>66.7</td>
<td>57.7</td>
</tr>
<tr>
<td>volume of service</td>
<td>90.9</td>
<td>55.1</td>
</tr>
<tr>
<td>demand/service</td>
<td>53.8</td>
<td>30.0</td>
</tr>
<tr>
<td>quality of service</td>
<td>50.0</td>
<td>27.1</td>
</tr>
<tr>
<td>customer satisfaction</td>
<td>37.7</td>
<td>10.4</td>
</tr>
<tr>
<td>goal achievement</td>
<td>47.2</td>
<td>40.8</td>
</tr>
</tbody>
</table>

Table 4.2 shows that the most common types of performance indicator across Departments are:

- cost indicators
- productivity indicators
- time targets
- volume of service indicators

Indicators of customer satisfaction are included in only 37.7% of departments.

In general, the types of indicator included most frequently are those that are the simplest to quantify, such as cost indicators, whilst indicators such as quality of service, customer satisfaction and goal achievement appear less often, if at all. This imbalance is frequently noted in the literature on performance indicators. Authorities concentrate on measuring what is easily measurable and this results in a bias towards measuring performance in terms of economy and efficiency rather than effectiveness. Pollitt (1986) suggests that the bias towards measuring economy and efficiency reflects management's concern with cost cutting. Taking 3 performance measurement schemes, Pollitt counted the number of indicators and categorised them according to what was being measured as shown in Table 4.3.
Table 4.3 What do contemporary performance assessment schemes measure?

<table>
<thead>
<tr>
<th>What is being measured?</th>
<th>Bexley Annual Review of Service Performance 1983/4</th>
<th>CIPFA 1984 PIs for the Education Service</th>
<th>DHSS/NHS 1st line PIs July 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>61%</td>
<td>54%</td>
<td>43%</td>
</tr>
<tr>
<td>Economy (or other input-based)</td>
<td>14%</td>
<td>6%</td>
<td>11%</td>
</tr>
<tr>
<td>Effectiveness</td>
<td></td>
<td>1%</td>
<td>12%</td>
</tr>
<tr>
<td>(incorporating some test of impact/outcome)</td>
<td>1%</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>Quality</td>
<td>-</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>2%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>22%</td>
<td>39%</td>
<td>40%</td>
</tr>
<tr>
<td>Total number of measures counted</td>
<td>(721)</td>
<td>(33)</td>
<td>(135)</td>
</tr>
</tbody>
</table>

The overwhelming focus upon measuring efficiency and economy is a recurring criticism of performance measurement. However, developments are now occurring which shift the focus more onto effectiveness; the extent to which the programme has achieved its stated objectives. As local governments exist to provide services that are responsive to public needs, these objectives should reflect the needs and desires of the community rather than what local government thinks is good for them. Stewart and Clarke (1987) argue that measures of effectiveness often come close to incorporating the demands of consumers, but, more generally effectiveness refers to providing the right service to enable the authority to meet its own objectives. A new approach\(^1\), the "public service orientation", emphasises the role of local authorities as

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\(^1\) The case for a public service orientation was set out by Stewart and Clarke (1985a, 1985b, 1986a and 1986b).
providers of services for, not to the public. Hence, the activities of the authority are analysed by the service provided i.e. by the key characteristics of the service among which are:

- speed of service
- extent of consumer choice
- coverage
- discrimination of need
- quality of service
- sensitivity to complaints

This approach places emphasis on measuring performance in terms of:

AVAILABILITY; the amount and type of service provided
AWARENESS; users' knowledge of the service
ACCEPTABILITY; user satisfaction.

Here, it is the views of the consumer that play the central role. Whereas economy and efficiency measures are concerned with inputs and the technical relationship between inputs and outputs, the public service orientation is concerned with output and the requirements of the consumer: is the local authority providing services in line with the views, ideas and demands of the public? Clearly, this approach brings allocative efficiency of demand to the centre of the efficiency debate as it represents a drive towards finding out people's needs before making decisions relating to service provision and measuring the performance of a service according
to recipients not providers.

Since the idea of effectiveness - meeting public needs and desires - is so broad, there is a range of different measures of service effectiveness. In our survey, the performance indicators that can be included under this heading are; indicators of quality of service, indicators of customer satisfaction and indicators of goal achievement. As shown in Table 4.2, these types of indicators are only included in approximately 50% of all the departments surveyed.

Column (2), in Table 4.2, records the percentage of departments that set targets for each of the indicators. Comparing this with column (1), which records the percentage of departments including each of the indicators, shows that departments frequently produce indicators for which no target is set. To give a figure meaning, it must be compared with another figure. For example, a cost indicator of £2 million is meaningless, in isolation, as an indicator of performance. We need to know where this figure lies in relation to a target. The performance of anything is simply its actual outcome compared to some target outcome. Thus, the process of measuring performance involves a number of stages:

STAGE 1: the identification of aims and objectives;

STAGE 2: the establishment of performance measures/indicators to assess the degree to which the aims and objectives are being met;

STAGE 3: a comparison of the actual outcome of the programme
with the desired outcome;

The results in Table 4.2 suggest that the process of comparing the actual outcome of the programme with a target outcome is frequently omitted. For example, whereas 90.9% of departments include volume of service indicators, only 55.1% of these departments set volume of service targets. Comparing indicators with pre-set targets is only one method of measuring performance. Departments may also use indicators to compare their own performance with that of similar departments or to evaluate performance over time. The various uses of indicators as comparators is considered in a subsequent section.

Is performance measured regularly?
Respondents were asked how frequently performance is measured. The question allowed respondents to choose a number of responses so that, for example, a department that measured performance at weekly and monthly intervals indicated both responses. The totals represent the measurement time profiles for all departments. The results, in Table 4.4, show that approximately half of the departments measure performance at regular monthly and/or yearly intervals. The question allowed respondents to specify 'other' frequencies of measurement and 68 respondents recorded a quarterly measurement time profile.

Frequency of measurement has a significant impact on the use of performance indicators (Westwick, 1987). Although it is not possible to specify a definitive frequency of measurement,
Table 4.4

**Frequency of Measurement**

(% of responses recording different frequency of measurement)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every 6 months</td>
<td>14.8</td>
</tr>
<tr>
<td>Monthly</td>
<td>55.6</td>
</tr>
<tr>
<td>Weekly</td>
<td>20.4</td>
</tr>
<tr>
<td>Yearly</td>
<td>48.1</td>
</tr>
</tbody>
</table>

Measuring performance at monthly intervals may, in many instances, represent an "ideal" frequency. If performance is measured annually, by the time the information is received, the time may have passed for effective action. Clearly, however, the frequency of measurement is dependent on the type of indicator, as noted by many of the respondents.

It is also desirable that decision makers in performance measurement have a performance measurement time period. A frequent criticism of the performance indicator data collected through management information systems is that the information contained in the package is out of date. For example, the most recent package of information contained in the package was 3 years out-of-date.

In addition to measuring performance at regular intervals, 81.5% of departments also carry out ad hoc measurement. This may be done in response to inquiries from, for example, councillors or the local ombudsman or as part of a one-off service review.
it makes intuitive sense that a minimal time period for feedback is desirable, if managers are to take corrective action. If the time period is too long, then it is impossible for the decision makers to respond effectively to the situation.

Measuring performance at monthly intervals may, in many instances, represent an "ideal" frequency. If performance is measured annually, by the time the information is received, the time may have passed for effective action. Clearly, however, the frequency of measurement is dependent on the type of indicator, a point noted by many of the respondents.

It is also desirable that decision makers receive performance measurement information that covers an appropriate time period. A frequent criticism of the performance indicator data available to the managers in the NHS is that the information is out-of-date. For example, the 1985 package of indicators was in use until 1988, by which time the information contained in the package was 3 years out-of-date.

In addition to measuring performance at regular intervals, 81.5% of departments also carry out ad hoc measurement. This may be done in response to inquiries from, for example, councillors or the local ombudsman or as part of a one-off service review.
Who does the measuring?

In general, performance is measured by the service department itself. The results show that in approximately one-third of the departments the performance of the department is measured by the Finance department, but only rarely is performance measured by the Chief Executive's department.

Butt, (1987) suggests that a suitable mechanism for directing and co-ordinating value for money studies is a small but powerful performance review committee (PRC). The PRC should be made up of elected members working closely with the management team of the authority through the chief executive. Our evidence shows that in practice, few local authorities have a performance review committee (or similar), responsible for measuring the performance of all departments.

The use of performance measurement information is influenced by who constructs the indicators and who does the measuring (Lawler and Rhode, 1976). Utilisation is likely to be highest when decision makers are involved in these activities. This is because first, if the decision maker is involved in setting the indicator s/he is more likely to understand it, and secondly, involvement in setting indicators and measuring performance may positively influence the decision makers
motivation to use and act on the information.

Why was performance measurement introduced?

Table 4.5 shows the percentage of responses recording different reasons for the introduction of performance measurement. In many instances, performance measurement was introduced in response to a number of simultaneous internal proposals and external pressures. Approximately three-quarters of departments introduced performance measurement as a result of an internal management proposal. In approximately one-third of departments performance measurement was introduced as a result of external pressure from the Audit Commission. In general, the various internal proposals—management review; elected members; internal audit—have represented the stimulus for the introduction of performance measurement, whereas external pressures—audit commission; district audit; ombudsman—have been less significant. This suggests that the 1981 Department of Environment 'code of practice' which gave guidelines for authorities to include performance indicators in their annual reports was largely ineffectual.

In response to the question of when performance measurement was introduced approximately half of the respondents replied that the introduction of performance measurement was not a coherent strategy but had developed, on an ad hoc basis, over a number of years since the mid 1980's. The remainder of the responses indicated that performance measurement was formally introduced between 1984 and 1987. Thus, the introduction of formal performance measurement systems can be viewed as a
Table 4.5

Why Was Performance Measurement Introduced? (% of responses recording different reasons for introduction)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Committee</td>
<td>29.6%</td>
</tr>
<tr>
<td>District Audit</td>
<td>16.7%</td>
</tr>
<tr>
<td>Internal Audit</td>
<td>27.8%</td>
</tr>
<tr>
<td>Management Review</td>
<td>72.2%</td>
</tr>
<tr>
<td>Members</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

Section (X) of the questionnaire was aimed at discovering the reasons for the introduction of performance measurement. Performance indicators are a source of information for the various groups of decision makers within the local authority service departments. They are intended to be measurement tools for decision making in order to ensure that public services are economic, efficient, and effective. Performance measurement can be a decision-making tool, but it is important to note that these indicators are relevant to decision making. The actual use of the information is discussed later.
recent phenomenon and, in general, is an ongoing process developed over 3 - 4 years.

SECTION 2: USE OF PERFORMANCE MEASUREMENT INFORMATION

Section (2) of the questionnaire was aimed at discovering the uses to which performance measurement information is put. Performance indicators are a source of information for the various groups of decision makers within local authority service departments. They are meant to be practical tools for decision makers to use in making local services more economic, efficient and effective. Anyone working in local government can be a decision maker, and performance measurement can influence almost anyone's decisions. However, generally speaking, decision makers are thought of as people in supervisory, management or policy making positions. We identified 2 groups of decision makers:

Group 1: Departmental management teams;

Group 2: section heads/operational managers;

and asked which type of indicator was relevant to the decision making process of each group. The results are shown for Group 1 in Table 4.6, and for Group 2 in Table 4.7. It is important to note that these results show which of the indicators (listed fully in Table 4.2) are perceived as relevant to decision makers, the actual use of the information is discussed below.
Table 4.6

Indicators relevant to top management decision making
(% of responses recording different indicators as relevant)

- Demand/Service
- Goal achievement 64.2
- Productivity 51.9
- Qual of Service 71.7
- Time targets 38.9
- Cost 92.6
- Customer satisfaction 56.6
- Volume of service 53.7

We can see from the chart that goal achievement is the most frequently mentioned indicator, followed by customer satisfaction and cost. The least frequently mentioned indicator is time targets.
Table 4.6 shows that the types of indicator seen as most relevant to top management decision making are:

- cost indicators
- quality of service indicators
- indicators of goal achievement
- demand/service provision indicators

The types of indicator seen as least relevant to top management decision making are:

- time targets
- productivity indicators
- utilisation rates

We can draw a number of tentative general conclusions from these results:

(i) One of the concerns of Departmental management teams is with ensuring that the goals of the service are being met. Hence we would expect indicators of goal achievement to be seen as relevant. These indicators are indicators of effectiveness i.e. the extent to which the defined task or work programme has been accomplished in relation to overall objectives. Of the departments surveyed, 64.2% noted the relevance of goal achievement indicators.

(ii) Demand/service provision indicators, i.e. comparing volume of service with potential demand, were seen as relevant
by 63.0% of the departments surveyed. Clearly, such indicators play a vital role in determining the level of service provision necessary to meet the demands of the consumer, and are therefore relevant for management decisions concerning strategic planning.

(iii) Top management is concerned with keeping within cash limited budgets. This concern is highlighted by the high response recorded in relation to the perceived relevance of cost indicators. These indicators are required for monitoring expenditure and may be used in, for example, bids for resources and future budget planning.

(iv) A high percentage of respondents (71.7%), recorded quality of service indicators as relevant to top management decision making. However evidence from Table 4.2 suggests that in practice only 27.1% of Departments both measure and set targets for this indicator. Quality of service indicators are seen as highly relevant in theory, but in practice, few departments actually measure this dimension of performance.

Table 4.7 shows that the types of indicator seen as most relevant to middle management decision making are:

- cost indicators
- quality of service indicators
- productivity indicators
- volume of service indicators
Table 4.7
Indicators relevant to middle management decision making
(\% of responses recording different indicators as relevant)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>% Relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand/Service</td>
<td>48.1</td>
</tr>
<tr>
<td>Goal achievement</td>
<td>58.8</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>60.8</td>
</tr>
<tr>
<td>Productivity</td>
<td>67.3</td>
</tr>
<tr>
<td>Qual of Service</td>
<td>68.6</td>
</tr>
<tr>
<td>Cost</td>
<td>90.4</td>
</tr>
<tr>
<td>Vol of Service</td>
<td>67.3</td>
</tr>
<tr>
<td>Time targets</td>
<td>63.5</td>
</tr>
</tbody>
</table>
The types of indicator seen as least relevant to middle management decision making are:

- demand/service provision indicators
- utilisation rates
- indicators of goal achievement

These results indicate that, in general, the concerns of middle management are focused on the process of service delivery, rather than the effectiveness of the service and the extent to which available services are used. Thus, the type of indicator seen as most relevant include measures of work performed and the amount of work done in a defined length of time. Cost indicators are perceived as relevant by 68.8% of respondents.

Are performance indicators aggregated up to higher level performance indicators?

Respondents were asked first, if performance indicators are aggregated up to higher level PIs, in order to condense a wide range of indicators into a few key indicators, and secondly, if this is the case, on what basis are performance indicators aggregated? The results show that 40% of departments aggregate a range of indicators into a set of key indicators. The basis for aggregation was generally cost.
The use of performance indicator data by decision makers is affected by the amount of information that they receive. The amount of information must be appropriate to the processing capability of the decision maker as 'information overload' will result in dysfunctional behaviour. Rosen and Schneck (1967), define information overload as

"...the amount of information input which is greater than that which the organisation or its decision makers can adequately handle" (p.13).

Likely reactions to information overload including data processing errors, omission, neglect etc., turns managers into ineffective decision makers. In addition to the negative behavioural effects, the preparation of the overload data is costly in its own right.

The problem of information overload is often noted in the literature on performance indicators in the NHS. The current NHS PI package contains about 425 indicators, (the future package based on the Korner recommendations will include over 2000), covering a wide range of services. Generally, there are a number of channels for handling the data and this alleviates the problem of overload, but in comparison with the private sector, this quantity of performance indicators is
enormous. Current research comparing public and private sector organisations is being carried out by Klein et al, at Bath university. Preliminary findings presented at a recent conference on 'Value for Money' suggest that public sector organisations are characterised by an "excess supply of performance indicators" and private sector organisations characterised by "parsimony". Although profit is not the only indicator of performance, it features strongly, together with a handful of other indicators, within a set of key indicators used by management as decision making tools.

In 40% of the departments surveyed, performance indicators are aggregated up to higher level performance indicators. The basis for this aggregation varies across the departments but concentrated predominantly on producing a key indicator of costs. In only a small number of departments were key indicators of need or outcome available.

In approximately 20% of departments a system for providing performance measurement to various levels of management exists.

Is performance measurement information made available externally?

In a previous section we identified two groups of decision makers within local authority service departments: Group 1 - top management; Group 2 - middle management. In relation to local government, there are a number of other groups of decision makers (Mayston, 1985). These are:
Group 3 - voters, tax-payers, and consumers of the goods and services produced;

Group 4 - representatives of those in Group 3, such as MPs, ombudsmen and pressure groups;

Group 5 - central Government policy makers and advisors.

The type of performance indicators relevant to the various groups of decision makers has been examined by Mayston (1985). Rather than ask, for each service, which indicators are supplied to each individual group of decision makers, we asked the more general question of whether or not performance measurement information is made available externally, through, for example, publication in annual reports and/or civic newspapers. The results are shown in Table 4.8.

Table 4.8 shows that approximately two-thirds of the departments surveyed publish performance measurement information in annual reports and/or provide information to auditors. The publication of PIs in annual reports provides a potentially important source of information for each of the external groups of decision makers. However, we need to look more closely at the types of PIs included, and how they are presented, in order to assess the accessibility of this information to the decision makers.
External availabilility of performance measurement information

Table 4.8
An extensive study of local authority annual reports was recently conducted by researchers at York University (Smith and Ashley, 1987). The York study surveyed the annual reports, where available, from all the London boroughs, metropolitan districts and English and Welsh counties and assessed whether the following objectives, formulated by central government, are being met:

* to give rate payers clear information about local government's activities;

* to make it easier for electors, ratepayers and other interested parties to make comparisons of, and judgments on, the performance of their authorities;

* to help councilors form judgments about the performance of their own authority.

