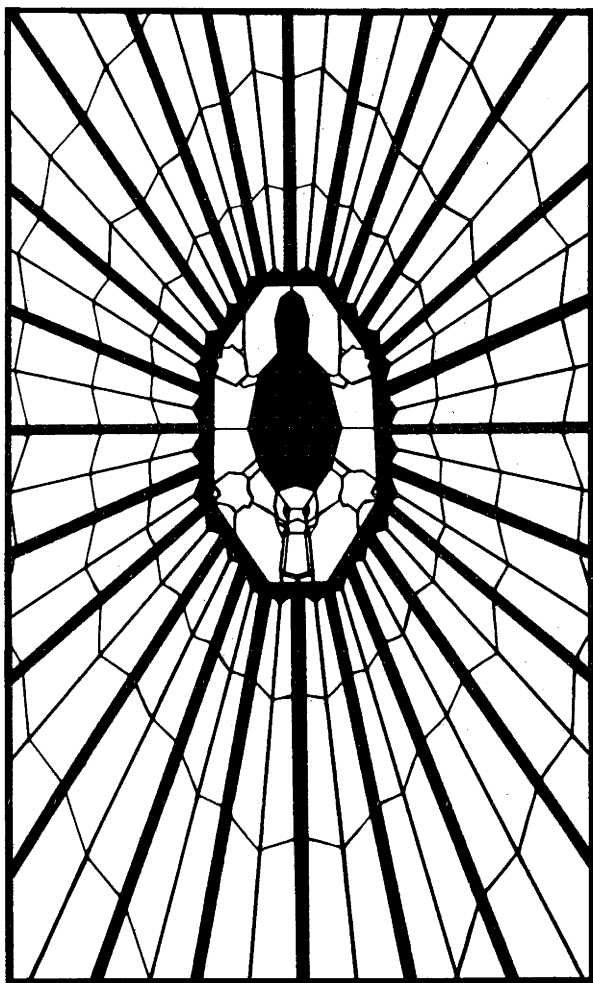


Heritage conservation in Australia

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an evaluation of economic incentives

Anthony Chisholm and Ian Reynolds



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Australian National University
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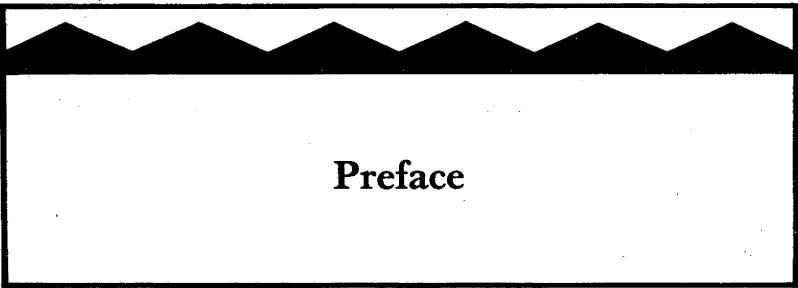


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Preface

The role of the Centre for Resource and Environmental Studies (CRES) is to undertake research and to provide objective information and analyses on social and public policy issues in the resource and environmental fields. By these means it aims to stimulate and to facilitate public discussion in these important areas of public policy.

The need for preservation of the national heritage is something that most people would support. One obvious problem in practical implementation, however, is that of defining what it is that warrants conservation. A less obvious, but equally important question concerns the specific means of achieving heritage conservation. These raise many issues of considerable complexity due to the inevitability that governments are involved and that costs and benefits are involved that are unlikely to be equitably distributed. It is these questions of how to achieve heritage conservation that are dealt with in this study, including the way to use efficiently the limited resources available to the community for conserving heritage property.

This study, undertaken by Dr Anthony Chisholm, Reader in the Department of Economics, the Faculties of the Australian National University, and Mr Ian Reynolds, formerly of CRES and now with the N.S.W. Department of Environment and Planning, has benefitted from the help of a number of people and institutions. Firstly, it could not have been proceeded without the willing cooperation of the Australian Heritage Commission. In particular, considerable thanks are due to the Director of the Australian Heritage Commission, Mr Max Bourke, who has taken a close interest in the project since its inception and who has made useful suggestions which we hope have ensured that the research has remained as close to the realities of heritage conservation as possible. Dr Sandy Gordon, prior to his departure from the Heritage Commission, also provided helpful suggestions, especially with respect to the use

of taxation concessions as a means of providing incentives for heritage conservation.

