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**Institute For International Research  
Conference on User Pays**

**User Charges: Some Aspects of  
their Allocative Role**

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## **USER CHARGES: SOME ASPECTS OF THEIR ALLOCATIVE ROLE**

### **THE ROLE OF THE GOVERNMENT IN PROVIDING GOODS AND SERVICES**

The rationale advanced for government provision of goods and services is a relevant consideration in deciding which classes of goods might be subject to user pays. This paper will survey the main arguments which are traditionally advanced for government involvement in the provision of goods and services. I do not, however, wish to imply that I necessarily agree with all of them. The survey is necessarily cursory. It is not intended to provide a critical analysis of the role of the government in the economy.

#### **The Domain of Rights and Duties**

In societies where most goods are normally traded privately, some rights are reserved for universal or equal distribution among citizens. The right to vote, to justice and to most police services are examples. Voluntary exchange in the rights to some goods is also prohibited, e.g. illicit substances. In addition, most societies impose certain duties, such as an obligation to obey the law, on their citizens. This arises from a generally - although not universally - acknowledged right of the government to exercise coercive powers.

In respect of this domain of rights and duties, democratic societies typically determine that equality should take precedence over efficiency (Okun [1975]). A market for votes could, for example, be expected to develop if votes were permitted to be traded. Democratic societies generally affirm, however, that certain goals, such as the advancement of personal freedom and human dignity, should be furthered by an equal allocation of some rights and duties.

The boundary between the domain of rights and duties and other rights is fuzzy. While the right to justice is 'free', court costs may be imposed in criminal as well as civil cases. We may debate the extent of rights and duties which society should treat in this manner. It is sufficient for our purposes, however, to note that rights and duties which society decides to allocate universally are not candidates for the application of user charges.

#### **Public Goods**

According to Samuelson [1970a], pure public goods, or collective consumption goods as he called them, have two crucial properties. First, it is impossible to exclude individuals from enjoying the benefits of the goods (the non-excludability property). Secondly, it is undesirable to exclude individuals from enjoying the goods as the enjoyment of them by one person does not detract from that of other people (the non-rivalrous property).

Practical examples of pure public goods are nevertheless rare. Stiglitz's [1988] comment that good government meets both criteria does not negate this conclusion. National defence, street lighting and lighthouses are traditionally cited as examples of pure public goods. If a potential aggressor is deterred by a country's defence

capability, it may be difficult to confine the benefits to those willing to contribute to defence expenditures. One problem is that people who believe that they will benefit from the provision of goods without contributing to the cost involved have little incentive to pay.

The second criterion for pure public goods, the non-rivalrous property, arises where the cost of supplying the goods to an additional person (the marginal cost) is zero. It might be argued, for example, that the cost of defending New Zealand will not change if the population increases by one person. Similarly, the cost of providing lighting to an additional person passing along a commonly frequented street, or to an additional ship, might be claimed to be zero. Where this is the case, the perfectly competitive model (which assumes away transactions costs) suggests that price should be set at marginal cost i.e. zero.

According to this traditional view of pure public goods, if such goods were to be provided privately they would be supplied in inadequate quantities or they would not be supplied at all, and community welfare would be impaired. Thus Samuelson concluded:

"... no decentralised pricing system can serve to determine optimal ... levels of collective consumption ... other kinds of 'voting' or 'signalling' would have to be tried."

This view of pure public goods has been contested. It has been argued that both non-excludability and non-rivalry reflect transactions costs. These may be defined as any obstacles to market exchanges that interfere with or discourage the process of transacting (Cowen [1988]). The problem of non-excludability arises because economic agents may have incentives to understate their preferences. Coase [1988] has suggested, for example, that a shipping firm negotiating on the joint supply of lighthouses would understate the benefits which it would receive from the lighthouses in order to lower its share of the total costs. Similarly, Demsetz [1988a and 1988b] has noted that it is transactions costs which prevent firms from charging each individual a separate price, including charging the marginal consumer a zero price where the marginal cost is actually zero. It has also been argued that the marginal cost of services such as defence may not be negligible.