To meet these objectives, the Department of the Environment produced a 'code of practice' for local authorities to follow in presenting their reports (Department of the Environment 1981). The code recommended that authorities should publish summaries of performance and compare these with those of other authorities with similar characteristics, and with the averages for all other authorities of the same type. In addition to these comparators, The audit commission (1987), suggest five types of comparisons for use in local government:

(1) Time; for instance, comparing this year's performance with last year's.
(2) Standards; comparing actual performance with some standard which may be locally or nationally derived.

(3) Intra-service; comparing the performance of a number of units or sections within a department who provide the same service, for example, homes for the elderly.

(4) Private sector; comparison with private sector provision, where such comparisons are possible, for example, in legal and architectural services.

(5) Inter-authority; comparisons can be made with:
   - all other authorities
   - all authorities of the same type
   - specially selected authorities which have similar characteristics
   - neighbouring authorities.

The use of PIs for various comparative assessments of performance is shown in Table 4.9. The results indicate that performance indicators are used by 63.0% of departments to make comparisons over time, for example, comparing this year's performance with last year's. Comparisons of performance with a locally or nationally derived standard are carried out in 64.8% of departments. This was discussed in relation to Table 4.1 which shows the types of indicators which departments include and whether or not targets are set for each indicator. Approximately half of the departments surveyed, use performance indicators to make comparisons with all other...
PAGE NUMBERING AS ORIGINAL
Table 4.9

Use of Performance Indicators as Comparators
(% of responses recording different comparative uses)

- Over time: 63.0
- All other LA's: 14.8
- Selected LA's: 55.8
- LA's of same type: 85.6
- With a standard: 64.8
- With private sec: 31.5
- With other units: 37.0

The possibility associated with the use of performance indicators for monitoring and controlling the levels of service may be different. There are a number of techniques which can be used to identify authorities with similar needs, resources, and performance characteristics and to examine for differences in accounting structures and their implications for performance. The difficulties that arise from using such techniques are discussed by [Author] and [Author] (1991).
authorities of the same type and specially selected authorities which have similar characteristics.

The problems associated with the use of PIs as comparators are discussed by Flynn (1986). Smith and Ashley, (1987), suggest four reasons why differences occur between authorities on any one indicator:

(1) Authorities may have different objectives and priorities and consequently, the desired levels of service may be different.

(2) The demographic, social and economic circumstances of authorities vary considerably and this will have an impact on the indicators.

(3) Authorities might desire the same level of service and have the same socio-economic circumstances, but be delivering the services differently.

(4) Authorities' indicators may differ because of differences in accounting practice or data errors.

There are a number of statistical techniques which can be used to identify authorities with similar social, economic and demographic characteristics, and to adjust for differences in objectives, allocation of inputs and reporting practices. For example, cluster analysis and data envelopment analysis (DEA). The difficulties that arise from using such techniques are discussed by Smith and Ashley (1987). For a discussion of DEA and its application to the public sector, see Smith and

Of the 111 local authority annual reports surveyed in the York study, only 4 published no comparative information. As we noted above, the inclusion of PIs in annual reports should provide external decision makers with an important source of information. However, in practice, the lack of guidance as to how to use or interpret the information and the problems associated with the use of PIs as comparators, (1)-(4) above, implies that few of the decision makers have the ability to make meaningful interpretations of the indicators. Smith and Ashley suggest that this situation may improve over time as the learning process develops.

To what use is the information put internally?

We previously identified 3 stages involved in the process of measuring performance; the identification of aims and objectives; the establishment of performance indicators to assess the degree to which the aims and objectives are being met; and a comparison of the actual outcome of the programme with the desired outcome. Clearly, this process will not lead to improved performance unless decision makers use the information generated. The simple existence of information does not ensure its use. Management must act on the information that they receive. Examples of management decisions for which performance information is relevant appear in Table 4.10. Respondents were asked whether or not PIs are used for management decisions concerning, for example,
Table 4.10 Internal use of performance indicators

<table>
<thead>
<tr>
<th>% of responses recording different internal uses of performance indicators to aid management decisions concerning:</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>planning</td>
<td>44%</td>
</tr>
<tr>
<td>target setting</td>
<td>60%</td>
</tr>
<tr>
<td>reallocating work</td>
<td>44%</td>
</tr>
<tr>
<td>reallocating resources within budgets</td>
<td>47%</td>
</tr>
<tr>
<td>reallocating resources between services</td>
<td>60%</td>
</tr>
<tr>
<td>reallocating staff</td>
<td>56%</td>
</tr>
<tr>
<td>the level of service provision</td>
<td>73%</td>
</tr>
<tr>
<td>areas where savings can be made</td>
<td>56%</td>
</tr>
<tr>
<td>problem areas for management attention</td>
<td>80%</td>
</tr>
<tr>
<td>improving service quality</td>
<td>5%</td>
</tr>
<tr>
<td>used to support a bid for resources</td>
<td>26%</td>
</tr>
</tbody>
</table>
planning, reallocation of resources, and supporting bids for resources. The results in Table 4.10 suggest that use of PIs is most common in the following areas:

* highlighting problem areas for management attention (80.0%)
* assessing the level of service provision (72.7%)
* setting targets (60.0)
* reallocation of resources between services (60.0)
* reallocation of staff (56.4%)
* indicating areas where savings can be made (56.4%)

Few departments used PIs for decisions concerning improvements in service quality. Respondents were also asked to give examples of these different uses. This information provides the basis for the following broad classification of use.

(A) Highlighting problem areas for management attention:

This category of use was the most common. Examples included the following;

- "Demand/supply indicators used to highlight mismatch between demand for and supply of resources for the under fives"

- "Creation of Intervention Team through information on Child Care statistics"

- "PIs provided the impetus for considering improvements in productivity"
(B) Reallocation of resources

This general area of use prompted the following examples of how PIs have helped to determine the allocation and reallocation of resources:

- "under utilisation of childrens homes led to change of use as a group home for mentally handicapped adults"

- "allocation of new money to mobile meals services by Division based on shortfalls against guidelines"

- "Transferring resources from surface dressing to re-surfacing"

- "with respect to rent arrears indicators are used to reallocate staff"

(C) Management decisions concerning level of service provision

Indicators are frequently used for decision making in relation to determining the level of service provision. Examples included the following:

- "comparing current levels of home help provision with projected demand"

- "deciding staffing levels in homes for the elderly"
SECTION 3: PERFORMANCE MEASUREMENT OF STAFF

Section 3 of the questionnaire was concerned with the measurement of staff performance. The results from this section are reported in Chapter 5.

SECTION 4: ASSESSMENT OF PERFORMANCE MEASUREMENT SYSTEMS

This final section focused on the views of the respondents in relation to performance measurement, asking whether PIs should be used more often/less often, what factors inhibited use and whether PIs had improved managements ability in a number of areas.

The possibility that respondents were hostile to performance indicators and were therefore unlikely to use them, was addressed in the question of whether PIs should be used more often, about the same, less often, or not at all. The results given in Table 4.11, show that an overwhelming majority of respondents (85%) thought that PIs should be used more often.

In order to identify some of the possible factors restricting the use of PIs, respondents were asked about a number of possible limitations that might exist. Table 4.12 shows the responses.

The most common factors inhibiting the use of performance indicators are the lack of time to explore the data and the shortage of specialist staff.
Table 4.11

How often do you think Performance Indicators Should be Used?
(\% of responses recording different views)

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>don't know</td>
<td>3.7</td>
</tr>
<tr>
<td>more often</td>
<td>85.2</td>
</tr>
<tr>
<td>not at all</td>
<td>0</td>
</tr>
<tr>
<td>the same</td>
<td>11.1</td>
</tr>
</tbody>
</table>
Factors Inhibiting the Use of Performance Measurement Information

Table 4.12

Factors

<table>
<thead>
<tr>
<th>Access</th>
<th>Confidence</th>
<th>Interpersonal</th>
<th>Lack of Time</th>
<th>Poor Style</th>
<th>Staff Shortage</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.8</td>
<td>87.4</td>
<td>77.4</td>
<td>24.5</td>
<td>39.6</td>
<td>30.2</td>
</tr>
</tbody>
</table>
How satisfied are you with performance indicators?

This set of questions asked how satisfied respondents are that performance indicators have improved management's ability in, for example, evaluating final outcomes, justifying the use of resources and indicating areas of potential cost savings. The results in Table 4.13, show that generally, respondents are satisfied that PIs have improved management's ability in these and other areas.

The final question asked for suggestions on how performance measurement systems and/or their use might be improved. In general, the suggestions, which tended to be brief, focused on the need for: improvements in information systems and increased computerisation; increased staff training to raise knowledge and awareness of performance measurement; and improved systems of accountability to ensure that managers are accountable for the performance of their particular service.
Table 4.13: How satisfied are you that performance indicators have improved management's ability in the following areas?

% of responses recording one of the five categories: NA-Not Applicable; DS-Definitely Satisfied; S-Satisfied; N-Neutral; NS-Not Satisfied; DNS-Definitely Not Satisfied.

<table>
<thead>
<tr>
<th>Activity</th>
<th>NA</th>
<th>DS</th>
<th>S</th>
<th>N</th>
<th>NS</th>
<th>DNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>evaluating final outcome as a result of the organisation's activities</td>
<td>6</td>
<td>4</td>
<td>19</td>
<td>25</td>
<td>44</td>
<td>2</td>
</tr>
<tr>
<td>clarifying the organisation's objectives</td>
<td>20</td>
<td>6</td>
<td>34</td>
<td>15</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>monitoring and controlling progress against plans</td>
<td>7</td>
<td>15</td>
<td>49</td>
<td>11</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>justifying the use of resources</td>
<td>9</td>
<td>13</td>
<td>53</td>
<td>9</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>providing a basis for calculating rewards and incentives</td>
<td>37</td>
<td>3</td>
<td>7</td>
<td>20</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>setting standards in the contracting out of services</td>
<td>2</td>
<td>33</td>
<td>29</td>
<td>20</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>monitoring the fulfillment of standards set for external contractors</td>
<td>6</td>
<td>33</td>
<td>22</td>
<td>31</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>indicating areas of potential cost saving</td>
<td>13</td>
<td>5</td>
<td>40</td>
<td>26</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>improving the quality of inputs</td>
<td>9</td>
<td>2</td>
<td>15</td>
<td>32</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>improving the quality of outputs</td>
<td>9</td>
<td>4</td>
<td>16</td>
<td>30</td>
<td>34</td>
<td>7</td>
</tr>
<tr>
<td>determining that overall value for money is being obtained</td>
<td>8</td>
<td>4</td>
<td>12</td>
<td>27</td>
<td>47</td>
<td>2</td>
</tr>
<tr>
<td>raising staff and management consciousness about economy, efficiency and effectiveness</td>
<td>5</td>
<td>16</td>
<td>33</td>
<td>20</td>
<td>16</td>
<td>10</td>
</tr>
</tbody>
</table>
4.3 SUMMARY AND CONCLUSIONS

Summary of findings - what have we learnt?

* Service departments using PIs place most emphasis upon cost indicators (98% included this indicator). Few (38%) attempted to measure consumer satisfaction.

* Departments frequently produce indicators for which no target is set. For example, whereas 90% of departments include volume of service indicators, only 55% of these departments set volume of service targets.

* Approximately half of the departments measure performance at regular monthly intervals. If this represents an "ideal" frequency, it is possible to argue that many departments are receiving information that is out-of-date.

* In general, performance is measured by the service department itself. Few local authorities have a "performance review committee" responsible for measuring the performance of all departments.

* 72% of departments introduced performance measurement as a result of an internal management proposal.

* The introduction of performance measurement has not followed a coherent strategy but has developed on an ad hoc basis over a number of years since the early 1980's.
* in the majority of cases performance measurement had been introduced post-1985. The systems were still in the early stages of development.

* the indicators that were considered to be of most interest to top management for decision making are those relating to cost; quality of service; goal achievement; and demand/provision indicators. Those that were of least interest were; service utilisation rates; time targets; and productivity indicators.

* the indicators that were most relevant to middle management were; costs; quality of service; productivity; and volume of service. Those of least interest were; demand; utilisation rates and goal achievement.

* performance indicators were used internally mainly for identifying areas for management attention; making decisions about the level of service provision; and reallocating resources between services.

* in 40% of departments PIs were aggregated up to higher level PIs. The key indicators produced were based primarily on costs.

* in approximately 20% of departments performance measurement information was provided to various levels of management.
* the use of PIs for comparative assessments of performance concentrated on the comparators; time; selected other authorities; and pre-set standards.

* performance measurement was used as a basis for measuring managerial performance in 48% of authorities. It was used as a basis for performance related pay in 20% of authorities.

* 85% of respondents thought that PIs should be used more often.

* asked how satisfied respondents were that PIs have improved management's ability in a number of areas, 40% were satisfied that Is are an aid to "indicating areas of potential cost saving", 33% were satisfied that PIs raise employee awareness of value for money.

* the hypotheses that we tested (section 4.4) suggest first that there is a significant correlation between the size of an authority and the regularity of measurement, such that, larger authorities measure performance at more frequent intervals than smaller authorities. Second, the political composition of an authority has a significant impact on the overall level of satisfaction recorded by respondents. This suggests that the influence of Conservative councilors on local authority managers results in both a greater commitment to measuring performance and increased motivation to improve performance measurement systems and thus leads to higher levels of satisfaction.
The results of our survey provide a clear illustration of the state of the art of performance measurement in local government. Specifically, the answers to our questions have provided information on: what performance indicators are in use in local government; how performance indicators are structured within the organisation; who uses performance indicators, how and why; and how these users perceive the relevance of performance measurement. Comparing this reality with the theoretical framework for measuring performance, developed in Chapter 3, we offer the following broad conclusions.

The results show that the performance measurement collected by departments is biased towards cost indicators. These indicators are perceived as key indicators and are most often aggregated up to higher level cost indicators. To draw an analogy with the private sector, indicators of cost are viewed as substitutes for indicators of profit as the focus for management attention. Thus the recurring criticism of performance measurement, that too much emphasis is on cost, shows up clearly from our survey. This highlights the political nature of performance measurement as a policy introduced by a government concerned primarily with cutting public sector expenditure. Pressure upon local authorities to cut their expenditure stemmed first, from reductions in central government grants. Second, when this appeared to have little effect on total spending, the Conservative government introduced a grant mechanism that provided expenditure targets
for each authority which if exceeded resulted in a reduction in central government grant. Also, since the Rates Act, 1984 authorities have been prevented from increasing local rates above an "excessive" level by rate capping. A similar mechanism will accompany the introduction of the poll tax whereby authorities will be restricted to setting the poll tax at "acceptable" levels. These pressures force local authorities to contain their expenditure hence their concern with cost indicators.

Similarly, the focus on measuring "work performed" suggests that authorities are recognising pressures from central government to increase productivity. Many local authorities have Direct Labour Organisations (DLOs). These are the authorities' own departments which may be involved in the construction of capital works (houses, minor roads, etc) or maintenance work. The Conservative Government passed legislation that DLOs should have separate accounts and earn a rate of return on investment of 5%, and that DLOs could not be awarded contracts unless they were subject to competitive bidding. If the DLO could not earn this rate of return it could be closed down.

Closely related to this development regarding DLOs has been legislation to force councils to contract out some services such as refuse collection, cleaning of buildings, catering and grounds maintenance. To compete in the tendering process in-house organisations must provide information on, for example, costs and productivity. In addition to this,
performance indicators are required by management involved in the contracting process for "setting standards in the contracting out of services" and "monitoring the fulfillment of standards set for external contractors". These uses of PIs were seen as important by over 30% of the departments surveyed. Here again, the bias towards cost indicators and lack of "quality of service" and "customer satisfaction" indicators reflects management's concern with containing costs.

Economy and efficiency within the value for money framework translate into the economists' notion of X-efficiency. A production process is technically efficient if the minimum feasible quantity of resources is used in the production of a given level of output, or a maximum feasible output is obtained from a given volume of inputs. X-inefficiency can be measured as the difference between the lowest level of average costs which is technically feasible and the actual level of costs (see chapter 1). The present government's concern with the efficiency of local government has been expressed in policies aimed at improving X-efficiency in the supply of services.

As noted earlier, allocative efficiency of demand requires that public sector decision makers have information on the preferences of consumers and that decisions to allocate resources reflect these preferences. A rational policy planning process should therefore identify needs before deciding on how to satisfy them. There are a number of ways
of finding out what consumers want, including the following:¹

(i) using sample surveys and questionnaires;
(ii) establishing panels of consumers who contribute to the design of services;
(iii) employing a consumer liaison officer or setting up a consumer hot-line in departments.

Techniques such as these are now being experimented with in a number of local authorities, and 38% of departments surveyed included "customer satisfaction" indicators although only 10% of these set targets for these indicators. The low number of authorities setting targets illustrates the point that the task is not merely to carry out surveys but to make sure that they are used. This may involve a number of steps:

(i) redesigning the service e.g. methods of delivery, extent of choice;
(ii) setting standards for each service and publicising this information so that consumers can better inform their expectations;
(iii) establishing accessible complaints mechanisms.

Although this list is brief it highlights a number of ways in which consumer feedback can be used within organisations. The

¹ See the recent series of articles on the public service orientation in the Local Government Chronicle (1987) and the National Consumer Council (1987).
central point of this public service orientation approach is that service providers must recognise that consumer satisfaction should be their primary goal. It follows that allocative efficiency of demand in local government can be achieved only when provision meets the needs of the public.

The problem of allocative efficiency of supply (see Chapter 2) is addressed by performance measurement in so far as it provides information to the sponsor, defined here as the elected Members of local councils and central government, about the bureau's production process. The public choice theories of bureaucracy considered in Chapter 2 assume that bureaucrats, in maximising their own utility, will expand output above the optimal level and/or produce output at above minimum cost, and that the sponsor, with little information about the production and cost functions of the bureau, is unable to combat such allocative or X-inefficiency. Authors that challenge this assumption argue that the sponsor will not react passively but, instead, will use various control devices to generate information about the production and cost functions of the bureau and use this information to reduce inefficiency. The Audit Commission, established by central government, clearly fulfills this role (see chapter 3). The performance measurement systems introduced within local authorities, often in response to pressure from members — 33% of departments cited pressure from Members as the reason for

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introducing performance measurement - play a similar role.