Knowledge and understanding of the operation of existing measures were greatly improved by discussions held with Mr Peter James, Deputy Director of the National Trust of Australia (NSW) and Mr Neville Newton of the New South Wales Heritage Council and also through communications with officers of the Australian Taxation Office.

Mr Alistair Ulph, formerly of the Centre for Resource and Environmental Studies (CRES), was instrumental in formulating a preliminary outline of the project. In its formative stage, the study also gained from the help of Professor Max Neutze and Mr Pat Troy of the Urban Research Unit at the Australian National University who commented on aspects of the study and provided us with information on a number of European authorities involved in heritage conservation.

Helpful comments were received on earlier drafts of this study from Dr Andy Dragun, Professor Max Neutze, and Mr Brett Odgers. The editorial assistance of Juliet Jeffcott has also been of considerable value.

Finally, this project was funded by the Australian Heritage Commission under the National Estate Grants Program and the Reserve Bank of Australia under its Economic and Financial Research Fund. This financial support is gratefully acknowledged.

Stuart Harris
Director



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Summary

As a result of the characteristics of those things that are customarily thought of as making up the nation's historical, cultural or scientific heritage, market forces by themselves cannot be expected to bring about the socially desirable level of heritage conservation; nor can they achieve the socially desirable level of use or consumption of benefits from the heritage property being preserved. Consequently, the conservation of the National Estate has, in Australia as in other countries, increasingly become the concern of governments who, perceiving a failure in the other processes of society to adequately conserve the nation's heritage, have introduced various measures designed to protect it. This study examines the effectiveness of various policy measures designed to ensure such conservation of particular elements of Australia's heritage.

The National Estate has been defined as 'those places, being components of the natural environment of Australia or the cultural environment of Australia, that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community'. The primary focus of the present study, however, is on that part of the National Estate which is predominantly man-made, rather than on rare natural ecosystems or national parks.

In a market-based economy, such as that in Australia, the extent of conservation of these heritage properties would, in the absence of special action by governments, depend upon the incentives to private individuals in the market. The study outlines, however, the circumstances in which market solutions to heritage conservation are insufficient because of the characteristics of heritage properties and the services or benefits they promote. The relevant characteristics commonly include those arising from the condition of joint supply — a situation that arises since, unlike that for most goods and services, one consumer's enjoyment of heritage benefits does not normally reduce the amount available for enjoyment by others;

those making it impossible to exclude consumers not willing to pay (and so contribute to the cost of preservation) from enjoying the benefits; those of an external nature such as where, for example, the preservation of one heritage property may increase the value of adjacent properties; and those offering some degree of monopoly power to the owner of the heritage property. In each of these situations a purely market solution alone may not achieve a desirable outcome from the community's point of view. A further factor influencing the effectiveness of market solutions is the likelihood that such solutions will give too little weight to the benefits to future generations.

Despite these characteristics, which justify the involvement of governments in heritage conservation, examples are given in the study of innovative private market initiatives in heritage conservation, and of circumstances where government intervention may be ineffective. Although the study does not consider one source of such ineffectiveness — political and bureaucratic inefficiency — it does consider the kinds of policy measures which might improve incentives to heritage conservation in a way that meets community objectives efficiently.

After concluding that because of the small amount of land involved, heritage controls will have little effect on the overall land market, the study notes that the subtle issues of compensation to owners of controlled properties relate largely to the mode of operation of the heritage control authority. With an authority acting consistently and providing adequate information about the likelihood of the imposition of heritage controls on various kinds of properties, market property values will reflect these expectations. Consequently it is important that heritage control authorities provide adequate public information about their operations, and sustain consistent policies, so that participants in the land market can form reasonable expectations.