The emphasis on the transactions cost aspects of public goods led Coase to challenge Samuelson's conclusion that lighthouses were a pure public good which should be funded out of taxation. In a paper entitled "The Lighthouse in Economics", Coase [1988] showed that in eighteenth century England:

"...lighthouses were built, operated, financed and owned by private individuals, who could sell the lighthouse or dispose of it by bequest. The role of the government was limited to the establishment and enforcement of property rights in the lighthouse. The charges were collected at the ports by agents for the lighthouses. The problem of enforcement was no different for them than for other suppliers of goods and services to the shipowner. The property rights were unusual only in that they stipulated the price that could be charged..."

He added:

"We may conclude that economists should not use the lighthouse as an example of a service which could only be provided by the government."

The lighthouse example is important for another reason. Coase showed that the fee charged for lighthouse services was collected along with the fee for port dues. This concept of tying the fee for one good to another good has been advanced as a private response to the free-rider problem. The funding of roads by an excise tax on petrol is a similar example. Tying is one of several ways in which markets might respond to the problems traditionally associated with public goods. Other writers have analysed and questioned claims made about other public goods (see Cowen [1988]).

The transactions cost approach does not lead to a simple rule of thumb about the method of providing and funding goods which exhibit significant characteristics of public goods. A case-by-case examination is required to determine the socially optimal outcome. This may involve government provision of goods. If it does, it does not automatically follow that part or full user charges are inappropriate.

Before leaving the subject of public goods, it should be noted that the extent to which goods exhibit the characteristics of pure public goods depends on available technology which may change over time. It might, for example, become less expensive to collect road tolls. Another example is the development of cable television and the scrambling of television signals, as employed by Sky Television. These developments suggest that it is now feasible to exclude non-payers from these services whereas this may not have been feasible in the early years of television. It is also likely that technology will in due course remove the lighthouse from the debate. The state of technology is therefore a relevant consideration in examining the extent to which particular goods exhibit the characteristics of pure public goods, and hence the benefits and costs of alternative methods of allocating and financing their provision.

### **Failure of Competition**

Public production of goods is sometimes found where markets are not competitive. This is often the result of policy-induced barriers to competition which (as I shall argue below) should normally be removed. Beyond this there may be a limited number of special circumstances in which competition may be significantly inhibited. One possible situation relates to so-called natural monopolies.

An industry in which increasing returns to scale (a decreasing cost industry) are so significant that only one firm would operate in any region is referred to as a natural monopoly. Where a natural monopoly is associated with high sunk costs (i.e. costs which are not recoverable upon exit from the industry), it may deter potential competitors from entering the industry. The potential competitor faces not only the prospect that the existing supplier may lower prices but the possibility that it might be necessary to leave the industry without obtaining much for the investment.

The local telephone network and local electricity and gas distribution may exhibit the characteristics of natural monopolies. The New Zealand government has also viewed the national electricity grid, which is operated by Transpower, and the main airports as natural monopolies.

Where public production of goods involves a natural monopoly, there is an argument for setting price equal to marginal cost. However, as marginal cost will be lower than

average cost for a decreasing cost industry, the firm would incur a loss. The question of whether the loss should be financed from taxation or sales revenue (i.e. whether user charges should be based on Ramsay-type principles and set to cover total cost) depends on an evaluation of whether the welfare cost imposed by the resultant loss of output would be larger than that from financing the loss by taxation. The former loss will be larger the more elastic is demand for the good concerned. An evaluation of the options can only be conducted on a case-by-case basis.

In the absence of sunk costs, a natural monopolist would set price equal to average cost and there would be no strong grounds for government intervention provided that there were no policy-induced barriers to entry into, and exit from, the industry.

