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Fees for Departmental Services: Some Economic Considerations[1]

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ABSTRACT

The philosophy of user charging being considered in Queensland DPI is that the users of government products and services should contribute to costs at levels which are economically efficient and/or acceptable to government. The method of charging depends on the characteristics of the particular product or service.

Direct charges should apply to products and services which can be explicitly identified and quantified, and which can be directed to an individual user. These products and services have the characteristics of private goods. Indirect charges, for example industry levies, will need to be relied on to fund products and services with the characteristics of public goods.

Procedures are suggested which allow products and services to be considered case by case.

INTRODUCTION

The rationale for charging for publicly provided products and services is generally based on financial and social objectives and with the aim of promoting economic efficiency.

Maximising efficiency involves allocating resources to their most productive use and adapting to changing circumstances. For some Government-provided goods and services, charging the full cost to users will contribute to increased efficiency in the use of resources. It will, on the one hand, guard against wasteful use of resources and, on the other, provide extra resources for expansion where there is currently under-provision of a product or service. The value of what is provided will be clearer to each side.

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[1] The views expressed are those of the authors and do not necessarily represent the official policy of the Queensland Department of Primary Industries.

One of the roles of Government is to provide those products and services which, if it were left to the private sector, would not be provided at desirable levels[2]. Goods and services provided by Government can also be justified if it can be demonstrated that they can be produced more efficiently in the public sector.

In examining the role of Government in relation to particular products and services, a factor to consider is that a Government which has provided free products and services in the past may have inhibited the emergence of a private sector capability. In these instances user charges will encourage the development of that capability, leading to a lesser need for Government involvement.

An efficient user charging mechanism will contain production of the product or service to a point beyond which the total economic benefit of additional output (both to the user and to others who may benefit) is exceeded by the costs of producing it. An efficient user charge for a publicly provided product or service is not necessarily one which recovers its full cost from the user.

The introduction of user charges for a product or service will produce gains and losses for individuals in the community. Users of a product or service who might formerly have received it free will now have to contribute in whole or in part to the cost of producing it. On the other hand, reduced demand for the product or service will free up resources for the Government to devote to other programs benefiting the community. The underlying objective of user charging is that the total community gains will outweigh the total losses.

This paper primarily addresses issues relating to charging users of Government products and services. The term "users" in the context of these guidelines means individuals or groups who either directly or indirectly exhibit a demand for or willingness to use the product or service.

The major objective is to discuss how the characteristics of government goods and services affect the way in which user charges should be applied.

GENERAL POLICY ON USER CHARGING

The general philosophy of user charging is that users of Government products or services should contribute to the costs of providing them at levels which are economically efficient[3] and/or acceptable to the Government.

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[2] Market failure is likely to occur when a product or service has non-rival characteristics or non-excludable characteristics or where there are significant external effects associated with the product or service. (See glossary of technical terms in Appendix 1 for further explanation).

[3] This means that it would not be possible to increase aggregate economic benefits by any variation to the chosen level of contribution or charge.

In theoretical terms, economic efficiency refers to the state of an economy in which no one can be made better off without making someone worse off. This requires efficiency in production (producing at lowest cost), efficiency in the allocation of resources (resources are allocated among products and firms in ways which maximise benefits from their use) and efficiency in product mix (producing what consumers and society want).

Two separate sets of principles apply depending on the characteristics of both the product or service itself and of the consumers or users of the product or service.

These principles are:

(a) Direct User Charging Principles; and
(b) Indirect Charging Principles.

Direct User Charging Principles are applied where:

(a) the products and services can be clearly identified or defined;

(b) the output consumed by a user can be quantified; and

(c) the individual users can be identified and individually charged while non-payers can be excluded from receiving the product or service.

If <u>any</u> of the three conditions are <u>not</u> met, then Indirect Charging Principles should be applied

This process of examining products and services for charging applicability is shown in Figure 1 (on page 4).

DIRECT USER CHARGING PRINCIPLES

General

The term direct user charge means a direct payment by an external user for a Government product or service. Direct user charges are paid when users receive Departmental products and services.

Users include individuals, firms or organisations acting individually or together who demonstrate a demand for the product or service and are capable of taking delivery of it in exchange for the payment of a charge.