The information generated by performance measurement schemes does provide the potential for Members to monitor each department but, clearly, they cannot possibly monitor every aspect of each service. The Audit Commission (1989) suggests that Members should implement a delegated monitoring scheme, on the following lines:

- members regularly monitor a limited set of measures that they judge to be most critical, supplemented with an annual review of the whole service;

- they ensure that officers are adequately monitoring everything else, at the appropriate detail and frequency;

- they require any deviations beyond a certain level of significance to be reported to them immediately.

Delegated monitoring is essential to overcome the problem of information overload. Ideally, members should be provided with a limited set of indicators which condense a range of indicators into a few key indicators. Our results show that performance indicators are aggregated up to higher level PI's in approximately 40% of departments and that in 80% of these departments a system exists for providing this information to various levels of management.

In general, the PI systems in local authorities appear to fit
into the "public sector style" of monitoring performance identified by Carter et al (1987)³. Such systems tend to have few consumer or quality sensitive PIs, use PIs that measure past rather than present performance, generate a large volume of PIs and have introduced PIs as an act of policy or compliance with external directives rather than developing performance monitoring as part of the managerial culture. This contrasts with the private sector style, exemplified in the following extract from Carter et al (1987), which refers to an unidentified supermarket:

"About half a dozen PIs have been developed that evaluate the performance of individual stores. (These) are integrated into the daily/weekly reporting process of the store manager. This provides detailed information which is available in an aggregated and disaggregated form at the highest organisational level. At store level, managers are set normative standards which all the PIs have to attain. Supermarket stands out for the speed with which it generates PIs and has them available for monitoring. Each store has a daily report. (Supermarket) boasts the most extensive and effective array of quality measures, most of which lend themselves to a quantitative form."

We can contrast this private sector style with the style of

³ This approach compared PIs in the public and private sectors identifying variations between the sectors in the design and use of PIs.
performance measurement in local authorities in two further areas. First, the frequency of measurement in departments was found to be either monthly (55%) or yearly (48%). Although we cannot specify an "ideal" frequency, a time lag of one year for decision makers to receive information means that corrective action is unresponsive to immediate problems. Second, there is little point in reporting PIs without some kind of target or yardstick that indicates whether the figures are good or bad. In the supermarket example, store managers receive targets which PIs must attain. Similarly, any PI that a council monitors should have some kind of comparative figure set beside it. We found that targets were set for only half of the PIs that were collected. The comparators used were pre-determined standards, time and other selected local authorities.

To paint a bleak picture of performance measurement in local authorities we can present a very generalised process as follows: 50% of departments collect and set targets for PIs; 50% of these departments collect this information monthly; 40% of these departments aggregate these indicators into a set of key indicators; 80% of these departments provide this information to various levels of management. This suggests that only 8% of local authorities have a coherent performance measurement system along the lines of the private sector style outlined above. Thus, whilst the potential exists for performance measurement systems to provide members with the information necessary to control efficiency, current systems have two major flaws. First they do not generate information
on consumers demand and second, the information that they do
generate is not presented to members in such a way as to
enable them to control the bureau.

4.3.1 HOW WELL ARE PERFORMANCE INDICATORS PERFORMING?

The final section of the questionnaire aimed to elicit the
views of the respondent on performance measurement. The
result: 85% thought that performance indicators should be used
more often. This commitment from management provides the
right climate for continued improvement and expansion of
performance measurement in local government. The major factors
inhibiting the use of performance measurement information were
identified as lack of time to explore the data (77%) and a
shortage of specialist staff (51%).

The final set of questions asked respondents how satisfied
they were that PIs have improved managements' ability in a
number of areas. Respondents selected one of the five
categories: NA - Not Applicable, DS - definitely Satisfied, S
- Satisfied, N - Neutral, NS - Not Satisfied and DNS -
Definitely Not Satisfied. The responses show, for example,
that respondents are "Satisfied" that PIs have improved
managements' ability in the following areas:
"justifying the use of resources" 53%
"monitoring and controlling progress against plans" 49%
"indicating areas of potential cost saving" 40%
"clarifying the organisation's objectives" 34%

Respondents were "Not Satisfied" that performance indicators had improved managements' ability in the following areas:

"evaluating final outcome as a result of the organisation's activities" 44%
"providing a basis for calculating rewards and incentives" 30%
"improving the quality of inputs" 36%
"improving the quality of outputs" 34%

In theory, PIs should provide a useful tool for management action in all of the areas listed above. The dissatisfaction with PIs in areas such as evaluating outcomes, improving quality and providing a basis for calculating rewards and incentives are the areas in which it is most difficult to construct reliable indicators. On the other hand, respondents were satisfied that PIs had improved managements' ability to justify the use of resources and indicate areas of potential cost saving - areas in which, as we argue above, PIs are not only better developed, but also, areas which must be the prime concern of management operating under the tighter financial
constraints imposed by central government.

Overall, the responses to this section of the questionnaire indicate that management within local government are keen to implement and expand performance measurement systems. Most of the departments covered by our survey had introduced performance measurement between 1984 and 1988, but stressed that this was not a coherent strategy but one that had developed, on an ad hoc basis over a number of years. The commitment expressed by management suggests that performance measurement will continue to develop. Furthermore, the responses to Section 2 of the questionnaire indicate that both top management and middle management perceive indicators of "quality of service" and "customer satisfaction" as relevant to decision making. This suggests that the course for the future development of performance measurement systems may be steered towards measuring effectiveness.

Our assessment of performance measurement has been largely confined to recording the views of the users of PIs. We have attempted to gather information on the actual benefits of introducing performance measurement by asking respondents to provide examples of how PIs have been used, these examples are included in the body of the text. The areas where PIs have been most useful as an aid to management decision making are in determining the level of service provision, highlighting problem areas for management attention and for reallocating resources between services.
The results of our questionnaire indicate that management within local authorities are keen to implement and expand performance measurement systems. Similarly, the Commission stress that members and officers have reacted positively to its work in the areas of audit flavours and Special Studies for which authorities volunteer. These positive reactions to performance measurement suggest that authorities have undergone a cultural change permeating down from top management and facilitated by the work of the Commission, particularly in their reviews of management arrangements. The Commission is now tuning its attention to evaluating effectiveness, a move which our survey shows will be welcomed by management at all levels. The recurrent criticism that performance measurement has concentrated on the money side of the value for money equation has apparently been heeded. Expressed in terms of cost savings the drive for improved value for money has been successful and the Commission is keen to stress that these value improvements have not been at the expense of quality and levels of service.

While the climate for implementing and improving performance measurement appears favourable, current systems are seriously flawed. Emphasis must be on developing performance measurement along the lines of the private sector style. We concluded earlier that only 8% of authorities have this type of system following a process of: collecting and setting targets for performance indicators; updating this information monthly; aggregating PIs into a set of key indicators; and providing this information to management at various levels.
The final point, which we have stressed throughout, is that performance will only improve if performance information is integrated into the decision making process of decision makers, which includes management at all levels.
4.4 HYPOTHESIS TESTING

The final stage in the process of evaluating the questionnaire responses involved testing a number of hypotheses. We were interested in the relationships between the size and political composition of local authority and: (i) the regularity of measurement of performance; (ii) the extent to which performance measures were used by internal decision makers and; (iii) how satisfied respondents were that performance indicators had improved management's ability to clarify the organisation's objectives, improve the quality of inputs, justify the use of resources and so on, (see below).

We expected a positive relationship to exist between size of authority and (i) regularity of measurement, (ii) the extent to which performance measures are used and, (iii) the level of satisfaction with performance measures. The size of a local authority will influence the frequency of measurement as larger authorities are able to employ more specialised staff to carry out the measurement and these staff have access to a broader range of information technology which enables them to process the information. This will also impact upon the extent to which performance measurement information is used by internal decision makers. The quality of the information that decision makers receive will be improved and the length of the time period for feedback will be shortened.

Respondents were asked how satisfied they were that performance indicators have improved management's ability in a number of areas, for example, justifying the use of resources
and indicating areas of potential cost saving. The level of satisfaction was expected to be related to the size of an authority. If both the quality and quantity of performance measurement information is better in larger local authorities, as is argued above, the information provides a basis for improved management decision making and action.

The hypotheses that relationships existed between the political composition of a local authority and (i) regularity of measurement, (ii) the extent to which performance measures are used and, (iii) the level of satisfaction with performance measurement, were based on the assumption that Conservative controlled authorities place greater emphasis on measuring performance. The current drive to achieve value for money in the provision of public goods and services owes much to the determined backing of the Prime Minister (Metcalf and Richards, 1983). It is therefore expected that Conservative dominated local authorities will exert greater pressure on the chief executive's department to measure performance at frequent intervals and to make use of the resulting information. There is a significant amount of research evidence which suggests that the use of performance measurement information and the frequency with which it is communicated is affected by intrinsic and extrinsic motivation (Lawler and Rhode, 1976). In local authorities in which the majority of Councilors are Conservatives, we would expect their influence on the extrinsic motivation of senior and middle management to result in a greater commitment to performance measurement. This, in turn, will lead to a higher level of satisfaction with performance measurement as the
motivation exists to improve the systems of data collection and interpretation.

The variable used as a proxy measure for size of authority was population, and the political variable was determined by the number of Conservative, Labour or Other councilors. Thus, an authority in which the majority of councilors were Labour was coded as '1', a Conservative majority was coded as '3', and any Other majority was coded as '2'. Kendall's rank order correlation coefficient (tau) was computed to measure the hypothesized relationships.

Kendall's tau (τ) is a measure of the tendency of two rank orders to be similar. It does not deal with the scores themselves, but with the order when they have been ranked in size, and it then measures the concordance between these rank orders. For each of the variables X and Y separately, the observations are sorted into ascending order and replaced by their ranks. In situations where t observations are tied, the average rank is assigned.

Each time $t > 1$ the following quantities are computed and summed over all groups of ties for each variable separately.

$$T_v = \sum t^2 - t$$

$$T'_v = \sum (t^2 - t)(t - 2)$$

$$T''_v = \sum (t^2 - t)(2t + 5), \text{ and } v = x \text{ or } y$$
Each of the N cases is compared to the others to determine with how many cases its ranking of X and Y is concordant or discordant. The following procedure is used. For each distinct pair of cases (i,j), i < j the quantity

\[ d_{ij} = (R(X_i) - R(X_j)) (R(Y_j) - R(Y_i)) \]

is computed. If the sign of this product is positive the pair of observations (i,j) is concordant since both members of observation i are either less than or greater than their respective measurement in observation j. If the sign is negative, the pair is discordant.

The number of concordant pairs minus the number of discordant pairs is:

\[ S = \sum_{i=1}^{N-1} \sum_{j=i+1}^{N} \text{sign}(d_{ij}) \]

where sign \((d_{ij})\) is defined as +1 or -1 depending on the sign of \(d_{ij}\). Pairs in which \(d_{ij} = 0\) are ignored in the computation of \(S\).

Kendall's tau is computed as:

\[ T = \frac{2}{\sqrt{N^2 - N - \frac{T^2}{2}}} \sqrt{N - N - \frac{T}{2} - T} \]

144
If the denominator is zero, \( T = 99 \).

The variance of \( S \) is estimated by (Kendall 1955)

\[
d = \frac{1}{18} \left\{ K(2N + 5) - T_x'' - T_y'' \right\} + \frac{T_x' T_y'}{9K(N-2)} + \frac{T_x T_y}{2K}
\]

where \( K = N^2 - N \)

The significance level is obtained using

\[
Z = \frac{S}{\sqrt{d}}
\]

which under the null hypothesis, is approximately normally distributed.

(i) Our initial hypotheses were that the frequency of measurement of performance was related to (a) the size of a local authority and/or (b) the political composition of a local authority.

The question "is performance measured regularly ?" allowed respondents to choose one or more of the following seven options: every week; every month; every six months; every year; every 2 years; every 3 years and; on an ad hoc basis. The replies were coded '1' for Yes and '2' for No. The mean score (regmean) of each local authority was calculated, and ranged between the minimum score of 1, implying frequent
measurement, and the maximum score of 2, implying that no performance measurement was carried out. Kendall's rank order correlation coefficient was computed for the variables (a) regmean and size of authority, and (b) regmean and political composition.

\[ H_0: \text{there is no relationship between the size of an authority and the regularity with which performance is measured.} \]

Kendall's tau: \( \tau = -0.3397 \)
Significance level: \( p < 0.001 \)

The null hypothesis is therefore rejected and we conclude that there is a significant correlation between the size of a local authority and the regularity of performance measurement. This relationship is depicted in the scatter diagram overleaf, showing that smaller authorities measure performance at less frequent intervals than larger authorities.

\[ H_0: \text{there is no relationship between the political composition of an authority and the regularity with which performance is measured.} \]

Kendall's tau: \( \tau = 0.1615 \)
Significance level: \( p < 0.100 \)

The null hypothesis is therefore accepted and we conclude that there is no significant relationship between political composition and frequency of measurement.
Regularity of Measurement (Regmean) v Population

The regularity mean (Regmean) was calculated for each authority. The mean score varied between 1 indicating that the performance measurement information was used for management decisions concerning all of the eleven options, and 2 indicating no use of the information. Kendall's rank order correlation coefficient was computed for the variables (i) Regmean and size and (ii) Regmean and political composition.

No significant relationship between the size of an authority and the extent to which performance measurement information is used for internal management decisions making.
(ii) The second pair of hypotheses were that a relationship existed between the extent to which performance measurement information is used for internal management decision making and (a) size of authority and (b) political composition of local authority. The question "to what use is the information put internally?" allowed respondents to choose one or more of the following eleven options: planning; target setting; reallocating work; reallocating resources within budgets; reallocating resources between services; reallocating staff; level of service provision; areas where savings can be made; problem areas for management attention; improving service quality; used to support a bid for resources.

The replies were coded '1' for Yes and '2' for No, and the mean score (usemean) was calculated for each authority. The mean score varied between 1 indicating that the performance measurement information was used for management decisions concerning all of the eleven options, and 2 indicating no use of the information. Kendall's rank order correlation coefficient was computed for the variables (a) usemean and size and (b) usemean and political composition.

$H_0$: there is no significant relationship between the size of an authority and the extent to which performance measurement information is used for internal management decision making.

Kendall's tau:  $\tau = -0.0911$
Significance level:  $p < 0.173$
The null hypothesis is therefore accepted and we conclude that there is no significant relationship between the size of an authority and the extent to which performance measurement information is used for internal management decision making.

\[ H_0: \text{there is no relationship between the political composition of an authority and the extent to which performance measurement information is used for internal management decision making.} \]

Kendall's tau: \( \tau = -0.0635 \)
Significance level: \( p < 0.289 \)

On the basis of this result we accept the null hypothesis that there is no relationship between the political composition of an authority and the extent to which performance measurement information is used for internal management decision making.

(iii) The final pair of hypotheses were that the size and/or political composition of a local authority was related to how satisfied respondents were that performance indicators had improved management's ability in the following:

- evaluating final outcomes as a result of the organisations' activities
- clarifying the organisations' objectives
- monitoring and controlling progress against plans
- justifying the use of resources
- providing a basis for calculating rewards and incentives
- setting standards in the contracting out of service
- monitoring the fulfillment of standards set for external contracts
- indicating areas of potential cost saving
- improving the quality of inputs
- improving the quality of outputs
- determining that overall value for money is being obtained
- raising staff and management consciousness about economy, efficiency and effectiveness.

The responses were coded as follows:

Definitely Satisfied 1
Satisfied 2
Neutral 3
Not Satisfied 4
Definitely Not Satisfied 5

A measure of the average level of overall satisfaction was calculated by taking the mean of the twelve responses for each local authority. Thus, the mean score (satmean), varied between 1 indicating "definitely satisfied" and 5 indicating "definitely not satisfied".

Kendall's rank order correlation coefficient was computed for the variables (a) satmean and size and (b) satmean and political composition.

H_0: there is no significant relationship between the size of an authority and the level of satisfaction with performance indicators recorded by respondents.
Kendall's tau: $\tau = -0.0817$
Significance level: $p < 0.199$

We therefore accept the null hypothesis that there is no relationship between the size of an authority and overall satisfaction with performance indicators.

$H_0$: there is no relationship between the political composition of an authority and the level of satisfaction with performance indicators recorded by respondents.

Kendall's tau: $\tau = -0.2723$
Significance level: $p < 0.009$

We therefore reject the null hypothesis and conclude that there is a relationship between the political composition of a local authority and the average level of overall satisfaction. This relationship is depicted in the diagram overleaf showing that respondents in Conservative controlled authorities tended to be more satisfied with performance indicators.
Satisfaction with Performance Measurement (Satmean) v Political Composition of Local Authority

The results of our hypothesis testing suggest that the size of an authority, as measured by its population, has a significant effect on the performance with which organisations are satisfied. This relationship is supported by a study, which shows that larger authorities are more likely to have a "Performance Review Committee" and that these staff have access to a range of information technology which facilitates the collection and processing of performance measurement information. Second, the political composition of an authority has a significant impact on the overall level of satisfaction calculated from the responses. This result reflects the findings of research into the role of political influence on the performance of local authorities.