While central and local government may be engaged in activities where competition is weak or absent, public production is not the only nor necessarily the best solution available. The first-best course might be to do nothing, to regulate private businesses or to subsidise or tax private producers. Each course of action needs to be evaluated on a cost and benefit basis.

### **Incomplete Markets**

Where private markets fail to provide a good even though the cost of providing it is less than the amount which consumers would be prepared to pay, there is an incomplete market. This may be due to high information costs, such as adverse selection, and moral hazard problems in insurance markets. Incomplete markets might, for example, help to explain the budget indication that the government may provide a student loan scheme if it is unable to develop one in conjunction with the private sector. While incomplete markets might in some circumstances justify government provision of goods, they do not have any special implications for the pricing of such goods.

### **Reducing Transactions Costs**

In recent years economists have rediscovered the importance of a well- defined system of property rights to the efficient functioning of a market economy. Such a system enhances the value of scarce resources and provides appropriate incentives for their optimal use. The three essential characteristics of property rights are the exclusive right of the owner to decide the use of a resource (within a general legal system), to obtain the income from the resource, and to transfer the rights to the resource to other people.

The extent to which well-defined property rights contribute to an efficient use of resources is affected by transactions costs. Conflicts among rights is inevitable. The costs of defining property rights completely and enforcing them fully would be excessive. Thus contracts will always be incomplete.

Central and local government have important roles to play in lowering transactions costs by defining property rights, providing procedures to enable such rights to be enforced, and facilitating resolution of disputes. These activities account for a significant segment of government activity. The land registration and transfer system is an obvious example. Others include the court system for resolving disputes, company registration (which lowers the cost of raising capital and organising investments) and those police activities which assist in enforcing property rights. The

benefits of these activities are largely enjoyed by the users and there are valid grounds to charge them for the costs involved. A possible exception is police activities such as preventing theft and apprehending offenders, which normally fall in the realm of rights and duties. (Some police activities such as those relating to lost property, however, largely constitute private services.)

### **Merit Goods**

The government is the major producer of health and education services, and it is a significant supplier of housing services. Local government also supplies housing services. With the possible exception of a limited range of health expenditures (e.g. control and prevention of contagious diseases) these activities are not traditionally classified as public goods. The rationale usually advanced for public provision of them is that individuals would consume inadequate quantities if left to make their own decisions. It is sometimes argued that there are significant external benefits associated with these expenditures. Some would argue, for example, that society as a whole benefits from education expenditure as it contributes to social cohesion. There might also be a concern that decisions taken by parents may not reflect fully their children's interests (e.g. primary and secondary education). Finally, the rationale for public production of these goods often rests on equity rather than efficiency considerations. It is argued that people on low incomes should be able to consume minimum standards of education, health and housing.

While I do not believe that these various rationales for public provision of education, health and housing all stand up to close scrutiny, it is sufficient to note that an extreme view is required to justify their provision free of charge to all consumers. Many education and health services have been largely provided 'free' while housing has been provided on a subsidised basis to particular groups. I believe there is a case on equity grounds for the subsidisation of some health, education and housing services, or for income transfers in their place, but many of these services could be subject to some form of user charges.

The essential conclusion which arises from this brief survey is that goods included in the domain of rights and duties are the only goods for which user charges are clearly inappropriate. A case-by-case analysis of the circumstances relating to other goods is required to determine whether there are any valid grounds for government subsidies. I am sceptical that proper analysis would lead to the view that many central or local government services should be provided free on a universal basis or should be heavily subsidised. Society's equity objectives can generally best be met through income transfers and the tax system rather than by the provision of private goods.

It follows that most goods produced or provided publicly are private goods. Their consumption reduces resources available for other purposes and the marginal cost of production (including transactions costs) is normally positive. Such goods may be described as publicly-provided private goods. The (debateable) arguments for public provision of these goods, such as merit good arguments, may place some constraints on the level of user charges or the extent to which some consumers are exempted from them, but they do not generally suggest that such goods should be provided free on a universal basis.