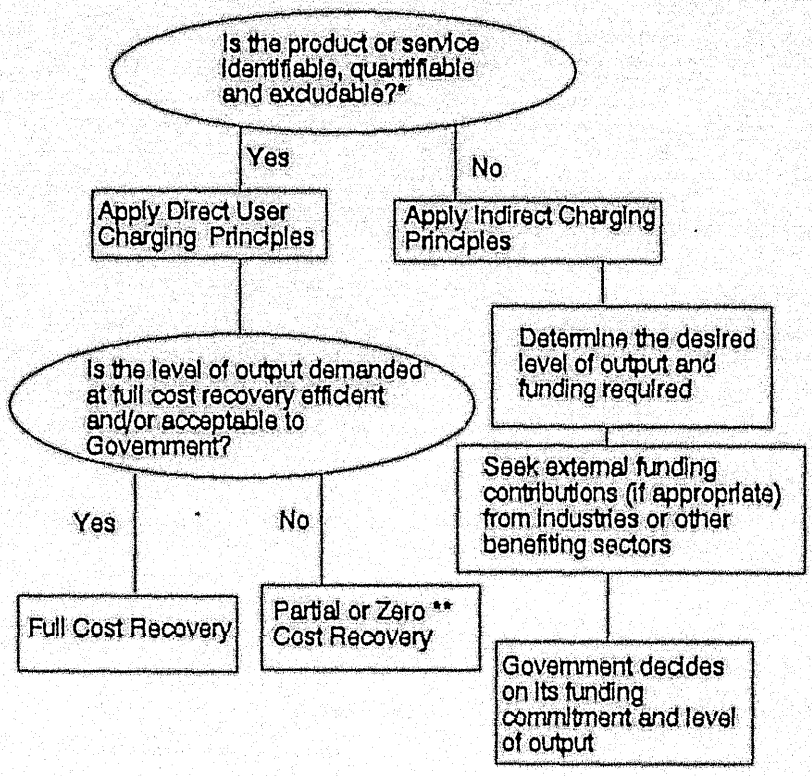
Direct user charging principles can be applied only to products and services which are capable of being clearly defined with the quantities of the product or service demanded and supplied being capable of measurement in specific amounts.

In addition users must be individually identifiable clients while potential users who are not prepared to pay the charge ("free riders") must be able to be excluded from receiving the product or service.

In other words, direct charges apply to services which have the characteristics of private goods.

Users should generally have the discretion to accept or not accept the products or services offered or have considerable discretion on the amount which may be accepted.

Figure 1: User charging principles



*The product or service must be able to be defined and its output be capable of being supplied in measurable amounts for direct user charging principles to be applied.

Moreover, the capability must exist to charge individual users while excluding nonpayers from receiving the product or service.

**Where it is desirable to subsidise the provision of a product or service, alternatives to Government funding may be sought through indirect charging principles.

The level of direct user charge for a product or service will depend on whether the output demanded as determined by charging full cost is economically efficient and/or acceptable to the Government. If this output is efficient and/or acceptable to Government, charges may be set to cover the full costs of the product or service.

In this context, the value of all resources used in providing a given unit of output may be represented by its "full cost". Full costs include the cost of capital assets and a rate of return on those assets as well as labour, consumables and operating expenses.

The general rule is that the cost of providing the product or service should be recovered at the point of delivery if possible. With the operation of free market forces, a proportion of the costs will be passed on to consumers, for example, through the price system.

The level of demand for the product or service at full cost recovery rates may not be economically efficient; nor may it be acceptable to the Government in which case it would be inappropriate to charge for it at those rates. This may occur for a number of reasons:

(a) The benefits to direct users may be low relative to total benefits. If full cost charges were imposed, the level of demand by the users themselves (based on the benefits they receive) could result in foregone external benefits. An example of this would be advisory services given to the preparation of a soil conservation property plan where there are off-farm beneficiaries. Demand by property owners for the service at full cost charging rates may result in an inefficient level of service requiring subsidised rates to ensure that the higher level of demand will deliver the associated external benefits.

(b) The client group may include individuals who would have difficulty in affording the product or service and the Government may wish to subsidise its provision for social reasons[4]. For example, advisory services to individual clients who are in financial difficulty would fall into this category. Such a service can be rationed among potential users by queuing, client screening and selection, and other means not involving a charge.

As indicated above, it may be appropriate in these circumstances for charges to be set at levels which cover less than the full cost of the product or service or for charges not to be imposed at all.

It is necessary to investigate the practicalities of imposing direct user charges and to evaluate the costs of revenue collection. These costs should be incorporated into the user charge. In some cases, the collection costs involved could be so high as to preclude the use of direct user charges. Some recreation services fall into this category.

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[4] These goods are often referred to as "merit goods". - see glossary of technical terms in Appendix 1

Full Cost Recovery

The direct user charge should be set at a level which will ensure full cost recovery, provided that it results in a level of output demanded which is economically efficient and/or acceptable to Government.