Satmean

5

4

3

2

1

0

Labour

Other

Conservative

Population

1004100

84700

Party

1

2

3

4

5
4.4.1 THE IMPACT OF SIZE AND POLITICAL COMPOSITION

The results of our hypotheses testing suggest, first, that the size of an authority, as measured by population, has a significant effect on the frequency with which performance is measured. This relationship was expected, a priori, as larger authorities are able to employ more specialised staff to carry out the measurement, or may have a "Performance Review Committee", and these staff have access to a range of information technology which facilitates the collection and processing of performance measurement information. Second, the political composition of an authority has a significant impact on the overall level of satisfaction recorded by respondents. This result reflects the responses to questions 30 to 41 which listed 12 areas in which performance indicators can be used to improve performance and asked respondents to indicate how satisfied that PIs are actually useful in these areas. The overall level of satisfaction was calculated by taking the mean of the 12 responses for each authority, so that, the mean score varied between 1, indicating "definitely satisfied", and 5, indicating "definitely not satisfied". Kendall's tau was used to measure the concordance between these mean scores and the political composition of each authority. The result, that respondents in Conservative controlled authorities indicate higher levels of satisfaction with PIs than respondents in Labour controlled authorities can be analysed more closely by calculating Kendall's tau for the individual responses to questions 30 to 41 and political composition.
Significant relationships were found to exist between level of satisfaction and political composition with respect to the following areas in which PIs can be used:

(i) Providing a basis for calculating rewards and incentives
Kendall's tau $\tau = -.3013$
Significance level: $p < .004$

(ii) Setting standards in the contracting out of services
Kendall's tau $\tau = -.2666$
Significance level: $p < .016$

(iii) Monitoring the fulfillment of standards set for external contracts
Kendall's tau $\tau = -.3782$
Significance level $p < .008$

In each case the result indicates that Conservative controlled authorities show a higher level of satisfaction with PIs than Labour controlled authorities. This highlights the political clout behind the introduction of performance measurement. The influence of Conservative councilors on local authority managers results in both a greater commitment to measuring performance and increased motivation to improve performance measurement systems and thus leads to higher levels of satisfaction.
TEXT BOUND INTO

THE SPINE
Do the performance indicators in your department include the following?

Are target levels set for these indicators? (please circle as appropriate)

1. **cost indicators**
   (eg total cost, unit cost)

2. **productivity indicators**
   (eg the amount of work done by staff in a defined length of time)

3. **utilisation rates**
   (eg the extent to which available services are used)

4. **time targets**
   (eg the average time taken to carry out defined units of work)

5. **volume of service**
   (eg crude measure of work performed)

6. **demand/service provision indicators**
   (eg comparing volume of service with potential demand)

7. **indicators of quality of service**

8. **indicators of customer satisfaction**

9. **indicators of goal achievement**

Other performance indicators: (please state what other information is collected/used including 'informal' data, i.e. that which exists but is not necessarily published).

10. Is performance measured regularly as follows?

    | every week | every month | every 6 months | every year | every 2 years | every 3 years |
    |------------|-------------|----------------|-----------|---------------|---------------|
    | [ ]        | [ ]         | [ ]            | [ ]       | [ ]           | [ ]           |
    | Other (please specify) |             |                |           |               |               |

11. Is performance measured on an ad hoc basis?

    Comment:
12. Who does the measuring?

Chief executive's office  Service department  Finance Department
[ ]  [ ]  [ ]
performance review committee (or similar)
[ ]
other (please specify)  

13. Are these measures audited?  YES [ ]  NO [ ]

If so, by whom?  

When were performance indicators introduced?  

14. Why was performance measurement introduced?

internal proposal: management review  elected members  internal audit
[ ]  [ ]  [ ]
external pressure: audit commission  district audit  ombudsman
[ ]  [ ]  [ ]
other (please specify)  

15. To what level in the organisation is responsibility devolved for:

Budget setting  

Financial control  

Performance achievement  

16. Which of the indicators listed in Q.1 - Q.9 are relevant to top management decision making?  (ie. departmental management teams)

Cost  Productivity  Utilisation  Time  Volume  Demand/Service
[ ]  [ ]  [ ]  [ ]  [ ]

Quality of Service  Customer Satisfaction  Goal Achievement
[ ]  [ ]  [ ]

What indicators NOT amongst those above are relevant to top management decision making?  

Please cite recent examples of how performance indicators have influenced a decision outcome  

156
17. Which of the indicators listed in Q. 1 - Q. 9 are relevant to middle management decision making? (ie. section heads/operational managers)

- Cost [ ]
- Productivity [ ]
- Utilisation [ ]
- Time [ ]
- Volume [ ]
- Demand/Service [ ]
- Quality of Service [ ]
- Customer Satisfaction [ ]
- Goal Achievement [ ]

What indicators NOT amongst those above are relevant to middle management decision making?

18. Are performance indicators aggregated up to 'higher level' performance indicators? (ie in order to condense a wide range of indicators into a few key indicators)

YES [ ]

NO [ ]

If so, on what basis are they aggregated?

19. Is there a system for providing information to various levels of management within the department?

YES [ ]

NO [ ]

please explain

20. What performance measurement information is reported to other internal departments/bodies? (eg Chief Executive's Department, Treasurer's Department, Members etc.). Please provide detailed comments:

21. Is the information made available externally?

- Published in annual reports [ ]
- Published in civic newspapers [ ]
- Provided to auditors [ ]
- Provided to government agencies [ ]
- Provided to consumer groups [ ]

Other: (please specify)

22. Are performance indicators used as a basis for service comparisons?

- Comparisons over time [ ]
- Comparisons with some locally or nationally derived standard [ ]
- Comparisons of units within a section who provide the same service [ ]
- Comparisons with private sector provision [ ]
- Comparisons with other authorities:
  - All other authorities [ ]
  - All authorities of the same type [ ]
  - Specially selected authorities [ ]
To what use is the information put internally? Management decisions concerning:

- Planning
- Target setting
- Reallocating work
- Reallocating resources within budgets
- Reallocating resources between services
- Reallocating staff
- Level of service provision
- Areas where savings can be made
- Problem areas for management attention
- Improving service quality
- Used to support a bid for resources

Please give examples for each if possible

Any other internal use? (NB Staff performance measurement is covered below)

Performance measurement of staff

- Is performance measurement a basis for measuring employee performance? YES [ ]
- Is performance measurement a basis for measuring managerial performance? YES [ ]
- Is performance measurement a basis for performance related pay? YES [ ]

What systems of management appraisal are used? (eg. annual appraisal, who are the and appraisers. When was the system introduced, etc) Please provide detailed comment enclose any relevant documentation:

By what criteria is managerial performance assessed?
28. Within your department do you feel performance indicators should be used

<table>
<thead>
<tr>
<th>More often</th>
<th>About the same</th>
<th>Less often</th>
<th>Not at all</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

29. Do any of the following factors inhibit the use of performance indicators in your department?

- Lack of access to CIPFA Audit Commission/Own Performance indicator data
- Lack of confidence in the validity of performance indicators
- Lack of time/opportunity to explore data
- Poor styles of data presentation
- Problems interpreting the data
- Shortage of specialist staff

30. How satisfied are you that performance indicators have improved management's ability in the following: (please circle the number under one of the five categories which applies. NA - Not Applicable, DS - Definitely Satisfied, S - Satisfied, N - Neutral, NS - Not Satisfied, DNS - Definitely not Satisfied)

- Evaluating final outcomes as a result of the organisation's activities
- Clarifying the organisation's objectives
- Monitoring and controlling progress against plans
- Justifying the use of resources
- Providing a basis for calculating rewards and incentives
- Setting standards in the contracting out of services
- Monitoring the fulfillment of standards set for external contracts
- Indicating areas of potential cost-saving
- Improving the quality of inputs
- Improving the quality of outputs
- Determining that overall value for money is being obtained
- Raising staff and management consciousness about economy, efficiency and effectiveness

31. Can you suggest ways by which performance measurement systems and/or their use might be improved? (please continue on a separate sheet if necessary).
1. Measures available

The results of research into the use of performance indicators by local government have shown that various performance measures are available to local government. These are principally:

a. CIPFA statistics
b. Audit Commission Profile
c. Audit Commission Performance Review in Local Government.
d. Local Authorities' own measures.

1.1 CIPFA Statistics

CIPFA's Statistical Information Service (SIS) publishes various booklets of statistical information covering all local authorities in England, Wales and Scotland. These cover estimated and actual expenditure of various services and are based on local authority returns e.g. Return of Expenditure and Rates (RER), Revenue Outturn (RO) Forms etc. The information shown by these statistics provides a broad starting point from which to compare one authority with another.

CIPFA's SIS also publishes on an annual basis 'Local Government Comparative Statistics'. This publication contains a selection of financial and other statistics, to assist in the preparation of the financial and statistical reports of authorities as outlined in the "Code of Practice for Local Authority Annual Reports". Authorities are categorised e.g. Inner London Boroughs, Metropolitan County Councils, Non-Metropolitan District Councils etc, an average being given for each class of authority.

Although useful for comparison purposes, it is recognised that the statistics do have certain shortcomings and therefore need to be used with a certain degree of caution. The principle shortcomings are:

a. No supporting information is given.

b. The average given for each class of authority may not be a suitable statistic for comparison purposes. To provide meaningful information each authority should be compared with other authorities of similar characteristics. This may not be the same authority for each service.

c. An indication of an authority's performance will not necessarily be best given in an inter authority context. Other comparisons which may provide more useful information include:

- comparison of achievement against plans
- comparisons over time
- service point comparisons e.g. unit cost of schools
- comparisons with outside organisations.
d. Most of the information provided by the statistics measures input, measurements of output are lacking, hence little information is provided about the quality and effectiveness of the services provided.

In response to these criticisms CIPFA's SIS have produced a statement on 'Performance Indicators in the Education Service'. This statement confines itself to performance indicators that are valid, relevant and helpful at the LEA level only, and which are designed to be practical indicators to improve the quality of schools. The indicators cover:

- Client Satisfaction
- The Paths Taken by 16-Year-Olds
- Examination Achievements
- The Quality of Teaching
- Costs-per-Pupil
- The use of School Premises
- The Social and Economic Context of the LEA

This is the only formalised performance indicator statement that CIPFA have drawn up, however consideration is currently being given to a statement on performance indicators for Personal Social Services.

1.2 Audit Commission Profiles

The Audit Commission Profiles classify authorities into family groups and are designed to help authorities highlight those areas of spending which are significantly different from the average spending of similar authorities. The statistics used in the profile are mainly derived from CIPFA's SIS and as with the CIPFA statistics, no supporting information is given, therefore the profiles need to be treated with a certain degree of caution and should only be used as a tool to identity areas of investigation.

A drawback to the profiles is that the statistics used are not always complete and some expenditure heads contained within them are ambiguous. This together with authorities differing accounting treatment of some services mean that the statistics are not always directly comparable.

Although the profiles do include some output measures, their main comparisons are between cost levels and not the quantity or quality of service levels. The profiles do not measure authorities service objectives which are likely to have significant effects on service levels and spending.

1.3 Audit Commission Performance Review in Local Government

CIPFA statistics and the Audit Commission Profiles provide a useful starting point from which to assess the performance of one authority against similar authorities, (although many authorities believe that the family groups chosen by both CIPFA and the Audit Commission are inappropriate). However neither of these (except CIPFA's Performance Indicators in the Education Services) assess performance against measures of efficiency or effectiveness. In order to overcome this deficiency the Audit Commission has recently published 'Performance Review in Local Government'. This is a handbook for use by auditors and local authorities.
It discusses the principles of performance measurement, then goes on to discuss key issues and trends within local authority services i.e.

- Education
- Environmental Services
- Housing
- Law and Order
- Leisure and Libraries
- Planning and Transportation
- Social Services

A Performance Review Guide is provided for each service. This gives a check list of performance measures. The benchmarks of good performance are currently being derived and should be published later this year. The guides cover qualitative as well as quantitative measures and also highlight issues with policy implications and issues which are difficult to quantify but which nevertheless underpin the delivery of the service.

1.4 Local Authorities own measures

The performance indicators produced by CIPFA and the Audit Commission are designed to cover all types of authorities. However certain authorities require specific indicators for their own purposes. Also many authorities produce their own comparative statistics based on a family of authorities that they believe to be more comparable than those of CIPFA and the Audit Commission. However, due to geographic, demographic and local economic conditions, it is impossible for any authority to be truly comparable with another.

2. Use of Performance Indicators

In order to determine the use of performance indicators by local authorities a questionnaire was sent to a sample of authorities. The questionnaire and list of authorities selected are attached as Appendices A and B respectively.

Of the authorities selected 37% responded. The results of the survey are shown below:

a. Use of Performance Indicators

<table>
<thead>
<tr>
<th>Currently in use</th>
<th>Plans to introduce</th>
<th>Not in use and have not been considered</th>
<th>Not in use, considered but rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>11</td>
<td>50</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>22</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Those authorities responding positively to the use of Performance Indicators were asked further questions i.e.

b. Which services do the Performance Indicators cover?

<table>
<thead>
<tr>
<th>All services, including support services</th>
<th>All services, excluding support services</th>
<th>Specific services only</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>6</td>
<td>55</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Although 91% apply indicators to all the main services, the degree of application varies considerably. This may be due to the attitude of particular service committees, cost centre managers, or the stage in the development of the indicators.

c. Are qualitative as well as quantitative aspects covered?

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7</td>
<td>64</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>36</td>
</tr>
</tbody>
</table>

The reasons given for the exclusion of qualitative aspects are the difficulty of evaluation and lack of policies as to the standards to be achieved.

d. Source of information used to set performance indicators.

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIPFA statistics</td>
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</tr>
<tr>
<td>Audit Commission Profile</td>
<td>7</td>
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<tr>
<td>Audit Commission Performance Review in Local Government</td>
<td>6</td>
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<tr>
<td>Local Authorities own measures</td>
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</tr>
<tr>
<td>Other</td>
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</table>

The other measures used are Department of Employment, Department of Education and Science and Census data.

e. Does a formal reporting procedure exist?

<table>
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<th>%</th>
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<td>55</td>
</tr>
<tr>
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f. Has the introduction of performance indicators improved economy, efficiency and effectiveness?

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</tr>
<tr>
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It should be noted that the answer to this question is only an opinion.
CHAPTER 5

MONEY MERIT AND MOTIVATION: performance appraisal and performance related pay in the public sector

5.1 INTRODUCTION

In our discussion of public sector efficiency in Chapter 1, we identified two sources of inefficiency in the public sector: X-inefficiency and allocative inefficiency. In Chapter 2 we surveyed a number of economic theories of bureaucracy which explain how these types of inefficiency arises in the public sector. For example, Niskanen's (1967, 1971, 1975) model is one whereby the outcome of bureaucratic activity is in terms of allocative inefficiency. In our critique of Niskanen (see section 2.2.1) we present models of bureaucratic behaviour which refute Niskanen's conclusion and moreover, suggest that the major source of inefficiency is X-inefficiency.

Peacock (1979, 1983) presents a model which indicates how X-inefficiency can arise in a public bureaucracy by including leisure within the welfare function of the utility-maximising bureaucrat. This corresponds to Leibenstein's (1976, 1978) development of X-efficiency theory in which he focuses upon the labour input as a major source of X-inefficiency. Leibenstein's analysis implies that a strategy for reducing this type of X-inefficiency will be concerned with the factors which influence the motivation of individuals in their choice of effort positions. This directs attention to the question:
how do you motivate employees? In the first part of this chapter we consider a number of behavioural theories of motivation which provide answers to this question. In particular we are concerned with the assumptions about human nature and human behaviour that these theories represent.

Over recent years the performance of individuals in the UK public sector has come under scrutiny as part of the Conservative Governments concern with the performance of the public sector in general. A variety of schemes have been introduced aimed at motivating bureaucrats to improve their performance. For example, within central government departments, the Financial Management Initiative (FMI), introduced in 1982, was concerned not so much with finance as with the management of individuals and organisational structure. A central theme of policies such as the FMI and Rayner Scrutiny Studies has been to change the organisational structure of government departments in an attempt to influence the relationship between the organisational structure and the motivating factors that influence individual behaviour. For example, a major aim of the FMI has been to shift responsibility for the control, cost and management of resources away from specialist personnel and finance divisions toward the "line managers" who use the resources on a day to day basis. This emphasis on the delegation of management responsibility is designed to change the attitudes and motivations of civil servants.

The second strand of government policy aimed at improving the
performance of public sector employees is the introduction of reward systems linking performance to pay. One example of this is the performance related pay (PRP) scheme applied to the general managers in the NHS. This scheme affects approximately 1000 managers at regional, district and unit level. At present, the most successful managers can add a maximum of 20% to their basic salaries over five years. The next group in line for performance related pay are the NHS's 8,000 middle managers and, following them, the other 40,000 people with managerial responsibilities in the NHS.

Within local government, most of the moves towards performance related pay have come in the authorities in the south east where there is a Conservative majority. The idea appears to remain anathema in Labour controlled authorities. The results from our survey (see Chapter 4), tend to confirm this trend: 64% of the authorities in which performance is linked to pay have a Conservative majority; 27% a Labour majority. However, in the vast majority of local authorities performance related pay schemes are rare. There is a great deal of talk about performance related pay but not, as yet, a corresponding amount of activity.

The types of performance related pay schemes that have been introduced by local authorities and the reasons for their introduction are discussed in later sections. First, we focus on the fundamental question of what motivates people to work.
5.2 THEORY X & X-EFFICIENCY THEORY

Theories of human motivation are based on assumptions about human nature and human behaviour. McGregor (1960) suggests that the views of management, in the 1950's, with respect to human motivation were as follows:

(1) the average human being has an inherent dislike of work and will avoid it if he/she can;

(2) because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment to get them to put forth adequate effort toward the achievement of organisational objectives;

(3) the average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all.

McGregor argued that these assumptions, which he called Theory X, were reflected in managerial strategy. "The central principal of organization which derives from Theory X is that of direction and control through the exercise of authority" (McGregor 1960, p.49). The idea that workers should be directed and controlled also forms the basis of the much earlier theory of scientific management developed by Taylor (1912) in the last decades of the nineteenth century. The theory of scientific management is a theory of the control of
labour which was based on the assumption that money is the prime motivator. An examination of Taylor's theory details the implications of the assumptions of Theory X for the internal organization of enterprises. In practice, the implementation of scientific management involved the following:

(1) The key to scientific management is illustrated by the following quotation: "all possible brain work should be removed from the shop and centered in the planning or laying-out department..."

(2) Managers should gather together all of the traditional knowledge possessed by the workers and reduce it to rules, laws and formulae. This enables management to develop faster methods of performing work tasks.

(3) The work of each worker should be planned by management such that each task is specified in terms of what is to be done, how it is to be done and the length of time it should be done in.