## **THE ALLOCATION OF PUBLICLY-PROVIDED PRIVATE GOODS**

In respect of publicly-provided private goods, the government faces two interrelated questions:

- how to allocate such goods among consumers; and
- how to finance their provision.

The first question arises from the fact that if publicly-provided private goods were supplied on an unrestricted basis to consumers without charge, their consumption would be excessive from society's viewpoint. Consumers would demand the goods up to the point where the marginal benefit which they received from the goods equalled the cost of acquiring them (transactions costs). The value placed on the goods themselves would be zero. At the same time, the marginal cost of producing the goods and transactions costs borne by the government would be positive. Excessive consumption, together with the costs of financing the goods in question, would in most cases impose intolerable welfare costs on the community. Thus the government is forced to ration the supply of publicly-provided goods. The choice which it faces is the method by which the goods are to be allocated.

Parish has described and evaluated some methods commonly used to allocate publicly-provided goods. I draw on his analysis in this section to highlight the attributes of a range of methods, including the price mechanism (user pays).

Parish first distinguishes between non-competitive and competitive methods of allocation. Non-competitive allocation is imposed by law, authority or custom. Recognising the existence of lobbying aimed at changing laws and customs, Parish calls this form of allocation ostensibly non-competitive mechanisms. Competitive methods comprise non-price and price methods. Non-price methods of allocation involve rationing by ordeal and by product degradation. A third intermediate category is recognised by Parish which involves methods of allocation which are non-competitive in the short run but which induce a behavioural response in the longer term. Parish recognises that the distinctions between these methods of allocation are not unambiguous. Nor are they the only methods used. They do, however, serve to illustrate the merits of some methods of allocation frequently used by central and local government.

### **Ostensibly Non-Competitive Methods**

Allocations based on innate characteristics such as age, sex, race and educational qualifications fall within this category. While people may be able to alter their behaviour in order to qualify for particular goods, Parish assumes that these characteristics could not be altered in the relevant time period. (If these characteristics can be altered, the method belongs in the intermediate category.) Education and some health services (e.g. dental services for school-age children) are largely allocated on this basis. Local government commonly offers concessions on transport services and admissions to recreational amenities to children and to older people.

With non-competitive methods of allocation, the problem of balancing demand and supply is replaced by that of devising and adjusting allocation rules so as to reconcile consumers' aggregate entitlements to the good with available supply. This task is

easier the more elastic is supply and the more elastic is the government's budget. If both were perfectly elastic, all of the adjustment would be made on the supply side. In other situations, which are more common, adjustment is required to the allocation rules. Since neither planning nor subsequent adjustments are perfect, imposed allocation systems seldom stick to their announced criteria. (This point will need no explanation to superannuitants.) Moreover, supplementary methods of allocation, such as queuing and waiting, are often employed. The administrative and enforcement costs of these methods are often very high because administrators have poor information on which to forecast demand and limited performance incentives. Moreover, in the longer run, consumers have incentives to take steps to qualify for the goods.

The key characteristic of non-competitive allocation methods is that the allocation is imposed on consumers. They are not given the opportunity to express the intensity of their preferences for publicly-provided goods. As a consequence, such methods are bound to be inefficient in the sense of leaving many opportunities for mutual exchange unexploited. We have no way of knowing, for example, whether the community, faced with the real resource cost of the options, would prefer schools with smaller grounds and more teachers to the current land-to-teacher ratios.

### **Competitive Methods of Allocation**

If individuals can meet eligibility criteria by purposeful behaviour, the basis exists for competition among potential recipients. In both price and queuing rationing, the behaviour whereby individuals ensure that they qualify for publicly-provided goods is directed solely to this specific end.

An essential distinction between competitive and non-competitive methods of allocation is that only under the former do recipients select themselves by their willingness to make some sacrifice in exchange for the enjoyment of the good. It can therefore generally be assumed that the individual values the good at least as highly as the sacrifices made in order to obtain it.