The study looks at the existing taxation deduction incentives for heritage conservation (as well as alternative tax credit schemes). It argues that a strong case exists for extending existing income tax incentives, preferably under a tax credit scheme, to apply to outlays made by private owners for conservation and restoration of heritage property as well as to donations of heritage property. It does suggest that eligibility for the tax incentive should be contingent on

such work meeting specified standards, and (where appropriate) on a minimum visiting requirement.

Overseas research suggests that tax deductibility for heritage donations is probably cost-effective insofar as the tax revenue foregone by Treasury is less than the additional heritage donations induced by the income tax incentives. The study argues that a case exists to improve such cost-effectiveness further by publicising specific conservation projects together with the fact that donations for such projects are tax deductible.

The study discusses the use of rate reductions as a conservation incentive compared with the use of direct subsidies. In a nationally based heritage conservation program, subsidy and rate reduction measures are, in principle, equally cost-effective and the choice needs to be made on other grounds. Because of other limitations of the rate reduction method, including the size of the rate bill, the authors see little role for rate reductions in a national heritage conservation program.

The authors see subsidies as having a role in two areas. First, to induce the initial conservation of heritage items, and second, to assist the maintenance and operation of heritage exhibits. The study observes that estate duties had been a relatively cost-effective incentive for donation. Given their phasing out, a replacement incentive may be required, such as a lump sum or annual grant in return for a guarantee of donation of the property at the owner's death. In some situations other forms of subsidy may be more appropriate, such as low interest loans or, for a heritage exhibit already in operation, a per visitor subsidy.

The major advantage of direct subsidisation, according to the study, is that it is very flexible and can be adjusted (in ways other incentives cannot) to ensure the desired rate of use of heritage property. The authors favour a direct subsidy as the preferred policy measure for providing conservation incentives, subject to adequate enforcement of conditions.

The authors consider a number of alternative 'regulatory approaches' to effecting the preservation of heritage property. These include the use of zoning and conservation easements to safeguard heritage property, though these the study assesses as representing an inefficient approach. They include, as well, the use of schemes involving transferable development rights as a conservation mechanism. Although such schemes have recently been proposed as a

replacement for zoning and also for use in preserving specific buildings of heritage interest, the authors consider them to have further disadvantages which render them even less suitable than compensatory zoning as a conservation mechanism.

Finally, the study considers the case for the government to acquire and manage heritage property on behalf of society. Although there is no alternative appropriate in situations of complete market failure, such situations are judged to be rare and the authors see the situation more commonly as one in which there is a choice between government ownership and a form of subsidy to continued private ownership — the specific merits of one or other needing to be assessed in each case according to the circumstances involved.



Chapter 1

The need for heritage conservation policies

Introduction

The preservation of the National Estate has in Australia, as in other countries, become increasingly the concern of governments who, perceiving a failure in the other processes of society to adequately conserve their nation's heritage, have introduced various measures designed to protect this heritage. The major concern of this chapter will be to identify and review various reasons why the protection and utilisation of the heritage will, in the absence of any corrective action by government, be less than is socially desirable. It then evaluates the various conservation policy options available to government. A careful analysis of alternative policy measures for heritage conservation is necessary since society has only limited resources to expend on its various projects and the use of resources for heritage conservation precludes their use in other areas.

An efficient allocation of resources to conserving heritage items implies the need for an evaluation of both the social benefits and the social costs of conservation. The allocation of funds to conservation can be justified only if the present value of the benefits of conservation outweigh the present value of the costs. However, our main terms of reference for this research project are to analyse the cost-effectiveness of alternative policy measures. No attempt is made to quantitatively estimate the social benefits of heritage preservation and the optimal level of conservation. It is necessary, though, to give some consideration to the characteristics of the benefits from heritage conservation, since it is the very nature of these benefits which gives rise to the need for government action and which significantly influences the most appropriate form of government intervention. We turn now to consider the characteristics of the social benefits provided by heritage conservation. Following this discussion, there is a summary of the main conclusions of the chapter, together with an outline of the remainder of the study.