The results of Taylor's own applications of scientific management were dramatic in terms of increased output. This is best illustrated by the story of his work for the Bethlehem Steel Company, supervising the loading of pig-iron on to railway carriages by hand. Initially, an average of twelve-and-a-half tons of pig-iron was loaded per man per day. After observing the work process, Taylor concluded that each
man should be able to load four times this amount. One man, noted for his desire for money, was selected and subjected to detailed instructions of how to perform the task. As predicted, the man's output increased to forty-seven-and-a-half tons per day. Applying the same instructions to one worker after another led to identical results and whilst productivity almost quadrupled, wages increased by only 60% resulting in considerable financial savings for the company.

The assumptions about human nature and human behaviour and the implications for the management of workers represented by the theory of scientific management, are clearly the same as those comprising Theory X. The essence of these theories is that workers are lazy and should be controlled. The assumption that workers possess an inherent dislike of work, they would avoid it if they could, is also found in the neoclassical economic model of the consumer as a labour supplier. However, in neoclassical theory such an assumption does not have the implications for the role of management implicit in Theory X i.e. to coerce, control, direct and threaten workers to get them to put forth adequate effort.

In neoclassical theory the analysis of the consumer as a labour supplier focuses on the way in which the consumer chooses the amount of time spent at work. This will determine both the consumers income and the consumers leisure time. The interdependence between income and leisure time is captured in the following utility function for the individual:

\[ u = u(y, l) \]
where \( y \) denotes income, \( l \) leisure time and \( u \) utility. Since more leisure is assumed to be preferred to less, the marginal utility of leisure \( \mu_l \), is positive. Since we also assume that the consumer dislikes work, the marginal utility of work time is negative.

The consumer is constrained in two ways. First, by the income received from work done and secondly, by the time available. Letting \( l \) denote the total hours available, then the hours worked in obtaining income \( y \), denoted \( h \), is given by \( h = I - l \). If \( w \) is the wage rate and \( \bar{y} \) is non-work income, then total income is given by:

\[
y = \bar{y} + w(I - l) = (\bar{y} + wI) - w
\]

The aim of the individual is to maximise utility subject to this budget constraint, i.e.

\[
\max u = u(y, l) \\
\text{s.t } y = \bar{y} + w(I - l)
\]

The equilibrium solution is characterised by the equality between the marginal rate of substitution between income and leisure (the slope of the consumer's indifference curve) and the slope of the wage line i.e. the wage rate. This situation is shown in figure 5.1 where leisure time is measured from the origin \( O \), and hours worked given by \( h^* \).
The equilibrium solution is at point \((l^*, y^*)\) and the number of hours spent at work \(h^* = l - l^*\). We can construct the supply of labour curve by plotting the wage rate against \(h^*\) supplied. As the wage rate changes, the wage line pivots about point \(P\) in figure 5.1, increasing in slope as the wage rate increases. The locus of equilibria resulting from changes in the wage rate is the price expansion path from which we can construct the supply curve of labour as in figure 5.2.
With the price expansion path shown, the consumers supply curve, plotting the wage rate against hours supplied is
positively sloped, indicating that an increase in wage rates will increase the supply of hours worked. However, this is not necessarily the case as increases in wage rates have both a substitution and an income effect. An increase in the wage rate increases the relative return on working making people want to work more but the increase in income results in an increase in the demand for leisure tending to make people work less. If the income effect dominates the substitution effect then the labour supply curve would be backward bending: rises in the wage rate lead to a fall in the supply of labour. Thus, standard neoclassical theory makes no prediction about the effect of an increase in wage rates on the overall supply of labour which may increase, decrease or remain unchanged.

In this model of consumer behaviour the individual is assumed to be rational - aiming at the maximisation of utility subject to the constraints imposed. The number of hours an individual works is thus a matter of choice, dependent on needs and wants and it is assumed that he/she has full knowledge of all relevant information. The effective labour input to the production process is the number of workers multiplied by the number of hours they work. There is no notion in conventional economic theory of variable effort levels as the relation between inputs, labour, and outputs is a determinate one. The assumption is that inputs have a fixed specification and yield a fixed performance. The supply of effort is synonymous with the supply of labour which, as we have seen, is dictated by the income-leisure choice of the individual. Thus this theory leaves no role for management, through control of the work
force, to influence the output of the worker.

The major work in the field of economics which considers effort as a variable is Leibenstein's X-efficiency theory. The assumption that effort is a discretionary variable in X-efficiency theory and can be influenced, to some extent, by management decisions concerning the internal structure of the organisation allows for the discussion of power relations which is absent in neoclassical theory. The employer/capitalist in conventional theory is dominated by a rationality dictated by the market, and the worker is dictated to by the income-leisure choice process. Thus, neither party is able, or even desires, to influence the nature of the employment contract.

X-efficiency theory allows us to draw together an economic analysis of production with theories of organisational psychology applicable to motivational patterns at work. We now turn to a discussion of the psychological assumptions in X-efficiency theory which explain individual behaviour.

The central postulate is that people behave the way they like, or they behave the way they feel they must, or they make some compromises between these elements. This represents the conflicts between what Freud termed the id - how the individual would like to behave if he/she had no sense of obligation, duty or adherence to standards of some sort - and the super ego - the set of standards of behaviour the individual would like to see himself/herself adhering to.
Thus individuals are constrained both by a sense of obligation to their own self-interest and by a sense of obligation to others. The degree to which individuals are concerned with such obligations is termed constraint concern. Leibenstein argues that since concern about constraints is often unpleasant, there is a tendency for some types of personalities to avoid complete constraint concern. However, the lower the level of constraint concern the more pressure, for example from peers, an individual is likely to feel. Thus, there is a trade-off between the degree of constraint concern and pressure.

A comparison of neoclassical theory and X-efficiency theory will help to clarify this point. In the former, the individual is assumed to be completely rational either maximising or minimising an objective function subject to various constraints. Given that a basic element of rational behaviour is constraint concern, a maximising individual reaches the highest point of utility when constraint concern is at a maximum. The essence of Leibenstein's theory is that some individual personalities are willing to bear some pressure rather than go beyond some point in their degree of constraint concern. He labels the behaviour of such an individual as selective rationality.

The relationship between constraint concern and pressure is a trade-off such that if pressure is less, then constraint concern is less, which implies that performance will be lower. These relationships and their implications for an organisation
are expressed in the following diagram.

FIGURE 5.3

176
In quadrant I of figure 5.3 the curve RR relates pressure, the independent variable, to the degree of constraint concern, the dependent variable. In quadrant II the curve EE relates constraint concern, now the independent variable, to effort, the dependent variable. In quadrant III the curve CC relates effort to that part of cost of production per unit attributed to the individual. Here, a higher degree of effort is associated with lower cost per unit. Finally, in quadrant IV the curve CP relates cost, the independent variable, to the degree of pressure the firm will exert on the individual. The curves are drawn such that values for pressure, constraint concern, effort and cost per unit of production are consistent with each other. These equilibrium values are represented by the point P.R.E.C which, if it should occur, implies that no change would take place.

This diagram illustrates the implications for resource allocation of the assumption that effort is a discretionary variable. If the RR curve, which reflects the extent to which firms put pressure on individuals, were lower this would reflect less pressure, less effort and ultimately a higher equilibrium cost of production. This brings us to a discussion of the relationship between pressure and X-efficiency. In Leibenstein's analysis the prime determinant of the level of the RR, curve i.e. the major source of pressure influencing X-efficiency, is the external enviroment. External pressures to reduce X-inefficiency relate to the degree of competition that exists. Competition provides the stimulus for firms to seek out efficient production.
processes. With respect to labour X-inefficiency, external competitive pressures are recognised by individuals within the organisation and their interest in the firms' continued existence motivates them to seek more productive effort positions. That is, members whose equilibrium effort positions involve effort positions containing relatively high cost activity-pace-quality-time bundles will seek out positions involving lower cost APQT bundles. In this way, organisations are able to reduce their costs and compete successfully in the market.

The second type of pressures which influence X-efficiency are the traditional procedures that exist in the organisation which in turn are a consequence of its history. The influence of tradition is manifested in arguments against innovation that take the form of "we have always done things this way". Thus, tradition may inhibit the introduction of lower cost production techniques or, similarly, inhibit the individual from seeking new APQT bundles.

Finally, the internal structure of the organisation will influence X-efficiency. This refers to the extent to which individuals are constrained to feel responsible for actions. To quote Leibenstein:

"...the essential aspect of the internal motivational analysis is to see to what extent the reward system and the system of interpersonal relations allow considerable shifts in the effort-responsibility-consequences..."
connections beyond the decision making unit, or to what extent there are constraining influences that keep these connections with the appropriate decision making units"

Our interpretation of this is that since the degree of responsibility or constraint concern determines the degree of effort and hence influences cost of production, to what extent does the internal structure allow individuals discretion to choose relatively high cost APQT bundles?

In the previous quote Leibenstein refers to both the reward system and interpersonal relations as influencing the motivation of individuals in their choice of effort positions. These interpersonal relations refer to the influence on the individual of all other individuals, both peers and superiors. In terms of the reward system, Leibenstein argues that if payment is independent of performance then individuals will minimise responsibility for their actions. These assumptions about motivation imply that one of the functions of management is to manage the degree of constraint concern of the members of the organisation, for example, by designing appropriate reward systems and giving appropriate orders. In this way, management can influence the individuals choice of APQT bundles.

Whilst it may be possible for an employer to completely specify an employees APQT bundle, Leibenstein argues that such pre-set APQT bundles are less efficient than partial free-choice APQT bundles. This arises from the high costs involved in
determining all aspects of work performance. Such costs include information costs, supervisory costs and quality control costs as well as the psychic costs on employees resulting from detailed control such as low morale and a high degree of irritation. Thus, the costs of specifying the precise activity-pace-quality-time bundle for the purpose of drawing up a contract are likely to outweigh the advantages.

The role of management implied by Leibensteins theory is illustrated by the following quotes:

" all managers in all fields face one fundamental problem: they cannot fully control firm members. Nor would it be rational, economic, or humane for them to try to do so."

" management's job is to provide motivational inputs to induce firm members to chose favourable job interpretations..."

" considerable free coice exists for APQT bundles in almost all situations. Such choices are likely to be constrained in some degree by an "incentive-penalty" system and, for some aspects of work, by supervisory and quality controls as well."

That is, management can reduce X-inefficiency by influencing firm members to chose lower cost APQT bundles provided that the reduction in costs outweighs the costs of implementing the
This brings us to a discussion of the relationship between X-efficiency theory and theory X. X-inefficiency arises from vague labour contracts which allow workers discretion over their activity-pace-quality-time bundles. If we remove this choice through strict control of individuals APQT bundles, by applying the principles of theory X - control, direction, coercion and threat - then X-inefficiency can be eliminated. Furthermore, recognising that the principle of direction and control which derives from theory X is the basis of the theory of scientific management, indeed, the former is a restatement of the latter, we can predict that the application of scientific management techniques will eliminate X-inefficiency. This is precisely what Taylorism entailed: control of the worker through the control over the decisions that are made in the course of work, i.e. decisions concerning the APQT bundle. The worker chosen by Taylor to verify his methods, was subjected to detailed instructions, illustrated by the following extracts from Taylor's The Principles of Scientific Management:

"Well, if you are a high priced man, you will do exactly as this man tells you, from morning to night."

"When this man tells you to walk, you walk; when he tells you to sit down, you sit down and you don't talk back at him."
"Schmidt started to work, and all day long, and at regular intervals was told by the man who stood over him with a watch "now pick up a pig and walk. Now sit down and rest. Now walk - now rest", etc."

This is a clear example of how management can eliminate X-inefficiency. Here, the output of the worker quadrupled whilst wages increased by only 60% from $1.15 to $1.88. After applying the 'science' of pig-iron handling to all of the workers, and taking account of the wages of supervisors, clerks, time-study people, etc, the results of the third year of the plan were savings of between $75,000 - $80,000.

The theory of scientific management provides one of the earliest examples of a control system which was undoubtedly successful in eliminating what Leibenstein later termed X-inefficiency. Although the notion of Taylorism became increasingly unpopular, for a number of reasons:

(i) because it was viewed as inhuman, degrading etc.
(ii) because the mechanistic view of individuals, assumed to be motivated purely by economic rewards was dismissed by later schools of industrial psychology.
(iii) because it brought about massive labour opposition from an increasingly unionised and powerful workforce.

It is arguable that the influence of Taylorian principles continues to shape the organisation of work. This view is powerfully expressed by Braverman (1974):
"Taylorism dominates the world of production; the practitioners of "human relations" and "industrial psychology" are the maintenance crew for the human machinery".

5.3 THEORIES OF HUMAN MOTIVATION

The design of effective control systems requires that assumptions about what motivates people to work are empirically valid. In both theory X and the theory of scientific management individuals were assumed to be motivated primarily by economic incentives. The implied role for management was one of direction and control. Similarly, Leibenstein's X-efficiency theory defines the role of management as being to "induce firm members to choose favourable job interpretations" and suggests that this requires incentive-penalty systems and supervisory control. Although Leibenstein is vague on these points it is possible to interpret his view of workers as similar to that of theory X.

In contrast to theories which emphasise economic incentives as the primary motivating device, the human relations school developed a quite different set of assumptions. The human relations theory grew out of a set of studies called the Hawthorne Studies carried out between 1926 and 1936 at the Hawthorne works of the Western Electric Company in Chicago, by F. J. Roethlisberger and W. J. Dickson under the supervision of Elton Mayo. Instead of concentrating on individual
behaviour in an isolated setting, it became recognised, through the Hawthorne Studies, that to understand the behaviour of individuals they must be viewed as members of collectivities in which sanctions are brought to bear to make individual behaviour conform to that desired by other members of the group. This discovery of the significance of "social" and group factors as influences upon individuals work behaviour was to be the major finding of the Hawthorne Studies. It made problematical the relationship between the individual and the rest of the group - why for example should an individual surrender the complete fulfillment of personal aspirations in order to satisfy the wishes of other members of the peer group; by what process are group decisions arrived at and how effective are group sanctions in making members comply?

The major findings of the Hawthorne Studies were;

(1) social factors play a significant part in influencing workers levels of production (physiological factors also play a role, but are not as important as originally thought);

(2) Non-economic rewards and sanctions, are more important than economic incentives. Of particular significance were the friendliness and respect of co-workers and supervisors;

(3) The work group, was an important constraint on workers
behaviour. Individuals did not tend to behave as individuals, but as members of groups;

(4) The informal leader was found to play a key role in the group decision making process. The informal leader was so called to distinguish him/her from the person who occupied the leadership role in the formal organisations structure.

(5) Leadership style was an important variable in explaining group behaviour. Those who maximised the opportunities for communication and participation were found to be the more effective.

The findings of the Hawthorne Studies opened up a whole new dimension for management. If management's task was to improve the motivation and efficiency of their employees to make them more productive, then what Roethlisberger and Dickson's findings suggested were that concentration upon formal principles of organisation structure (such as unity of command and span of control) and on the structure of economic incentives was wrong minded. Management should instead be concentrating upon the management of non-economic incentives, thereby increasing production by influencing group standards and improving leadership styles. In other words, emphasis is being placed upon an alternative system of control.

Social psychologists emphasised the role played by non-economic incentives; see Brown (1970) and Homans (1950). "Social man" as compared to "economic man" was assumed to value stable work groups and good social relations. These
conditions were thought to be found (as in the Hawthorne studies) in small cohesive groups and so attention shifted towards organising work around such groups.

Further studies into human motivation revealed that social needs, like economic incentives, were only part of the picture. There are many factors which motivate individuals, for example: the desire to fulfil and to achieve ego motives, and to feel important; the need to feel secure; the need to be creative and to have new and worthwhile experiences; and finally, the basic economic motives. The "needs model" of human motivation was set out by Maslow (1954) in terms of a hierarchy of needs, in which individuals ordered the satisfaction of their needs from the most basic physiological needs of hunger and thirst to the highest of self-actualisation. Followers of Maslow, especially Argyris (1957) began to extend and apply the basic Maslow model to organisational behaviour. Their aim was to achieve both organisational efficiency and human satisfaction. Argyris considered that organisations made individuals passive, dependent and immature. Thus, by influencing the set of social relationships which individuals faced in the organisation, they could be provided with the potential for realising their higher order needs including that of self-actualisation. The key to improving human relationships and increasing efficiency in organisations was to find the appropriate leadership style and then to train managers in these skills of leadership.

In a similar vein to Maslows' model is Herzberg's Two Factor
Theory. This suggests that the factors involved in producing job satisfaction (and motivation) are separate and distinct from those that lead to job dissatisfaction. The motivator factors that are intrinsic to the job are: achievement, recognition for achievement, the work itself, responsibility and growth or advancement. The dissatisfaction or "hygiene" factors that are extrinsic to the job include: company policy and administration, supervision, interpersonal relationships, working conditions, salary, status and security.

Herzberg interprets these findings to suggest that individuals are directed by two basic and quite different needs, the need to avoid pain and the need to self-actualise. The motivator factors are related to self-actualisation and the hygiene factors to need. But such hygiene factors do not act as motivators. Their absence can make a worker unhappy, but their presence will not make a worker want to work harder.

Undoubtedly, the human relations school was diametrically opposed to the teachings of the classical and scientific management theorists. These differences were set out by McGregor who contrasted the assumptions of theory X, which he believed represented the dominant view of management with Theory Y. Theory Y views individuals as social beings possessing a complex set of needs which can be satisfied in organisations, provided that the appropriate conditions exist (the human relations school).

However, the human relations school was not free from
methodological criticism; see Carey (1967, 1976) and Boreham and Dow (1979). Many of the studies were carried out without proper regard to experimental design. Essentially what each experiment or case study was aiming to do was to estimate empirically functions of the following kind:

\[
\text{Individual productivity} = f_n (.) \\
\text{Individual satisfaction} = f_n (.)
\]

in which the contents of the brackets (.) were the explanatory variables. The problem facing anyone in this area is to obtain suitable and sensible measures of magnitudes such as human satisfaction, leadership style, human needs and so on. Even if measures are obtainable there are further problems of combining cardinal and ordinal measures into a single dimension.

It was assumed in most of the human relations studies that the achievement of high morale/satisfaction would improve worker productivity. As early as 1960 McGregor had pointed out the fallacies in such an argument. Productivity was a much more complex subject than was realised and was also dependent upon the degree of capacity utilisation in the economy and technological change.