#### ***Price***

The most common method of competitive allocation is by price. The key features of this method are as follows:

- \* the good is exchanged for money;
- \* there is a tendency for a single price (aside from transport and other service cost differentials) to prevail at any point in time in connected markets;
- \* there is a tendency for the price or price structure to adjust to changes in supply and demand so as to clear the market;
- \* the stronger are the two immediately preceding tendencies, the fewer are the opportunities for mutually beneficial reallocations of the good;
- \* these outcomes arise from the self-interested activities of buyers, sellers and middlemen;

- \* various institutions, conventions and specialised occupations have evolved which facilitate the process of price discovery and adjustment.

### ***Ordeal***

Another competitive method of allocation is by ordeal. Queuing and waiting are perhaps the ordeals most frequently encountered. They are common in the public sector. People are required to queue for health services, for admission to kindergartens and for Housing Corporation units. Another example of an ordeal is the requirement of some local authorities that one can only water one's garden during the summer with a hand-held hose.

Queuing and waiting ration goods according to an individual's willingness to undertake time-consuming, inconvenient or disagreeable activities. Parish notes that with price rationing these are often the more spectacular manifestations of a deterioration in the quality of service offered by sellers.

Rationing by ordeal resembles price rationing in that potential recipients have to choose between the good that they wish to acquire and the one that they are required to give up in order to obtain it. Queuing is similar to bidding in an auction in that the person who joins the queue first bids the highest amount.

Rationing by ordeal differs from price rationing in several important respects. Under price rationing the money price is at the same time a cost to the buyer and a benefit to the seller and hence a transfer from a social point of view. The ordeal, however, is a pure waste of resources. If the allocation could be provided by price rationing, the ordeal could be avoided altogether.

Another difference between allocation by ordeal and by price rationing is in the strength of market equilibrating forces. With the latter, there are incentives motivating buyers, sellers and intermediaries. If sellers do not benefit from the ordeal, they have no incentive to seek a higher price. Similarly, there is no incentive for price arbitrage by middlemen. The whole burden of market equilibration is forced on consumers, who have an incentive to search for the least costly ordeal. This process may be impaired by uncertainty and the cost of discovering the prevailing price. These costs are likely to be higher with allocation by ordeal than with price rationing.

A third difference is that even if the market equilibrating tendency is strong enough to establish a uniform, market clearing ordeal, the costs of undergoing the ordeal will vary from person to person. If the ordeal involves standing in line, people will differ in their valuation of the time given up and the inconvenience incurred. Hence the single price will translate into many different money-equivalent prices, and the resulting allocation will not be Pareto-efficient i.e. capable of making at least one person better off without making anyone else worse off. (The manager who sends an office junior to queue for tickets to a rugby test understands this point.)

### **Allocation by Product Degradation**

Product degradation often plays an important role in rationing subsidised services, such as health, education and housing. This may help to explain the community's dissatisfaction with the performance of public producers of such services. Queuing and waiting are also commonly associated with product degradation. The quality of service provided may deteriorate in response to excess demand and the government's unwillingness to increase its spending on the good (for example, queuing at hospital accident and emergency departments because the existing staff are excessively busy). The SOE/privatisation process has seen major improvements in the quality of service offered to consumers (e.g. reduced waiting times for telephone connections). This illustrates the extent to which product degradation can occur even where user charges exist but where competition is limited.

If a good is provided to everyone free of charge, then product degradation may be the only means of rationing supply. As the quality of the good falls, more consumers may choose private supply of competing goods and thus reduce the cost to the government of publicly-provided goods. The rise in private health insurance and in the use of private hospitals for elective surgery illustrates this point.

Product degradation as a method of allocation is similar to that of allocation by ordeal. The key difference is that under the latter method the consumer may be able to contract out the ordeal (such as paying someone to stand in the queue). This is not possible in the case of product degradation. Both methods are Pareto-inefficient because people differ in their sensitivities to ordeals and to losses of service quality.