If this situation exists, the need for continuing Government provision of the good or service may need to be reviewed. Questions to consider are:

- Why is the Government involved in this business in the first place?
- How competitive is the market and do clients have a clear choice of supplier?
- Are there differences in quality and standards of service including delivery, reliability, etc?
- Have the full costs of the product or service been properly determined or are there cross subsidies involved? Have selling and marketing costs been included?
- If the market rate is higher than the full cost to the government, how efficient are the firms in the market? Is there an "broker" role for the Government in these circumstances?

As a general principle, where products and services are in competition with comparable products and services in the market place, the options for continuing, scaling down or fully commercialising these products and services should be examined. In other words, the existence of market failure needs to be established.

Partial or Zero Cost Recovery

If the level of output demanded which would result from full cost recovery is not economically efficient and/or acceptable to the Government, user charges which recover only a portion of the costs of providing the product or service are more appropriate; in some cases no charges at all may be warranted. Funds obtained through general taxation or a mechanism of indirect contribution such as industry levies will be needed to provide the product or service in the desired amounts.

An example of partial cost recovery supported by industry funding would be a processing or marketing organisation subsidising the provision by the government of advisory services to individual farmers with the objective of improving product quality or changing product specifications to meet market requirements.

Application to Product and Service Areas

Direct User Charging Principles would generally apply to the following categories of products and services.

(a) *Analytical and diagnostic services such as analysis of soils, analysis of foods, pest and disease diagnosis.*

Full cost recovery charges should apply to many analytical and diagnostic services. For others such as disease diagnosis, where there are considerable external benefits

involved in the monitoring and early detection of disease outbreaks, partial cost recovery may be more appropriate.

(b) *Advisory services for individual inquiries and requests, including customised technical information and assistance.*

These are mainly individual advisory or consultancy services. Full cost recovery rates should apply to most of these types of advisory services.

(c) *Commissioned Research and Development*

Full cost recovery should generally apply to most commissioned research and development projects initiated by private sector firms and other individual clients.

Such projects differ from most other research and development projects initiated by the Government to which, for example, rural industry research and development corporations contribute some funding. The research is designed specifically to meet the needs of a particular firm or individual.

(d) *Planning, design and construction services for individual clients including whole property plans, farm business plans and soil conservation plans.*

Full cost recovery would apply to such work as local authority investigations and farm irrigation designs. Partial cost recovery may apply in the preparation of on-farm soil conservation plans where it may be necessary to subsidise output to achieve a greater level of demand in order to capture external benefits, such as reduced downstream silting.

(e) *Recreational Services*

Recreational services are often adjuncts to other Government activities. While full cost recovery may be appropriate, the costs and feasibility of collection are significant factors and need to be considered case by case. For example, it may not be feasible or cost-effective to charge entry to a recreational facility adjacent to an irrigation dam.

(f) *Publications (including data, information, books, tapes and videos)*

In many cases it would be appropriate to recover only the full publishing costs of a report; in other instances total project costs, including those associated with researching and collecting information, may also be covered by charges for the publication. There will be cases where (for leaflets, pamphlets), the administrative costs of charging would be high relative to sales and the value to the community of dissemination of information warrants free or subsidised distribution.

(g) *Physical products including animal semen, vaccines and similar items.*

Full cost recovery should apply generally for most products.

INDIRECT CHARGING PRINCIPLES

Many Government services do not lend themselves to direct user charging. These services generally have the characteristics of a public good. That is, they have non rival and non excludable characteristics.

Some Government services, for example, the provision of research findings, have non-rival characteristics. That is, many consumers (primary producers) may use the service simultaneously. There is no unambiguously efficient way to charge users for the amount provided and it is this characteristic that makes it difficult to introduce a pricing mechanism. This is different to the situation applying, for example, to the provision of a private good such as fertiliser.

Further, some services, again for example, the provision of research findings, have non-excludable characteristics. That is, no consumer (primary producer) can be prevented from using the service. This results in the failure of the market exchange economy to supply these services at a desirable level. This provides the rationale for the use of means such as levies or taxation to support these services.

Indirect Charging involves the use of funding support from benefiting sectors for those government activities where wide ranging direct user charging for individual products and services is inappropriate. In these circumstances, Government and particular industries will collectively determine the amount of expenditure on these activities.

It should be noted that there is no reason why public goods have to be funded from the public purse ie from taxpayers' funds. However, there does need to be collective action to ensure a public good is produced at a desirable level. This is one role of Government. How it is funded is a separate question.