The approach was just as prescriptive as that of scientific management. The difference between the approaches was that the prescriptions differed. The human relations pursuit of a set of supportive social relationships as a desirable feature
of modern complex organisations should have been regarded as an ethical proposition to be pursued in its own right. However, such propositions were dressed up in pseudo-positive analysis, without always fully appreciating that there existed a genuine conflict between organisational efficiency and what is considered to be good for the individual. As Tannenbaum (1966) commented: "...the qualities of personality and motivation that we have discussed are inconsistent with the requirements of formal organisation." This means, therefore, that there is a complex "trade-off" to be made between the efficiency criteria (a la Taylorism etc) and the effects that any efficiency procedures have upon human welfare.

A further problem was that many of the propositions of the human relations school could not be formally tested. This arose either because the data were not readily available or because the propositions were ethical ones and hence not suitable for empirical testing. Many statements, especially those derived from the needs model, were tautologous - behaviour was defined in terms of actions aimed at achieving certain goals - and could not, therefore, be tested. Moreover, the needs model was highly rational, since it assumed that individuals' behaviour was also purposive and goal directed. It did not take into account the constraints which individuals faced nor the possibility that they might be misinformed both about their goals and about the means of achieving them. Nor were needs ever adequately defined; were they real and how could we test for their existence, or were they just a simple classification for rationalising what might
be happening? It was never made clear why individuals expected to satisfy their needs in organisations such as the business firm. An alternative and just as reasonable view would be that individuals viewed work and the economic rewards it generated as a means to other ends which could be more appropriately satisfied outside the organisation. Creating pleasant and meaningful working conditions was a desirable objective in terms of its effects on human welfare, but this did not make economic incentives and rewards insignificant factors in explaining human behaviour.

Within the human relations models there is no examination of conflict within organisations, nor of the importance of external factors as explanations of individual behaviour within organisations. Almost all of the literature on human relations is geared towards either ignoring the possibility of conflict, or of minimising it. For Argyris the incompatibility between organisational efficiency and individual needs might have led to a gap which would be filled by conflict. However, by applying suitable management techniques (i.e. leadership styles etc) such a gap could be minimised if not completely closed, thereby producing an optimal solution (note Argyris does not specify the properties of such an optimum or on what criteria such properties might be desirable). In this respect it is important to press the social engineers of the human relations school to find out precisely what kind of set-up they are aiming at, since what they seem to be advocating is some kind of utopian industrial order. Are they, for example, advocating complete industrial
democracy, in which workers take a participative role in all decisions; or is it a pseudo-democracy that they intend, in which workers take a part in certain decision areas chosen by management? In that case management retains power over key areas.

Such power relationships within organisations were completely ignored by the human relations school, especially when the locus of that power was external to the organisation. C. Wright Mills (1959, p.53) has been critical of the emphasis of the human relations approach upon status and prestige in the primary work group setting, rather than upon more fundamental power relationships within the organisation, asking, "why are class and power not only minimised and made subordinate to status, but even sponged up into it?" One possible answer to Mill's question is that, "it is far easier and less politically portentous to make the worker feel that he/she belongs and is important than it is to tamper with the structure of industrial authority" (Blumberg 1968, p.48). In designing their experiments the industrial sociologists have failed to note that status could be acting as an intervening variable, with power being the primary variable. An increase in power, it could be argued, increases the status of the worker, in which case the more interesting question becomes, "what factors brought about this shift in power?" No satisfactory answer seems to have been provided so far.

Finally, the human relations school almost exclusively concentrated upon industrial organisations and industrial work
behaviour. Moreover, it was blue collar workers and low level white collar workers who were the focus of attention. Whilst studies of non-industrial and public sector organisations do exist, these tend to be the exception rather than the rule.

Mayo (social man), Maslow (self-actualising man) and others started from the premise that the rationalisation of work had taken the meaning out of work itself and suggested that meaning must therefore be sought elsewhere, for example, in social relationships on the job. Thus, the problem for such theorists lies not with the routinised, fragmented meaningless tasks that such workers perform but their reaction against performing them. Similarly, for management the problem lies in costs and controls not in the humanisation of work. The emphasis is on the style of management rather than on the position of the worker.

More recent theories on the motivation to work stress the complexity of an individual's decision making process. Edgar H. Schein proposes a model of motivation for what he calls "complex man". Shein recognises that individuals have many motives forming a hierarchy which may change over time and from situation to situation. Such individuals can respond to many different kinds of managerial strategies and whether they will or not, depends upon their view of the appropriateness of such strategies to the solution and their needs.

Similarly, expectancy theory emphasises the subjective nature of the motivation calculus. This is the mechanism by which
individuals decide how much effort, energy, time etc. to expend. The calculus is different for each individual. This approach predicts that behaviour will reflect an individual's selection of goals and what the individual believes will produce the required rewards. Thus for each individual the calculus has three separate elements:

1. the strength of the need;
2. the expectancy that behaviour will lead to a particular result;
3. the instrumentality of the result in reducing (1).

For example, take an individual who has a strong need for power - if given a task to do and promised promotion he/she will expend effort on the task to the degree that he/she believes:

1. good performance will lead to promotion (expectancy);
2. that promotion will satisfy the power need (instrumentality).

Thus we are motivated by our expectations about the likelihood of a particular action leading to certain outcomes.

Expectancy theory, Schein's complex man and other models of even more complex man (see Handy, 1986), provide an insight into the complexity of analysing motivation. However, for most operational purposes their "reality" is too complex. Schein identifies the most important implication for managerial strategy arising from the assumptions of complex man as: "the
successful manager must be a good diagnostician and must value a spirit of inquiry." In dismissing the rather simplistic views of an individual as "rational man", "social man" or "self-actualising man" we are left with a model whose implications for the role of management are too vague/complex to be of any practical use.
5.4 PERFORMANCE APPRAISAL AND PERFORMANCE RELATED PAY

The range of theories relating to the determinants of job performance is vast. In the preceding section we have presented; theories claiming that the key to increasing performance is a better incentive system that links pay, promotion or recognition to high job performance; theories that claim that employees are motivated by a drive to fulfill various needs; theories that claim that the way to improve performance is to give people enriched jobs with more autonomy, challenge and responsibility; and yet other theories that claim that people will improve their performance when they expect that a particular action will lead to a specific outcome.

These theories contain a wealth of prescriptions for managers aiming to improve the performance of subordinates. Performance can be improved through well-designed incentive and reward systems, improved task design, various leadership and motivation techniques and training and development of staff. In short, management should concentrate on the organisation's incentive system; leadership and the characteristics of the worker's job. This statement neatly summarises the role of management but the task remains to expand the implications into a practical model for management use.

In this section we explore one of the major controversies arising from these theories of motivation, by examining the
relationship between motivation and money. The role of money as a motivating agent must be stressed for a number of reasons:

(1) Although the needs models of human motivation omit money, it is clearly instrumental in satisfying a whole range of needs from hunger to self-actualisation. The extent to which this is true will vary from individual to individual and culture to culture.

(2) Money is useful as a measure of comparison, with other people, with the past and with other organisations. Since money accompanies increases in status, responsibility and success, all of which are difficult to measure, money is the element that is measured and talked about.

(3) Money has a role to play in expectancy theory and will be effective in the motivation calculus if individuals see that it will satisfy some important needs and also that increased effort will lead to more pay.

The role of money in motivating individuals has recently become a key topic in public sector organisations where performance related pay schemes are spreading. In central government nearly all staff, around 400,000 employees are subject to some form of performance element in their pay; the NHS has some staff covered by performance related pay; and in local government, just under a quarter of the total number of local authorities in England and Wales now have or are
planning to have PRP schemes.

The introduction of performance related pay in local authorities has been on a piecemeal, authority by authority basis. This means that each of the 100 or so authorities that have or are planning to have PRP schemes operate their own, individual scheme. Thus, the task of describing PRP in local government, 100 disparate schemes, is made more difficult. Our approach has been to identify a number of main areas of interest: why have local authorities introduced PRP; who is covered by such schemes; what types of schemes exist; what types of payment systems have been implemented; and how is staff performance measured?

An additional area of interest concerns the impact of performance appraisal and performance related pay on, for example, public sector employees and organisational output.

Unfortunately, at the present time, it is not possible to assess this impact as no research has yet been carried out with particular reference to the UK public sector. However, drawing on the behavioural theories discussed in the previous section and the information collected from our case studies it is possible to provide some clues as to the likely outcome of the current appraisal schemes.

Local authorities which operate performance related pay schemes are currently a minority, but the need for effective performance appraisal is more widely recognised. The results
in Table 5.4 show that approximately half of the authorities covered by the survey have introduced staff appraisal schemes.

Table 5.4

| % of authorities in which service performance measurement is a basis for appraising | 26% |
| employee performance | |
| % of authorities in which service performance measurement is a basis for appraising | 48% |
| managerial performance | |
| % of authorities in which service performance measurement is a basis for performance related pay | 21% |

Similar results were shown by a survey carried out by the Chief Executive's Support Network\(^1\) (C.E.C.S.N.E.T.). Of the authorities included in this survey, 39% had already established a staff performance appraisal system, 39% had no appraisal system at all, and the remainder had only partial or experimental systems. Significantly, all but 1 of the systems already established are for senior managers only. The emphasis on assessing managerial performance was also highlighted by our survey which showed that 48% of local authorities had managerial performance appraisal systems whereas only 26% had employee appraisal systems.

\(^1\)The CECSNET survey was sent to 36 County Councils in January 1988. Of these 31 (86%) returned a completed questionnaire.
While, in many ways, there may be no differences between appraising the performance of managers and that of other employees, the most significant difference is that managerial performance has an impact on the output of others and subsequently on the actual output, in terms of goods and services, of the unit or department. Therefore, perhaps more than the individual employee, the manager needs to be reviewed in terms of results produced and how well he or she performs the functions of management.

It will be recalled that the role of management implicit within X-efficiency theory is to provide motivational inputs to induce employees to choose favourable job interpretations. Viewing effort as a variable, made up of choices concerning the activity - pace - quality - time bundle, the role of management is to influence/control these individual choices. The relationship between variable effort levels and the output of the unit (or firm), is depicted in Figure 5.3. The major implication of Leibenstien's theory is that a higher degree of effort is associated with a lower cost of production.

Although X-efficiency theory was developed in respect to private firms, it is equally applicable to the public sector. In Leibenstien's analysis the prime determinant of the level of effort is the degree of competition that exists in the market and internal influences, such as the influence of management, are less relevant. This assumption may be reversed in applying X-efficiency theory to the public sector. Here, external pressure may refer to the influence of central
government which can have a significant impact on the behaviour of individuals. For example, initiatives such as the FMI were concerned with the behaviour of employees at managerial level and below. However, we suggest that internal influences represent the major source of pressure influencing effort levels and ultimately, output levels. One obvious reason for this assumption is the labour intensive nature of production in the public sector. Local government services are directly provided by people - teachers, social workers, home helps and so on - approximately two million people in all. Thus, the prime determinant of the level and quality of service is the quality and motivation of these people. The emphasis on assessing the performance of employees at managerial level can thus be seen as a response to the recognition that their performance impacts on the performance (effort levels) of these employees.

The decision to link staff appraisal to a system of rewards is highly controversial. Critics argue a powerful case for separating appraisal, as far as possible, from any system of rewards (George, 1986). On the other hand, many argue that performance appraisal may be enhanced by such a link. It is generally agreed that prior to instituting a performance related pay plan, an organisation must establish a strong appraisal system. The empirical evidence cited above, shows that the trend within local government has been to introduce staff appraisal from the top down, starting with chief officers. Our research also shows that authorities do not generally recognise the need for performance appraisal in its
own right, but are rushing into schemes that link performance to pay, prior to establishing sound performance appraisal systems.

The literature on performance appraisal identifies a wide range of benefits. The following list is drawn from the work of Morrisey² (1983), in which he categorises the benefits in terms of 'the organisation', 'the individual supervisor', and 'the supervisee'. Here, we summarise the benefits for the organisation and the supervisor:

For the organisation:

More effective and efficient use of personnel
Improved overall productivity
Reduced employee turnover
Improved internal communications
More motivated employees
Greater attraction to potential new employees

For the supervisor:

Opportunity to increase capability and value through agreed-upon development plan
Opportunity to contribute more directly to organisational as well as personal improvement

²The work of Morrisey stems from his experience as a trainer and a manager in both the private and public sectors in the USA.
Reduction of adverse personnel actions due to poor communications

Reduction of criticism from higher level management for what may be perceived as poor supervision

Writing 30 years earlier, McGregor (1957) suggested that performance appraisals meet three needs, one for the organisation and two for the individual:

1. They provide systematic judgments to back up salary increases, promotions, transfers and sometimes demotions or terminations.

2. They are a means of telling an employee how he or she is doing, and suggesting needed changes in behaviour, attitudes, skills or job knowledge.

3. They also are being increasingly used as a basis for coaching and counselling employees.

The potential benefits to be gained from implementing employee appraisal systems suggest that it is a major tool for improving organisational effectiveness. However, the problems associated with the implementation of such a scheme may often negate these benefits and even have an adverse effect on the performance of the organisation as a whole. Mikalachki (1983), suggests that:

"a large number of those evaluated find merit rating systems frustrating, demoralising and unfair. As a consequence, they repay their employers with
resignations, bitterness, or poorer work performances."

Mikalachki notes that this is particularly the case for management appraisal as the nature of the job makes objective evaluation difficult. Earlier, we noted that the need for managerial appraisal is perhaps greater than for other employees because of the impact of managerial behaviour on the behaviour of others. It is this interdependence that makes managerial appraisal more difficult. The success of the manager depends, to a large extent, on the performance of his or her 'team members'.

A major difficulty in appraising the performance of public sector employees concerns the nature of public sector output. If chief officers are to be held accountable for the output of their departments, service performance indicators must be established. A discussion of the problems involved in defining public sector performance in terms of the 3Es of economy, efficiency and effectiveness, appears in chapter 3. Our empirical study "Performance Measurement In Local Government - A National Survey" identifies a range of indicators that are currently used by local authorities to assess service performance (see chapter 4). Examples include:

- cost indicators
- productivity indicators
- utilisation rates
- time targets
- indicators of customer satisfaction

These are the types of indicators that could be used to appraise managerial performance. However, they are a
reflection of the behaviour of all employees rather than the self output of the manager and, as such, represent only one dimension of managerial performance. This dimension is of particular importance in appraising managerial performance and refers to a manager's ability to control/motivate other employees. Again, we are referring to the influence of management on X-efficiency.

In order to propose a scheme for appraising managers it is necessary to define the various functions that they perform. In 'Management by Objectives and Results in the Public Sector' (1976), Morrisey identified five functions and nineteen distinct activities that go into management work. These are reproduced below, in summarised form, and provide a checklist for the various dimensions of managerial performance that must be considered when implementing an appraisal system.

THE FUNCTIONS OF MANAGEMENT

Function I. Planning. determining what work must be done.
Defining roles and missions.
Determining key results areas.
Identifying indicators of effectiveness.
Selecting and setting objectives.
Preparing action plans.
Establishing policy.
Establishing procedures.

Function II. Organising. Classifying and dividing the work into manageable units.
Structuring the work for efficient production.
Integrating staff into effective teams.

Function III. Staffing. Determining the requirements for and ensuring the availability of staff to perform them.

Determining personnel needs.
Selecting personnel.
Developing personnel.
Function IV. Directing (leading). Bringing about the human activity required to accomplish objectives.

Assigning job responsibilities.
Motivating staff.
Communicating.
Coordinating staff.

Function V. Controlling. Ensuring the accomplishment of objectives.

Establishing standards.
Measuring performance.
Taking corrective action.

Each of these functions and activities is performed by managers at all levels although differences exist in the amount of time devoted to each function and the frequency with which it is performed. Figure 5.5 shows the variation in effort devoted to each of the five functions at three levels of management.

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P = Planning
O = Organising
D = Directing
S = Staffing
C = Controlling

Fig. 5.5 Proportion of management effort devoted to planning, organising, directing, staffing and controlling.

Source: Morrissey, G.L. (1977), Management by Objectives and Results in the Public Sector.

As is apparent from the illustration the amount of management effort devoted to the various functions of management varies according to an individual's position in the hierarchy. For example, the closer the manager is to the unit's direct output, the more effort is devoted to the directing functions.
i.e. assigning job responsibilities and motivating staff. A similar approach to defining the functions of managers at various levels is taken by Mowbray\textsuperscript{3} (1983). Recognising that the concerns of management vary according to the level at which they operate provides a framework for measuring the effectiveness of management decisions. This is the view taken by the Management Advisory Service who are concerned with measuring performance in the National Health Service.

With respect to the NHS, at the level of the actual delivery of services the prime concern of management is to provide a high quality and effective service to individuals. At department level, (ward, out-patient clinic) where systems of management budgeting or resource management operate, managers are concerned not only with quality and effectiveness but also with the efficient use of resources. At the level of the unit (a hospital, a community service) the management interest is more concerned with co-ordinating and controlling the various components of the unit in line with the agreed district plan. At the level of the district the main managerial concerns centre on the preparation of strategies and short-term plans, related to resources, within which the services will operate. At regional level, the concerns are with responding to national initiatives, establishing strategies, allocating resources, undertaking reviews and monitoring cash expenditure.

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\textsuperscript{3}Derek Mowbray is director of the Management Advisory Service.
The first step in the development of a managerial performance appraisal system is to identify the functions of management (as above), and consider their relative importance in relation to the different tiers of management. As we move up the organisational hierarchy, the concerns of management change. This suggests a need for a performance appraisal approach that is tailored to specific jobs. We cannot talk about managers within local government as an homogeneous group.

5.4.1 DESIGNING AN APPRAISAL MODEL

The literature on performance appraisal models is vast. However, little has been written on performance appraisal in relation to the public sector or, specifically, on appraising managerial performance. Work done in this area has been concerned with the managers in the NHS and much of this, along with the general literature can be usefully applied to local government.

The NHS Working Party on performance appraisal identified six fundamental conditions which need to be satisfied if an appraisal system is to start with any hope of success:

(1) It must demonstrably have the vigorous and wholehearted support of senior managers.