### **Intermediate Methods of Allocation**

The final category of methods of allocation examined by Parish are intermediate methods. These cover allocations based on criteria (such as income, marital status, place of residence and quantity transacted in a previous year) that are innate in the short run (ostensibly non-price competitive methods) but are 'behavioural' in the long run. Moving out of a flat and into a caravan in order to improve one's chances of being allocated a Housing Corporation rental unit is an example. We may also see some interesting examples as householders adjust their circumstances to qualify for shares in their local electricity businesses.

This method initially imposes an allocation upon potential consumers. As with non-competitive allocations generally, the extent to which the rationed good is misallocated depends on the relationship between possession of the qualifying characteristic and the value of the ration. Consumers compete for the ration and seek to attain the required qualifying characteristic. The demand for the ration and the qualifying characteristic become bundled. The initial allocation is modified as potential consumers qualify for the good, and the allocation of both the qualifying characteristic and the good will be sub-optimal.

### **Conclusion on Allocation Methods**

The public provision of private goods requires that a political authority decides how goods are to be allocated. This involves a weighing of the benefits and costs of available methods. The non-transparent costs of non-competitive methods need to be taken into account. The conclusions of the foregoing analysis are critical to this assessment. They are as follows:

- \* only price is capable, unaided, of both allocating a good among potential demanders and equilibrating demand and supply. Where rationing by ordeal amounts to a form of payment in kind to the supplier, the ordeal can equilibrate the market. This is likely to be a rare situation;
- \* price rationing is capable, in principle, of bringing about a Pareto-efficient distribution of the good. Also, to a greater extent than any other method, it incorporates an incentive structure conducive to an efficient allocation of resources;
- \* price rationing does not always involve instantaneous market clearing. It may not be efficient, for example, for banks to seek to eliminate all queuing or for retailers to carry full ranges of stocks of all available goods. These forms of rationing play a minor role under price allocation, however;
- \* rationing by ordeal and by product degradation allow the intensity of individual preferences to be revealed but only through the participation in a specific ordeal. The cost of the ordeal will vary from person to person. The former method cannot achieve an efficient allocation of resources unless the ordeal is contracted out to specialists at a common money price. This is unlikely since it involves a return to the price system. In the case of product degradation this is not feasible;
- \* non-competitive allocation is not based on individual preferences and hence cannot produce a Pareto-efficient distribution of goods;
- \* under most non-competitive price rationing, allocative inefficiencies result from the discretionary allocation of individual rations;
- \* administrative and enforcement costs are likely to be high for non-competitive allocation schemes;
- \* it is only with price rationing that the potentialities of exchange are realised in full. Some ordeals represent payments in kind to the supplier and hence in these cases rationing by ordeal represents barter exchange. There is also an element of exchange present when the ordeal acts as a screening device. Apart from these cases, competitive non-price methods of allocation do not involve exchange.

The efficiency of the price mechanism in allocating private goods, relative to other mechanisms surveyed, has long been recognised and should come as no surprise. As Hayek [1945] commented:

"We must look at the price system as ... a mechanism for communicating information if we want to understand its real function ... The most significant fact about this system is the economy of knowledge with which it operates, or how little the individual participants need to know in order to be able to take the right action. In abbreviated form... only the most essential information is passed on, and passed on only to those concerned."

He added:

"The marvel is that in the case like that of a scarcity of one raw material, without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation are made to use the material or its products more sparingly; i.e. they move in the right direction."

How can the bureaucracy compete with this coordination mechanism?

These overwhelming benefits of the price system are the general basis of the case for user pays. There need to be valid public policy grounds for not applying it in whole or in part to the public provision of private goods and services. The preceding discussion suggests such grounds are unlikely in most circumstances.

### **FINANCING THE PUBLIC PROVISION OF PRIVATE GOODS**

If goods are allocated mainly by price, it can normally be expected that their provision can be funded largely out of trading revenue. If private goods are largely allocated by a non-price method, then the question of financing their provision arises. This issue is examined next.