Government activities where external support should be sought include:

- research - activities aimed at developing new knowledge and technology to improve productivity in primary and related industries;

- extension - non-consultancy activities aimed at improving the rate of adoption of new technology and helping members of industries acquire new skills and knowledge; and

Determination of the level of output and the relative shares of costs to be provided by Government and industry/interest groups would involve on-going consultation based on a consideration of budget priorities, the overall return from the provision of the product or service, the means of financing which are available, and agreements being reached on a long term basis on shared funding arrangements.

In some cases where Government currently provides a product or service for which collective industry funding seems appropriate, an option which could arise is for a private industry-funded body to undertake the activity.

Financing methods which may be considered as alternatives to general taxation for these types of activities include levies, voluntary contributions, local government charges/rates, industry collections and co-operative arrangements.

The chosen method(s) of financing will depend on a number of factors, such as:

- for levies, whether the power to make levies is available and whether a mechanism for collection is feasible;

- for voluntary contributions, whether negotiation with the users will lead to an appropriate agreement which takes into consideration the level of contributions which other users are making to the provision of Government services; and

- for local government charges/rates, whether suitable arrangements can be made to collect such charges or rates.

SUMMARY

To ensure a consistent approach to the application of the user charging principles, the following process is recommended.

- Define the product or service as clearly as possible in output terms.

- Identify whether the output is quantifiable. Can it be supplied in discrete or measurable quantities?

- If not quantifiable as defined, re-examine the definition of the product or service. Can it be re-defined or disaggregated into quantifiable units?

- Identify users or user categories of the product or service. Are there identifiable individual clients for the product or service who are capable of receiving it and being charged for its use?

- Is it possible to exclude potential users of the product or service from receiving it if they are not prepared to pay for it?

- If:

  (a) The product or service is identifiable and quantifiable <u>and</u> individual users for the product or service can be identified and individually charged while excluding non-payers, apply Direct User Charging Principles.

  (b) If Direct User Charging Principles are not applicable to the products or services or to the activity concerned, apply Indirect Charging Principles.

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APPENDIX I
GLOSSARY OF TECHNICAL TERMS

Some of the terms used in the language of user charging are given below. The guidelines have been developed following consideration of the characteristics of goods, particularly rivalry versus non-rivalry and excludability versus non-excludability. The terms "public good" and "private good", should not be confused with commonly used phrases such as "for the public good" meaning "for the public benefit", and "for private benefit" meaning "benefits to users of services".

Internal effects: the outcomes (benefits or costs) resulting from an individual's activity that affect only that individual's welfare.

External effects: the outcomes (benefits or costs) resulting from an individual's activity that affect the welfare of others.

Rival good: a good with a characteristic such that enjoyment or consumption by one person precludes the simultaneous consumption by other persons. (For example, a bag of fertiliser used by one farmer cannot be used by another).

Non-rival good: a good with a characteristic such that many persons may simultaneously consume the good. 'Public goods' such as defence are non-rival goods, as all persons simultaneously consume the good (or the good can be made available to other persons at no extra cost). It is the non-rival characteristic of goods such as research and defence that makes the operation of an efficient pricing mechanism so difficult.

Excludable good: a good with a characteristic such that it is possible to prevent any consumer or producer from consuming or using in production a given unit of a good. Legally a person may obtain these goods only by exchanging something for the good or by gift. Examples are items of equipment such as books and farm machinery and attendance at a seminar where non-payers can be excluded.

Non-excludable good: a good with a characteristic such that is it not possible to prevent any consumer or producer from consuming or using in production a given unit of the good. It is this property which results in the failure of the market or voluntary exchange economy to supply these goods at a socially desirable level (this is an example of market failure). As an example, a radio broadcast is non-excludable - cable TV access is excludable.

Private good: a pure private good is a good which has properties of both rivalry and excludability. It has little to do with whether it is provided by the private sector. Classroom education is essentially a private good which is provided by both the public and private sectors. Education is also viewed by most governments as a merit good.

Public good: a pure public good is a good which has properties of both non-rivalry and non-excludability. Again, it has little to do with whether it is provided by the public sector. The private sector may be commissioned to provide a good or service in this category.

Merit good: Merit goods encompass that class of goods which society, on equity or fairness grounds, collectively feels would not be provided in the "right" amount in the absence of some type of government intervention.

Efficient outcome: an efficient outcome is achieved when a position is reached whereby any movement from this position will result in the <u>aggregate</u> value of individual gains being exceeded by the <u>aggregate</u> value of individual losses.

Inefficient outcome: an inefficient outcome exists at a position whereby it is possible to find a movement from that position which will result in the aggregate value of individual gains exceeding the aggregate value of individual losses.