The Characteristics of Heritage Benefits

The National Estate has been defined as 'those places, being components of the natural environment of Australia or the cultural environment of Australia, that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community'.¹ As such, it would include historic buildings and other structures, aboriginal and other historic sites, habitats of rare fauna and flora, areas of outstanding scenery and so on. The benefits derived by society are likewise varied and include the benefits of recreation and the benefits derived from historic and scientific research. The primary focus of the study is on that part of the National Estate which is predominantly man-made, rather than rare natural ecosystems and National Parks.²

It is commonly thought that the reason markets fail to adequately allocate resources to the provision of these benefits is because they are 'intangible' or 'unquantifiable', or that such benefits are in some way quite different from those usually traded in the marketplace. These views are invalid and are based on misconceptions. Consider the case of a person who purchases a pair of shoes in the marketplace. He does so, not simply to own a pair of shoes but rather for the flow of benefits, (services) like protection and comfort, that they provide him with. Yet these benefits are no more tangible than heritage benefits. But whereas the benefits of the services provided by shoes are reasonably efficiently traded in well established markets, heritage benefits are not. Clearly, whether goods are efficiently traded in markets or not has nothing to do with their tangibility. However, for various reasons to be discussed, the

- 1 *Australian Heritage Commission Act 1975-76*, Section 4.(1).
- 2 A reasonable amount of research has been done on the economics of the natural environment and National Parks; see for example, Krutilla and Fisher (1975), Tisdell (1972), Freeman (1979) and Ulph and Reynolds (1980). But the authors were unable to find a single substantive economic study, either in Australia or overseas, on the economics of heritage conservation of 'man-made' exhibits. This is surprising given the quite substantial public and private funds now being allocated to such investments in many countries, including Australia.

market fails to adequately provide heritage benefits. One consequence of this is that, since usually no market place is established for these benefits, they are difficult to value and thus tend to be ignored in decision-making. Valuation of these benefits is possible, but involves the use of indirect and sometimes costly and complicated methodology.

There are a number of reasons why the free market will inadequately provide society with heritage benefits. These are the joint-supply nature of heritage benefits, the non-excludability of some heritage benefits, externalities which are commonly associated with the provision of heritage benefits, the effects of possible monopoly provision of certain heritage benefits, and possible divergencies between private and social rates of discount. Each of these possible sources of market failure will now be discussed.

Joint Supply

Joint supply, or non-rival consumption, refers to the characteristic possessed by some goods that the consumption of benefits by one individual does not diminish the supply available to others. One person's consumption of fresh air, for example, does not diminish the supply of fresh air available to others. For many types of National Estate property, an increase in the number of visitors, at least up to some point, will not diminish the flow of benefits consumed by each individual visitor. Beyond some point, however, congestion will occur so that each additional visitor then reduces the flow of benefits to all other visitors.

Congestion effects may be of two kinds. Firstly, congestion may affect the level of utility of each visitor so that the presence of an additional visitor may impose a cost, in terms of reduced utility, on all other visitors. Secondly, if the level of visiting exceeds a certain threshold, it may adversely affect the physical nature of the exhibit and so reduce the aggregate flow of benefits, unless offsetting extra maintenance outlays are incurred. Efficient utilization of the benefits would require the price of entry for each visitor to be set equal to the marginal congestion cost they impose.³ The marginal congestion cost for heritage property with a low level of visiting will be zero. In such cases, an efficient level of consumption of heritage benefits will be attained only if no entry fee is charged. This point,

3 It is assumed here that there are no other marginal costs.

together with its implications for the optimum private and public (social) supply of heritage property, is illustrated in Figure 1.1.