(2) It must be organisationally valid and meet genuine organisational needs.
(3) It must be socially acceptable (i.e. people must be willing to use it).

(4) It must be administratively convenient.

(5) It must fit the managerial style and overall culture of the organisation.

(6) It must be supported by extensive training and development work geared to building skills, knowledge, confidence and understanding.

The problem is one of designing an appraisal system that will fulfill these conditions. A search of the literature on performance appraisal suggests that the key determinant of successful implementation is the extent of employee involvement. A major study carried out in the United States involving a survey of 1600 organisations highlighted lack of employee involvement as the major cause of failure of performance appraisal systems and found that only 50% of the entire sample made efforts at employee involvement. Furthermore, their data showed that less than 15% of the

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4In 1983, C. Jackson Grayson, founder of the American Productivity Centre, brought together experts on productivity and performance improvement from all areas of the private sector. The group concentrating on reward systems conducted a nationwide survey of 1600 organisations. Their subsequent report "People, Performance and Pay" was published by the APC in 1988.
An example of a model of managerial performance appraisal is presented below. At each stage, the involvement of the manager is necessary to ensure his/her understanding of, and commitment to, the appraisal process:

**Stage 1:** break down the specific job into its major performance elements, which represent categories within which results need to be achieved.

**Stage 2:** establish priorities for each performance element, e.g. place them in rank order.

**Stage 3:** identify specific measurable end results for which the employee is to be held accountable.

**Stage 4:** determine the required performance standard that constitutes effective performance.

We can illustrate this in relation to the health service with reference to the framework of management decision making discussed above: one of the key accountability areas for unit managers concerns the allocation of resources, a possible measure might be budget performance, and a standard for this measure might be that expenditure does not deviate from budget by more than 1%.

The above procedure relates to the development of an appraisal system. If performance is to be linked to pay, Stage 4 i.e. determining the required performance standard that constitutes
effective performance must include a description of the system of PRP to be implemented. This will describe the impact on salary of the rating point.

Once performance assessments have been made, the performance of employees has been categorised and the size of the payments has been determined, the distribution of payments must be considered. Budgeting for performance related pay is essential because finite limits exist on the amount of money available for distribution. PRP philosophy suggests that the distribution of payments should follow whatever pattern the outcome of assessments indicates. In practice, given the budgeting constraints, the majority of employers use forced distributions and set quotas on the number of employees in each performance category.

There are two types of forced distribution schemes: those that assume a normal distribution of performance and those that assume a skewed distribution. Normal distribution schemes expect that employee performance will follow a normal parametric statistical model: a bell-shaped curve with equal numbers of employees getting the highest and lowest summary performance ratings and with the mean, mode and median identical. For example, 5% of employees can be expected to fall into the top and bottom categories, with 15% in each

category just below the top and just above the bottom, and 60% in the middle.

One implication of this approach is that half of the employees will be rated as below average. However, most managers rate their own performance highly: some studies have shown that more than 80% of managers believe that they deserve top ranking. In one study\(^6\), 86% of the engineers working in research laboratories in several companies rated themselves in the top 25% of excellence in performance. The other 14% saw themselves in the top 50% of performance excellence. Such conceptions of ranking lead managers to expect that PRP will result in large bonuses for themselves. Clearly, it is not possible to rank 80% of managers in the top level of performance and the expectations of the majority of staff will not be fulfilled. Such a conflict of opinion will inevitably result in discontented staff. One example of this occurred in a Canadian company who introduced PRP. About 80% of the staff received ratings below their expectations. The result was weeks of disruption in work and several resignations as people vented their hostile feelings.

The skewed distribution approach overcomes some of these problems. It assumes that only a small number of employees will remain at relatively poor performance levels, while a

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disproportionately large percentage will be rated above the middle category. This is a nonparametric distribution: a line describing the relationship between frequency and performance starts and stays low at the bottom performance levels, rising slowly until it jumps up at the middle rating category, with a hump that drops slightly at the highest rating category.

The nonparametric distribution scheme, while superior to the normal distribution scheme, is still problematic. All such schemes experience a number of problems:

(1) The number of high achievers is limited by definition rather than by actual performance.
(2) Appraisals are modified to meet quota requirements.
(3) Managers will manipulate the PRP process to fit budget plans.

The problems of forced distribution schemes must be recognised although, as yet, there are no simple solutions. Abandoning forced distributions makes budgeting for pay costs impossible but one possible solution is to conduct the assessment process before making the final decision about the size of payments. The relationship between assessment categories and payments is then determined in light of the outcome of the assessment process and thus allows for accurate budgeting.

5.4.2 PERFORMANCE APPRAISAL IN LOCAL GOVERNMENT

In the remainder of this section we present our case study
material collected from two county councils. Our guarantee of confidentiality allows us to identify them only as Xshire County Council and Yshire County Council. This research is very much a preliminary attempt to gather together information on performance appraisal and performance related pay. Our main empirical research is presented in Chapters 3 and 4, but it was felt that as performance related pay is currently the flavour of the month in local government it was important to widen our research to cover this area. Moreover, our discussion of X-inefficiency in the public sector and our conclusion in Chapter 4 that current Government policies are concerned, almost exclusively, with eliminating this type of inefficiency directs attention to incentive penalty systems that are operated, as Leibenstein argues, to influence the X-efficiency of labour.

A further point to note is the influence of Niskanen type theories of bureaucracy on the present Conservative government. Recalling in Chapter 2 that Niskanen's remedies for bureaucratic inefficiency included a proposed reward system that linked the performance of a bureaucrat to pay, we are now witnessing, 20 years on, the proliferation of such schemes within parts of the public sector under direct government control and the spread of these schemes in predominantly Conservative controlled local authorities. Whole hearted support comes from a Government which can be relied upon to condone and, sooner or later, act upon the policy proposals published by the IEA.

Performance Appraisal in Xshire County Council
The approach of Xshire County Council to increasing the individual performance of staff is geared towards identifying and fulfilling staff training needs. The Employment and Personal Development Review (EPDR) scheme aims to identify skills or areas of work/training which require development.

The "term staff" appraisal is consciously and consistently avoided and although the EPDR scheme initially included a performance rating matrix covering areas such as "quality of work" and "output" this was omitted after strong opposition from unions. Those involved in designing the scheme are very conscious of union hostility to measuring staff performance. Although top management is open to discussions of formal staff appraisal and the possibility of linking performance to pay, this is seen as an impossibility at the present time.

Politically, Xshire is a hung council. The feeling is that whilst Conservative members are generally keen on the idea of performance appraisal and performance related pay, all other members are generally against such proposals.

**The EPDR Scheme**

The Employment and Personal Development Review scheme was devised by the Personnel Department. However, the implementation of the scheme is the responsibility of chief officers and is therefore seen as the property of each Department rather than Personnel. It is defined as "a scheme aimed at improving communications within the organisation providing a framework which will assist in the achievement of
two objectives:

(a) increased individual performance of staff
(b) a higher level of job satisfaction

The EPDR scheme was given the go ahead by the Resources Committee in March 1989 and is being implemented on a trial basis for six months. It covers the first three officer levels but, if successful, will be extended to all APT&C staff. At present the chief officers are covered by a separate scheme, currently in its third year, that was developed by the chief executive, this is discussed in below.

In the trial stage, the EPDR scheme will cover approximately 200 employees. Each first tier officer will act as Reporting Officer for up to 6 second tier officers, which, in turn, act as Reporting Officer for up to 6 third tier officers. Each Reporting Officer is briefed on operating the scheme and given guidelines on carrying out the interview/discussion. Participation in the scheme is entirely voluntary at each level.

The scheme involves the following;

(a) A job specification; this covers the most important tasks and responsibilities of individuals and is based on his/her job description.

(b) A review preparation form; prior to the interview/discussion the reporting officer and post holder each complete a "preparation checklist for discussion". This highlights the issues to be discussed, for example, the post
holders are asked to list what they believe to be their most important tasks; how they view their own performance in relation to these; how performance could be improved; what constraints they face; how the Reporting Officer's managerial style affects their performance; and what action needs to be taken in respect of their performance and development. Similarly, the Reporting Officers list what they consider to be the most important tasks of the post holder; how well post holders perform in relation to these; how performance could be improved; and so on.

(c) An interview/discussion; this is based on the issues identified in the review preparation (see (b) above). The discussions take place at yearly intervals and the aim is for the participants to agree jointly on an action plan for the year.

(d) An action plan; this is split into three sections. Section 1 lists the main priorities, in terms of tasks and responsibilities, for the period up to the next review discussion. Section 2 details the significant changes either in the job, the structure or working methods which will help the post holder improve on current performance. Section 3 identifies the skills or areas of work/training which require further development or experience. The action plan is devised jointly by the Reporting Officer and post holder.

The EPDR scheme is designed to identify staff training requirements, for example, training officers to manage budgets, or implement systems of service performance measurement. Participants in the scheme are told, repeatedly,
that disciplinary, grievance and pay issues are specifically excluded from the scheme.

Xshire already has an advanced training programme, and emphasises the importance of training as investment in human capital. They aim to promote the image of "the gardener boss" i.e. a commitment to growing and nurturing the skills of employees. A number of current training initiatives are carried out in partnership with both the public sector (other local authorities) and the private sector, for example, local businesses. In the future, such partnerships will be expanded and distance learning schemes are to be developed.

The Chief Executive's Scheme

The chief executive of Xshire is strongly committed to the idea of performance measurement not only for the organisation but also for individual employees. In 1986 the structure of the council was fundamentally changed and the new structure was designed to revitalise the performance review and decision making process. Each committee was asked to identify its objectives and the Performance Review Sub-Committee to establish a systematic performance review procedure. Priority was given to the statement of the 'vision'of the County Council, and this was linked to the identification of committee objectives. Following this, the Chief Officers produced 'position statements' which provide information for policy and service review (economy, efficiency and effectiveness) and resource allocation. This new structure has, to some extent, facilitated the development of Chief
Officer performance appraisal.

The scheme covering the Chief Officers was devised by the Chief Executive and is known as the "Chief Officers Annual Discussion with the Chief Executive", we will use the acronym COD. This scheme differs from the EPDR, described above, in so far as it is orientated towards relating the performance of Chief Officers to departmental performance. This is particularly the case for the current year and the Chief Executive is developing the scheme to tie in with the vision and position statements of the authority. Clearly, COD is influenced by the Chief Executives commitment to appraising staff performance and his conviction that performance should be linked to pay. However, at present, the scheme does not incorporate a performance rating matrix or any system of rewards or sanctions linked to employee performance, as the Chief Executive is anxious to avoid union hostility.

The COD Scheme

COD was first introduced in 1987 and covers all of the Chief Officers - approximately 20. The Chief Executive approaches each Chief Officer for a discussion based on a questionnaire. This includes questions on the objectives and key activities of the Chief Officer, their expectations of the Chief Executive, their management style, their achievements, priorities, problems, relationships with other Chief Officer's and their thoughts for the future. Over the three years for which the scheme has been running, the questionnaires have evolved and now provide a clear framework for assessing Chief Officer performance. The 1989 COD is reproduced below.
CHIEF OFFICERS ANNUAL DISCUSSION WITH THE CHIEF EXECUTIVE

Achievements

Successful implementation of service objectives/policies
management improvement plan
programmes
Overall departmental performance (against what criteria?)

Disappointments

Objectives not achieved; policies and programmes not
implemented or completed. Reasons.

Policy/Performance Review - Value for Money matters

Issues presented to Policy and Service Review Sub-Committees
1987/88 - results of reviews - Members' reactions - evidence
of savings/improvements in service.
Programme for current year - aims and progress to date

Customer Care Issues

Evidence of satisfaction/complaints from 'customers'- the
public, Members, Committees, Chief Officers and their
Departments, staff, trades unions, etc.
Current 'customer care' policies and procedures within the
department.
Proposals for developing 'customer care' policies during the
year.

Financial Control issues
Budget control - over/under spending - reasons
Capital programme - slippage (and reasons)

**Personnel Related Issues**

Organisation - restructuring
Management development and training
Staffing levels in relation to work load
Morale
Recruitment and turnover
Staff consultation and communication
Overtime
Appraisal procedures and practices

**Contribution to Corporate/Inter-departmental Issues**

*Chief Officers own needs* - problems, career-related issues, any issues not raised above.

Although the COD scheme does not explicitly define the performance of Chief Officers it does provide a framework for doing so. Referring back to page 205 where we identified the "functions of management" that must be considered when implementing an appraisal system we can see that the COD scheme provides information on the various dimensions of managerial performance that go into management work. For example, within the 'planning function' the relevant activities include setting objectives, identifying departmental performance indicators and determining key results areas. These activities are considered within the COD scheme.
It is important to note the link between the COD scheme and the system of service performance review in place at Xshire. The performance review system, set up in 1986, resulted in a clear statement of the overall vision of the County Council, that is; to succeed in providing the people of Xshire with quality services responsive to their needs. The vision was translated into the identification of individual committee objectives which were developed within the position statements to provide practical objectives, programmes to achieve these, an assessment of the resources required to achieve specified standards and performance indicators. This system of performance review provides information on the performance of departments in relation to their objectives and can be fed into systems for appraising Chief Officer performance.

The problems of measuring local authority employee performance, especially at managerial levels have already been discussed. The literature on public sector employee appraisal frequently identifies lack of tangible output as a major stumbling block when trying to measure employee performance. This is especially apparent when considering management performance and even more so, when considering employees in finance departments or personnel departments. However, such problems may be overcome by setting clear departmental objectives which can be used in the process of appraising managerial performance. This leads us to the conclusion that performance measurement systems have an important role to play, not only in assessing economy, efficiency and effectiveness in local government, but also in providing
Performance Related Pay in Yshire County Council

The initial stimulus for introducing PRP in Yshire came, simultaneously, from a number of sources. The idea was first discussed by the Chief Officers Management Team (COMT), made up of the chief Executive, Director of Property, Director of Planning and Transportation, Director of Education, Director of Social Services, County Clerk and County Solicitor. Performance related pay then became an issue for the Special Projects Unit to research. Prior to this, a working party had been established to consider overtime payments for senior staff. Having considered overtime payments, and made recommendations, this group turned its attention to PRP. The working party, chaired by the Deputy County Treasurer, includes members of the Special Projects Unit.

The May 1989 elections reduced the Conservative majority and Yshire became a hung council. Immediately following the election the 3 Political Group Leaders held a discussion with the Chief Executive in which PRP was discussed. The Conservative and Alliance leaders were very much in favour of the idea of PRP and the Labour leader more sceptical. Prior to the elections there was a general feeling amongst the officers, at PO level and above that the return of a Conservative majority would lead to salary increases. The current feeling amongst officers is that PRP will result in salary increases. Most managers rate their own performance
highly: some studies have shown that more than 80% of managers believe they deserve top ranking.

In the aftermath of the elections the Special Projects Unit was instructed to prepare a report introducing the topic of performance related pay concentrating on the possible benefits and outlining the broad methodology for its introduction.

The Special Projects Unit first report suggested a number of possible PRP schemes:

a) Cash bonuses  
b) Additional salary increments  
c) Higher % increases to salary  
d) New salary ranges

Following discussions in the Chief Executives Department a second report was produced outlining, in detail, the schemes installed in Kent and Westminster County Council's. It was proposed that Yshire should proceed with one of these two schemes.

At present Yshire County Council has no comprehensive system of staff appraisal. A number of very small scale pilot studies were started two or three years ago but these have fallen by the wayside. When questioned on appraisal a typical reply is that the employee "hasn't had an appraisal interview for a couple of years". A proposal some years ago by the Workstudy Section to introduce performance related pay to
administrative staff, the central typing pool and staff in
data preparation was vetoed by opposition from both staff and
unions. However, PRP does operate for some employees, "many
manual workers are on it". The current proposals for PRP will
relate to the top tiers of management, from the bottom of the
Principal Officer range to the Chief Officer level, approximately 500 staff.

The details of the scheme have not yet been finalised. The
Special Projects Unit have identified a number of specific
issues to be covered including:

(i) coverage - which groups of staff will be covered?
(ii) defining performance - method of assessment, how to
differentiate between different levels of performance, whole
job comparisons, assessment against standards, assessment of
results;
(iii) product of Performance Assessment - i.e. how many
performance categories, how to define them;
(iv) the Assessor - who will assess individual performance,
the role of the Members;
(v) procedures for appraisal - frequency of interviews,
documentation etc. mechanics of operation including appeals
system;
(vi) trade unions - deciding the extent of consultation and
negotiation.

To relate performance to pay, the first step is to define
performance and a useful starting point is an employee's job
description. Yshire is considering the approach described by
Buford et al who outline a five-step procedure illustrating how to develop a job description that can be used as a performance appraisal instrument, this procedure is summarised below.

**Developing a job description for performance appraisal**

**STEP 1** Conduct job analysis In designing a performance appraisal system it is necessary to identify the work content of the job. Procedures for collecting information are: 1) interviews with employees and/or their managers; 2) observation of the work being performed; 3) completion of questionnaires by employees or managers; 4) employees recording activities in logs as they are performed.

**STEP 2** Write job description Divide job into task areas each of which is introduced by a flag statement that describes the types of behaviour and outcomes that identify successful job performance. The task areas should be presented in order of importance, and each allocated a percentage so that the summation of all task areas is 100%. The percent allocated to the task area is based on such factors as time expended and complexity.

**STEP 3** Transfer task area and flag statement to appropriate

instrument i.e. design appraisal form and rating scale. For example, 1 Fails to meet job requirements; 2 Essentially meets job requirements; 3 Fully meets job requirements; 4 Meets job requirements with distinction; 5 Exceeds job requirements.

STEP 4 Establish appraisal policies and procedures State the purpose and uses of the system. Develop procedures to cover how often appraisals are to be conducted, documentation and employees right of appeal.

STEP 5 Train raters Raters must fully understand the system itself and develop skills in performance counselling. It is essential that the raters understand what level of performance corresponds to each scale point 1 - 5.