Under the price mechanism goods are exchanged voluntarily. In the case of publicly-provided goods allocated in other ways, the government must use its coercive powers to fund their provision. The administrative and compliance costs of the taxation system can be expected to be high because taxpayers have incentives to avoid and evade taxes. Thus the transactions costs involved in a voluntary market transaction in which private goods are exchanged are generally likely to be lower than the administration and compliance costs of raising taxation to finance the provision of those goods.

Another important difference between a market transaction and taxation is that the benefits flowing from the good are likely to be only loosely related to the burden of the taxation. Even if the taxpayer and the consumer is the same person, it would be a coincidence if the value of the good consumed was approximately equal to the incremental tax paid by the consumer.

If the user charge for a publicly-provided private good is set at marginal cost, its price will normally reflect the value to society of the resources involved in consumption of the good, and an efficient allocation of resources is likely to result. If, however, the good is provided at a heavily subsidised price, consumption of the good and of all other goods can be expected to be distorted. This distortion will be compounded by the impact on taxpayers' behaviour of the tax raised to finance the good. The nature

of the economic cost of the tax depends on the class of tax imposed. In the case of an income tax, the following consequences could be expected:

- \* the choice between current and future consumption (saving) is biased in favour of the former;
- \* the tax wedge between pre- and post-tax earnings reduces the incentive to work and to undertake training;
- \* non-market activities are encouraged relative to market activities;
- \* because it is not feasible to tax all activities, classes of investment and organisational forms uniformly, taxes penalise some activities, investments and organisational forms relative to others.

Income taxes may also adversely affect a host of other activities such as family formation and migration.

A consumption tax, such as GST, also distorts choices. The main difference between an income tax and a consumption tax is that the latter does not distort the choice between current and future consumption.

The provision of goods might be financed by a selective tax. If there is no close relationship between the provision of the publicly-provided good and the good subject to the tax, then the selective tax is likely to be highly distortionary. This is particularly the case where the price elasticity of demand for the good is elastic. Such a tax would offend against the general principle that taxes should apply at the lowest possible marginal rates on the broadest practicable bases because this provides the best hope of minimising efficiency costs.

For the purposes of exposition, income and consumption taxes were discussed separately. However, both taxes interact with each other. For example, in examining the impact on work incentives of taxes it is necessary to consider both forms of taxes. An income tax reduces the after-tax wage while a consumption tax reduces the volume of goods and services which can be bought with a given after-tax income. In this sense these taxes can compound the biases which were noted.

Measured against these standards, local government rates are likely to be particularly costly. They are collected from a narrow tax base - residential and commercial land and/or buildings - which are one input in the production of housing services and a wide range of other outputs. This is a further reason for being cautious about financing publicly-provided private goods such as libraries, water supply, rubbish disposal and transport services out of rates.

The rise in the tax to GDP ratio in recent decades has fostered research aimed at quantifying, to the extent feasible, the overall efficiency cost of taxes. While Browning's estimate suggested that the cost of raising an extra dollar of revenue in the United States was in the range of 9 to 16 cents, more recent studies for a range of countries suggest that the cost is much higher (Browning [1976]). Ballard et al. [1985], for example, put it at 17 to 56 cents. Hansson and Stuart [1985] suggested amounts of 67 to 451 cents for Sweden which, at the time of the study, had very high marginal tax

rates. These studies suggest that the benefits of tax-financed expenditure need to be significantly greater than the programme cost if community welfare is to be enhanced.

The significance of such studies is that they suggest that, at the margin, the costs of raising tax revenue at present levels of government spending are high. In using non-price methods to allocate publicly-provided private goods, governments are choosing to add these efficiency costs to those associated with alternative methods of allocating goods. There need to be compelling grounds for funding publicly-provided private goods out of taxation.