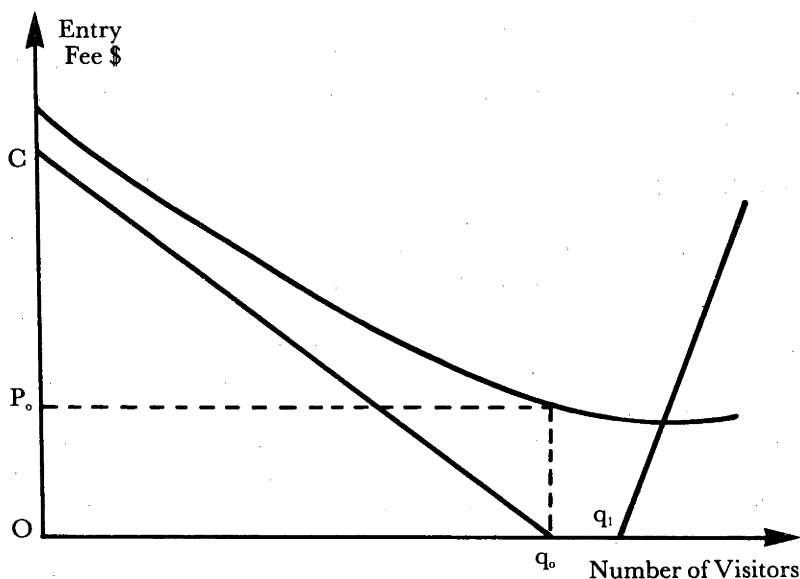
Assume a private owner of a heritage property is considering what entry fee he should charge. The demand relationship (D) shows the level of visiting for each possible entry fee. The marginal cost schedule (MC) measures the marginal congestion cost of a visit as a function of the number of visitors. Marginal congestion cost follows the horizontal axis to q_1 , reflecting the fact that, until congestion effects set in (at q_1), the marginal cost of a visit is zero.⁴ The average total cost curve (ATC) represents the average total costs of operating the property as a heritage exhibit.

The socially optimal level of utilisation is the point where the demand and marginal cost relationships coincide, at a level of visiting q_0 . There are no congestion effects at this level of visiting so the appropriate entry fee is zero. The crucial point is that at this price and level of usage the operator will not cover the total cost of his operation. The average revenue from a visit is zero while the average cost of a visit is p_0 . Hence, the socially optimal provision of heritage property, q_0 , will not be forthcoming unless a subsidy of p_0 per visitor is paid by the government to the property owner. Alternatively, the government could acquire the heritage property and operate it at a financial loss.

This leads to the second implication of setting entry price equal to the zero marginal cost, namely how can government determine whether the preservation of the particular heritage property is socially desirable. The social value of the benefits is approximated by the area under the demand curve, COq_0 .⁵ The total costs of providing the exhibit for q_0 visitors would be p_0AQ_0O . To decide whether establishing the exhibit is socially profitable or not the social value must be compared to the costs. If benefits, COq_0 , are

- 4 This simple method of presentation is purely illustrative. The theoretically correct conceptualisation would be to specify a separate demand curve for each level of congestion and to then select the demand schedule, having the particular level of congestion and associated entry fee, which maximizes gross consumer surplus. In our illustrative exposition, we circumvent this problem by specifying the optimum level of visiting to be within a region of zero congestion effects.
- 5 For the purposes of this discussion we assume that benefits are only gained by visiting the site.

Figure 1.1
Implications for Utilisation of Setting Entry Fee
Equal to Marginal Cost of Visit



greater than p_0AQ_0O , the exhibit should be provided. The area Op_0Eq_0 is common to both, but since p_0CE is greater than AEQ_0 , social benefits exceed social costs. Thus, preservation of this heritage property is socially desirable even though an unsubsidised private operator would sustain a large financial loss.⁶ In this case the government should either subsidise a private operator, to the extent p_0AQ_0O , or acquire and operate the exhibit itself.

In the above illustrative example, the ATC curve lies above the demand curve, so that the heritage property will not be preserved by a private entrepreneur motivated solely by profit considerations, without some form of government subsidy. For many heritage

6 This exemplifies the distinction between a social benefit-cost analysis and a private financial analysis. For ease of exposition, we have not considered here the need to convert all costs and benefits to present value terms. This issue is discussed in a later section on the choice of a discount rate.

properties however, at least a portion of the ATC curve will lie below the demand curve. In such cases, the heritage property will be preserved, but the entry fee charged by the private owner will usually result in a visiting level which is socially sub-optimal. Thus, in general, the joint supply (non-rival consumption) characteristic of many heritage exhibits will, in the absence of government intervention, induce too small a supply of heritage properties and too low a level of utilization (visiting) of those heritage properties which are supplied.⁷

Non-Excludability

The preceding discussion on joint supply assumes that price exclusion is possible. That is to say, individuals who do not pay for the privilege can be easily excluded from enjoying the benefits of National Estate preservation in those situations where a non-zero price is appropriate. For goods normally traded in markets, price exclusion is possible. However, there are many goods for which price exclusion is impossible or prohibitively costly. Benefits flowing from some forms of National Estate property tend to have the characteristics of non-excludability (e.g. spectacular views of national parks visible from public roads and historic buildings within clear public view).