If performance is to be linked to pay, a description of the system of PRP to be implemented must also be designed. This will describe the impact on salary of the rating point, for example, the Kent County Council scheme relates pay to performance as follows:

<table>
<thead>
<tr>
<th>Performance Rating</th>
<th>Salary Progression</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scale placement at any point (with effect from previous October)</td>
</tr>
<tr>
<td>2</td>
<td>Two increments (with effect from previous October)</td>
</tr>
<tr>
<td>3</td>
<td>One increment in April</td>
</tr>
<tr>
<td>4</td>
<td>No increment</td>
</tr>
</tbody>
</table>
The performance related pay scheme at Yshire county council has not yet been implemented. However, it is now likely that a scheme similar to that in operation at Kent county council will be adopted. Details of the Kent scheme and the schemes installed at Coventry City Council, East Sussex County Council, Hove Borough Council and Somerset County Council are provided in the Incomes Data Services and Coopers and Lybrand (1989) report. An earlier report produced by Incomes Data Services and Peat Marwick McLintock (1988) contains some information on PRP but is more concerned with how authorities formulate their salaries and benefits policies in general. These two reports, along with the detailed information that we received from five of the local authorities included in our survey, provide the source of information for the following section in which we broadly summarise PRP schemes installed in various local authorities.

5.5 WHY INTRODUCE PERFORMANCE RELATED PAY?

Local authorities themselves identify a number of reasons for introducing performance appraisal and performance related pay schemes. These include:

(i) recruitment and retention problems, especially in the South-East where the labour market is tight;

(ii) financial constraints on local government spending, which are leading councils to look for new ways to motivate and reward those staff who can demonstrate increased efficiency;
(iii) competitive tendering which is also causing councils to review their management systems in order to be able to compete more effectively with private contractors; and

(iv) strong encouragement for the decentralisation of collective bargaining from central government, which has been taken up as a 'political issue' by some Conservative led councils.

(v) as part of the introduction of a performance management culture.

The IDS (1988) research showed that the groups most affected by recruitment and retention problems are experienced and qualified professional staff concentrated in the Senior Officer and Principal Officer ranges. Evidence from the Local Authorities Conditions of Service Advisory Board (LACSAB)\(^8\) indicates a similar trend. LACSAB found that the vacancy rate for non-manual staff in England and Wales was 5.9% and that between 1977/78 and 1986/87 turnover for non-manual staff increased from 12% to 15%. Part of the local authority response to these problems has been to introduce management appraisal schemes, and performance related pay. In a number of Conservative local authorities the pressure to introduce performance related pay schemes and to break away from national collective agreements stems from ideological beliefs. The report notes that:

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\(^8\) LACSAB report on recruitment and retention, October 1987
"The growth of 'free market' ideas has undermined accepted notions about collective bargaining. 'Free market' based criticisms of national bargaining began with a speech by Nigel Lawson to the National Economic Development Council in November 1986. At that meeting he said that 'pay rates tend all to often to be set in the light of labour market conditions in London and the South-East'. He concluded therefore that: 'Greater differentiation could free the labour market and so - over time - create more jobs'. In his view, national bargaining contributes to the continuation of unemployment."

Clearly, the initial stimuli for the introduction of staff appraisal systems come from a number of sources. They appear as a cure-all for problems ranging from recruitment and retention to high unemployment.

The current application of appraisal and PRP, in all of the local authorities in our survey, is limited to higher levels of management. So, at this stage, the numbers involved are small, for example, our research revealed that schemes usually cover 100 employees or less.

5.5.1 TYPES OF PAYMENT SYSTEMS

The approaches used fall into three main categories:

(i) variable increments in relation to defined performance ratings which may also vary according to place in salary scale for the job.
(ii) discretionary increments using existing scales, such as a double increment for exceptional performance.

(iii) merit bonuses of one-off lump sum payments.

The percentage increase in salary that payments represent varies across authorities. The highest rewards for the best performers represented 15% of salary while the most usual rewards ranged between 5% and 10%.

The most popular method of performance assessment in our sample of authorities was target-setting. In all authorities target-setting was a joint exercise carried out by the appraisor and appraisee. Most authorities mentioned the difficulties in setting quantifiable targets for managers at senior levels. These target based schemes are often derived from annual statements of the authority's overall "action plans".

In most authorities the appraisee is appraised by his or her immediate manager. However, as these schemes apply to the top levels of management, council members are usually involved in the appraisal process especially at Chief Executive and Chief Officer levels.

5.5.2 TRADE UNION VIEWS

The views of the public sector trade unions on performance
related pay are diverse. NALGO, the main union for public sector employees, is strongly opposed to the whole concept of PRP at the national level. On the other hand, the Federated Union of Managerial and Professional Officers (FUMPO), is generally supportive of the idea. The IDS (1989) report quotes FUMPO's general secretary as saying that: "As a trade union which represents senior managers FUMPO do not philosophically oppose performance related pay for managerial staff".

NALGO's objections are that it is not possible to measure employee performance fairly, that most authorities lack the expertise necessary to design and implement schemes and that such schemes are open to abuse by managers. Our research shows that union opposition represents the main obstacle to the introduction of PRP or employee appraisal: Xshire County Council dropped its performance rating matrix because of union hostility; in Yshire, an early proposal by the Workstudy Section to introduce PRP for admin staff was vetoed by the unions. However, as the current introduction of PRP is for senior management only, and the numbers of staff involved are small, union opposition, at local level has been muted.

In most authorities where performance related pay has been introduced trade unions have not been involved. At Coventry City Council NALGO was informed of developments but not involved in detailed negotiations. In Kent County Council NALGO was not prepared to negotiate on PRP and the scheme was introduced despite union hostility. Somerset County Council
consulted NALGO informally but the issue was discussed in
detail only at Chief Officer level. Local authorities
recognise however, that if current schemes are extended down
the grading structure then formal consultation will need to
take place with NALGO.

5.6 WILL PERFORMANCE RELATED PAY IMPROVE PERFORMANCE?

The introduction of performance related pay in local
government is a relatively new initiative and so far, no
detailed study of the outcome of such schemes has been carried
out. This leads us to the obvious and rather trite conclusion
that more research is necessary. A starting point for future
research could be to assess the reasons, given by authorities,
for introducing performance related pay. The two main reasons
are: (i) as a response to recruitment and retention problems
and (ii) as part of the introduction of a performance
management culture.

The effect of PRP on recruitment and retention may be assessed
with reference to measures such as employee turnover, vacancy
rates and responses to job advertisements although the link
between changes in these measures and the introduction of PRP
must be clarified. The notion that PRP is an aid to
recruitment and retention is linked to the belief that PRP can
be used to increase salaries generally. For example, Somerset
County Council justify their introduction of PRP by pointing
out that the salary levels for the Chief Executive and Chief
Officers were uncompetitive. Thus PRP was seen as a way of
increasing these salaries. A direct consequence of the PRP schemes in the nine local authorities covered by our research and the IDS research has been an increase in basic salaries. In most cases its introduction has been accompanied by reviews of salary levels and staff have moved to higher salary points or have the prospect of higher earnings.

In Yshire County Council employees who were to be covered by the PRP scheme generally felt that PRP would result in salary increases. Such expectations are widely held because almost all individuals rate their own performance highly. The reality that PRP tends to increase salary levels for all staff confirms these expectations. This prompts us to question the validity of pay for performance as a tool for improving performance when it appears as a back door method of increasing salaries for all employees.

In our previous discussion of performance rating distributions we suggested that ratings could follow a normal distribution, in which half of the employees will be rated as below average, or a skewed distribution in which a disproportionately large percentage will be rated above the middle category. How can the actual distribution of performance ratings in authorities follow such an abnormal pattern? A topic for future research could be to consider the impact of PRP on salary levels and the distribution of performance ratings. Clearly this has implications for the budgeting constraints that authorities face with respect to their staffing outlay.
A number of local authorities in our survey have introduced PRP as part of the introduction of a performance management culture. The IDS research (1989) states that Kent and East Sussex saw PRP as contributing to a change in organisational structure stemming from the introduction of performance management.

"For Kent the primary reason for introducing performance pay was to sell the concept of performance management. The appointment of a new Chief Executive in 1986 led to an extensive reorganisation and a new management philosophy. Emphasis is now placed on devolved decision making, allowing managers more autonomy and initiative. Performance pay is seen as a way of facilitating this change."

"At East Sussex, the introduction of performance pay is also part of a wider programme of performance management. The authority recognises that performance pay can not stand on its own but it can reinforce a changing organisational culture. The authority wanted a pay system which would encourage staff to work harder and emphasis performance. It claims that performance pay shows, in tangible form, the value of an individual's contribution to the organisation."

Similarly, our research at Xshire showed that the performance appraisal scheme was driven by a Chief Executive who was committed to the idea of performance measurement not only for
the organisation but also for the individual. An interesting question is whether PRP is seen as a way of facilitating performance measurement, as in Kent, or whether performance measurement facilitates PRP. We would argue that the latter view is correct. As we have seen, the method of performance assessment of managers involves setting targets for the individual manager which are derived from organisational objectives. In Xshire, for example, the system of performance review provides information on the performance of departments and these performance indicators are used for appraising Chief Officer performance. Here, the development of organisational performance indicators facilitates the introduction of a system of managerial appraisal.

At the start of this chapter we considered a range of theories of motivation and considered the question of whether money is a motivator. We concluded that money plays an important role in satisfying needs even though the human relations models omit money. For example, money indirectly satisfies the physiological needs of hunger and thirst and needs for security. It also provides a measure of success and status.

Two of the main problems of performance related pay are that pay is perceived as being unrelated to job performance, and that the size of the performance related increase has little impact on performance. Our research provides information on how these problems relate to PRP in the public sector. The first problem can be overcome by clearly stating the job
duties, specific work outcomes and behaviours that define success at the job. It is vitally important that these objectives are defined jointly by the appraiser and the appraisee. The second problem is that salary increases are too low to motivate employees. Pay can be motivating if the increase is large enough in relation to income to result in a significant change in financial condition. In order to be effective, such an increase would have to be in the order of 20% to 30% (Geis, 1988).

In relation to the local authorities in our survey, the PRP schemes in operation fulfill the criteria of joint objective setting. However the results from our survey of performance measurement (Chapters 3 and 4) suggest that few authorities have adequate systems of service performance measurement. This means that the types of service indicators that could be fed into managerial appraisal are not yet sufficiently developed. A final point in relation to the size of the performance increase is that current schemes allow for increases that are much smaller than is necessary for performance related pay schemes to be successful.

X-efficiency theory by linking behavioural theories of motivation to an economic theory of production, shows the impact of varying effort levels on organisational output. In doing so, it forces attention to the role that reward systems

For example, a survey of 2,867 companies conducted by The Wall Street Journal in 1979 found that salary increases were too low to motivate employees.
can play in motivating individuals to search for higher effort positions. However, if the introduction of performance related pay in local government is to be seen as an effective reward system rather than as a means of increasing salaries across the board, or as a response by Conservative authorities to a Conservative government initiative, its design and implementation must reflect a commitment to a fair and accurate system of performance appraisal. The development of such schemes at managerial level must be linked to systems of performance measurement that facilitate the development of accurate methods of employee appraisal.
CONCLUDING COMMENTS

To conclude this thesis we stress some of the points that have already been presented as conclusions to each chapter. In addition, we point out the related issues which may provide the basis for further research.

In concentrating, in this thesis, on the efficiency of the supply of public goods and services we have focused on the behaviour of bureaucrats and the nature of the organisational framework in which they work. Here inefficiency may arise in the form of allocative inefficiency or X-inefficiency. The models of bureaucracy surveyed, in Chapter 2, place differing emphasis on the form that inefficiency will take. For example, Niskanen concludes that bureaucratic supply is characterised by allocative inefficiency in the form of over supply, whereas Peacock asserts that inefficiency is more likely to take the form of producing output at above minimum cost.

The point that we have stressed is that bureaus are inefficient because it is in the interests of bureaucrats either to produce too much output and/or to produce output at above minimum cost. We concluded, that strategies to reduce inefficiency must therefore aim either to change the incentives of bureaucrats, so as to make it in their interests to produce efficiently, or, to provide sponsors with the necessary information on costs to enable them to force
bureaucrats to produce efficiently. The strategies that we identified can be summarised as follows:

(1) increasing competition to the bureau by greater use of private sources of supply;

(2) the use of control devices based on information on the minimum cost of supplying goods and services;

(3) the introduction of reward systems that influence the motivation of bureaucrats/public sector employees.

In the UK, the strategy of increasing competition within local authorities through greater use of private sources of supply has been introduced through compulsory competitive tendering\(^1\). This is a controversial issue. Its supporters point to improved services and cost savings with benefits to consumers. Critics stress lower standards, major monitoring and redundancy costs, contract failures and lower pay for the workforce. While this thesis has not attempted to review the empirical evidence\(^2\) on the effects of contracting out,

\(^1\)The 1988 Local Government Act introduced compulsory competitive tendering for catering, cleaning streets and buildings, the maintenance of grounds and vehicles and the management of sports and leisure facilities.

\(^2\)For a summary of recent empirical evidence on the impact of
Our survey of studies directed by the public choice approach, Chapter 2, presents the theoretical basis for concluding that a more competitive supply structure reduces both allocative and X-inefficiency.

One of the key issues in assessing contracting out is whether it does result in a more competitive supply structure. The response of private industry has often been to reduce competition through mergers and take-overs, creating oligopoly and local monopolies. Thus future research in this area could usefully be directed at analysing the structure of supply that results from a strategy of contracting out.

In the USA, supply structures include provision by county government departments to other municipalities under, for example, the Lakewood Plan. Although this model of inter-authority competition has not yet been adopted by local authorities in the UK, it does present possibilities for future alternative supply structures.

Contracting out see Ascher (1987) and Parker and Hartley (1990).
The second strategy to reduce bureaucratic inefficiency involves the use of control devices based on information on the minimum cost of supplying goods and services. In chapter 3 we have examined how the introduction of value for money audits generates the necessary information. Specifically, in assessing the impact of the Audit Commission on local authority performance we have shown how the Commission creates pressure for authorities to reduce X-inefficiency by acting as a control device. The work of the Commission generates information on the cost of supplying goods and services in various local authorities and this information is used by the Commission to make recommendations on how authorities can reduce spending. Bureaucrats no longer have the "monopoly of information" identified by Niskanen, but are subject to monitoring by the Commission and are required to produce and publish summaries and comparisons of their performance under the Department of the Environment (1981) Code of Practice.

The pressure for local authorities to introduce systems of performance measurement has come from external sources - central government, the Commission - and internal sources - elected Members. In theory, performance measurement provides the necessary information for measuring economy, efficiency and effectiveness as defined within the framework described in chapter 3. The reality of performance measurement is described in chapter 4. This provides a wealth of information on the state of the art of performance measurement in local government. One of the conclusions drawn from our analysis of this information is that current schemes are biased towards
measuring X-inefficiency. Such systems tend to have few effectiveness measures which come close to measuring allocative efficiency. In addition, current systems measure past rather than present performance; generate a large volume of performance indicators with few aggregated indicators; and generate information that is difficult to interpret. Current users of PI's have expressed their commitment to improving and expanding performance measurement. The Commission and local authority managers both stress that the continuing development of performance measurement will shift the focus onto measuring effectiveness, a move that will bring allocative efficiency to the center of the debate. A recent publication on performance measurement describes current systems in place in central government, future research is needed into local government performance to assess whether the shift towards measuring effectiveness has been realised.

The final strategy, identified above, is concerned with changing the incentives of bureaucrats so as to make it in their interests to produce efficiently. This follows from the model presented by Peacock (chapter 2) which indicates how X-inefficiency can arise in a bureaucracy by including leisure within the welfare function of the utility maximising bureaucrat. Similarly, Leibenstien's development of X-efficiency theory (chapter 1) focuses upon the labour input

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\(^3\) Cave, M., Kogan, M. and Smith, R. (1990), (eds), Output and Performance Measurement In Government: the state of the art.

243
as a major source of X-inefficiency. Chapter 5 presents a brief survey of various schemes that have been introduced in local authorities, aimed at motivating employees. As previously noted, no other research has been carried out on the impact of these schemes on organisational efficiency in the UK public sector. However, our analysis suggests that while the staff appraisal and performance related pay schemes currently in operation do fulfill some of the criteria laid down in the literature, they are unlikely to be successful. These schemes appear to have been introduced as a means of increasing salaries for top management - our research shows that they have been successful in this respect. Few authorities are able to relate performance to pay as they lack adequate means of measuring this performance. The rapid spread of performance related pay is another topic for future research.

Our review of theories of public sector supply in early chapters showed how inefficiency can arise in public sector bureaucracies. We have shown how the general policy prescriptions arising from these theories have been translated into a series of policies aimed at improving the efficiency of local government. Moreover, we have shown that the overriding emphasis of these policies is on eliminating X-inefficiency in the supply of goods and services. This research has highlighted a range of topics for further research to develop upon the theoretical and empirical analysis provided here.
BIBLIOGRAPHY


CIPFA (1987), Local Government Trends, (Chartered Institute of Public Finance and Accountancy).


Cmnd, 8616 (September 1982) Efficiency and Effectiveness in the Civil Service.

Cmnd, 9058 (September 1983) Financial Management in Government Departments.


Department of the Environment (1981), Local Authority Annual Reports, (HMSO).


Economic Progress Report, (Jan-Feb 1987), Output and Performance measures, No. 188.


Gray, A. and Jenkins B, Lasting Reforms in Civil Service


H.C. 236, Session 1981-82 Efficiency and Effectiveness in the Civil Service:


Leibenstein, H. (1976) Beyond Economic Man


Mayston, D.J. (1985), Non-Profit Performance Indicators in the Public Sector, Financial Accountability and Management, vol 1, No.1, summer.


National Audit Office, (February 1986), VFM developments in the NHS


Niskanen, W.A. (1973) Bureaucracy: Servant or Master, Hobart Paperback


Nunamaker, T. R. (1985), Using Data Envelopment Analysis to Measure the Efficiency of Non-Profit Organisations: a Critical Evaluation, Managerial and Decision Economics, vol. 6, 1,
pp.50-58.


Stiglitz, J.E. (1986) Economics of the Public Sector


Tullock, G. (1976), The Vote Motive, Hobart Paperback 9, (Institute of Economic Affairs).