### **CONTESTABILITY**

The preceding discussion has not focused on the market conditions under which publicly-provided goods might be supplied. The pricing mechanism clearly works best when producers face actual or potential competition. This provides an incentive for them to constrain costs, to be responsive to consumers' requirements and to innovate. When there are high barriers to entry into, and exit from, an industry, these incentives are blunted.

Public provision of goods and services sometimes occurs in situations where competition is at best limited. In this situation the incentives facing public providers are minimal and consumers may have few alternative sources of supply. User charges may also be excessive in the sense of being set well above the level at which a competitive market would provide the service, and the quality of the service may be poor. This could occur even where the charges are based on costs because costs could be inflated. Where prices are excessive, the public authority can be viewed as charging a market price for the goods and contemporaneously levying a selective consumption tax. As noted earlier, such taxes are often among the more distortionary taxes imposed by governments.

It follows that competition in the supply of publicly-provided goods is a critical element which should go hand in hand with a policy of user pays. For many goods it is possible to generate competition by removing policy-induced barriers to competition and by setting up activities involved in the production of private goods as separate trading entities, with clearly defined objectives and appropriate accountability. The separation of the provision of private goods from other activities is necessary to limit the scope for cross-subsidisation and hence to foster competition with other providers, to eliminate conflicting objectives and to enhance performance measurement. This should be a first step towards their privatisation, where this is feasible.

Where external competition is not possible, the government and local authorities can foster competition by regularly contracting for services. The benefits which can be reaped have been amply illustrated by recent tenders for bus services by local authorities. There is considerable scope to expand this approach in both central and local government. Traditional administrative tasks, such as the vetting of welfare applications, could, for example, be contracted out in this manner.

If such an approach were followed, the residual activities which are not open to competition at all are likely to be few in number. Even in this area, it may be possible to introduce competition between different units of the public sector.

The monitoring of public enterprises raises a range of well known difficulties. They benefit from an implicit central or local government guarantee. Their managements may be protected from a transfer of ownership which reduces performance incentives, and they often enjoy competitive advantages. They may, for example, use public funds to subsidise their activities. Thus, while a policy of user charges is a desirable step, many of the activities of central and local government would be more efficiently undertaken in the private sector. Residual equity concerns are best met by targeted income transfer programmes and through the tax system. I am highly sceptical of the view that in the New Zealand setting local government has a valid equity role, despite the involvement by some authorities in welfare programmes.

## **CONCLUSION**

The proposition advanced in this paper is that valid grounds for the public provision of goods and services on a universal basis free of charge are restricted to a limited number of special cases. It follows that most goods and services provided by central and local government are private goods.

If the government provides private goods it has to choose how to allocate or ration them among consumers. An analysis of a range of allocation methods commonly employed by governments showed that price allocation is the most desirable. It enables supply and demand to be equilibrated, resources to be efficiently allocated and can lead to a Pareto optimality. This conclusion should be no surprise because the merits of the price mechanism have been a key strength of the market economy. Its superior attributes constitute the fundamental justification for adopting user pays policies to allocate publicly-provided private goods and services.

If publicly-provided goods are largely allocated by price, their provision will be mainly financed out of trading income. Where this is not the case, they need to be funded via taxation. Unlike genuine user charges, taxation imposes efficiency costs on the community because it alters the incentives of taxpayers. Moreover, the burden of taxation, in most cases, is unlikely to be closely related to the benefit received from publicly-provided private goods.

A user charge could become a selective consumption tax if it were excessive relative to costs. Such taxes are often among the most distortionary of taxes. The key to avoiding this problem is to ensure that publicly-provided private goods are subject to competition. This is likely to be possible in most cases. Activities involved in the production of publicly-provided private goods and services should be set up as separate entities and policy-induced barriers to competition should be removed. Where competition is limited, provision of the goods and services concerned should generally be subject to periodic contracting. In other cases competition between units within the public sector might be possible.

The public sector is a very significant part of the New Zealand economy. It must improve its efficiency in the same way that the private sector has been forced to become more efficient in recent years. A properly constructed user pays programme has an important role to play in contributing to that objective.

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