National Estate benefits, the provision of which is deemed socially desirable, but which are not price excludable, would need to be provided by government. National Estate benefits which are partially, but not fully, price excludable could be provided by private entrepreneurs with the aid of a government subsidy. The nature of the benefits derived from heritage exhibits ranges from those

- 7 The inevitable trade-off production efficiency and consumption efficiency in the market provision of goods having the joint-supply characteristic was first clearly shown in the classic paper by Samuelson (1954). In recent years a number of researchers have contributed to the theoretical analysis of excludable public (joint-supply) goods. See, Oakland (1974), Head (1977), Arrow (1970), Brito and Oakland (1980), and Burns and Walsh (1980). The main result to emerge from this work is that the supply of excludable public goods in a competitive market will be too small (production inefficiency) and that some potential consumers will be inefficiently price excluded (consumption inefficiency). The degree of market failure will be accentuated in a monopolistic market.

which approach being pure public goods, having both the jointness in supply and the non-excludability characteristics, to those which are pure private goods, having neither characteristic.

Externalities

Defined simply, an externality occurs when the actions of an individual affect not only himself, but also impose incidental services or disservices on others. The individual will not normally take these 'spillover effects' into account when deciding on his action,⁸ since he neither receives nor makes payment for them. If significant externalities exist the socially optimal amount of the National Estate will not be preserved, even though no other form of market failure may be present.

In principle, the 'ideal' policy solution to an externality problem is to impose a tax (subsidy) on the externality generating activity at a rate equal to the marginal external cost (benefit). Thus in the congestion problem, the appropriate tax rate (entry fee) is equal to the marginal external congestion cost that each visitor to a heritage exhibit, imposes on all other visitors.

A more complicated externality problem exists where there is an area containing many historic buildings, each of which is being considered by its owner, either for demolition and redevelopment of the site, or for historic preservation, say, as a combined shop (or restaurant) and heritage exhibit. It is well accepted that the preservation of one historic property will add 'historic worth' to an adjacent historic property. The utility gained from seeing a particular historic building will be enhanced if it is in a complete historic setting, rather than isolated and adjacent to some inappropriate form of development. Moreover, visitors will gain economies of scale in visiting, since they would be able to visit a number of historic properties at once and not have to make a number of separate trips, or one longer trip, to see all the properties as would be the case if they were scattered over a wide area.

To determine the socially optimal level of historic preservation, the above externality needs to be taken into account in the decision making process. If the number of owners of property were sufficiently small it is possible that they would attain the socially optimal

8 Although if he is a receptor of a negative externality (e.g. polluted air) he may well take some form of defensive action.

level of preservation *via* negotiation and bargaining among themselves without any form of government intervention.⁹ Usually though, externalities will not be internalized in this way because the number of parties involved, and thus transaction costs, will be too high.

In the above problem, for each property owner, there is a divergence between marginal private benefit and marginal social benefit of preservation of his property. The policy solution is, in principle, straightforward. A subsidy should be paid to each property owner at a rate equal to the external marginal benefit attributable to the preservation of each owner's property. In practice, however, the determination of the appropriate subsidy rates is a difficult problem, since the external marginal benefit from preserving a particular property is not a constant; its value is dependent upon the total amount of historic property preserved. Generally, the marginal external benefit of preserving an additional historic property in a given locality will be smaller the greater the total amount of preservation in the area.¹⁰

It also should be observed that each individual property owner is confronted with a type of 'prisoner dilemma' problem. For each property owner the private benefits obtained from preservation of his property depends, in large part, upon the total number of properties preserved which he cannot predict with any degree of certainty. Moreover, in a dynamic setting, a decision by a particular property owner to preserve his property may in itself influence others to do the same, since his preservation decision will usually raise the private benefits that others would attain from preservation of their properties. There is thus a strong incentive for individual property owners to delay making their own decisions in the hope of observing the decisions made by others.

In general, it is the authors' view that tax-subsidy schemes are the appropriate policy instrument for handling externalities asso-

9 See the seminal paper on this topic written by Coase (1960). Some recent work on the theory of clubs is also interesting and the conceptual framework developed in this literature would appear to have some relevance to problems of this nature. See, for instance, Sandler (1982).

10 Marginal external benefits may be an increasing function of the aggregate amount of preservation when the latter is at a low level, but beyond a certain level of aggregate preservation marginal external benefits will decrease.

ciated with heritage conservation.¹¹ The application of the appropriate Pigovian tax (subsidy), in effect, removes the divergence between private and social costs and benefits and thus internalises the externality. In some circumstances, however, the externalities may be so pervasive and substantial that it is too difficult and costly to devise and administer a tax-subsidy (pricing) system. In these situations, regulatory controls, such as zoning are likely to have to be resorted to, rather than attempting to operate through a pricing mechanism.

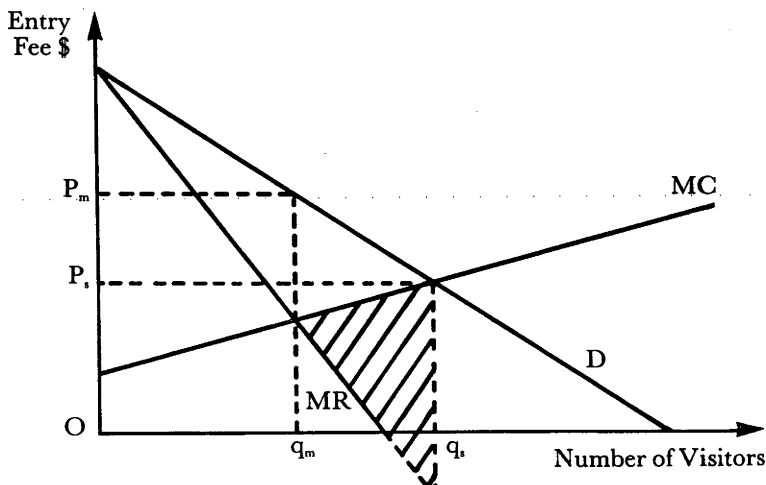
Monopoly

A fourth problem with the provision of benefits from preservation of the National Estate is that the owner of a historic property may have some degree of monopoly power and this may be exploited in setting the entry fee and the associated level of visiting. The implications of this will become clearer if we consider the following example.

Assume there is an exhibit of heritage property owned by a private individual which is the only one of its kind. Consider now the entry fee he will charge and the associated level of visiting. His decision will be based on the marginal cost schedule and the revenue he can extract from the visitors. As shown in Figure 1.2 the monopolist will permit visitors to the point, q_m , where the marginal cost (MC) of that level of visiting equals the marginal revenue (MR) gained. Each visitor will be charged an entry fee of p_m . The socially desirable level of visiting is determined by examining the relationship between the marginal costs of operating the exhibit at different visiting levels and the visitors' marginal valuations, as expressed in the demand curve to visit the exhibit as shown in Figure 1.2. The socially optimal level of visiting is q_s , and the optimal entry fee is p_s . Considering Figure 1.2 we can see the likely effect that monopoly provision would have on the utilization rate and entry fee as compared with the socially optimal level of usage and entry fee.

11 We do not undertake a more detailed analysis of such policy instruments in this project because such studies are available elsewhere. For a detailed analysis of these policy options in the context of environmental protection see Chisholm (1979).

Figure 1.2
Comparison of Socially Optimal Visitation Rate and Entry Fee
with those prevailing under Monopoly



If the historic property is owned by a private monopolist, the visiting level will be restricted to q_m and at this lower level of visiting, visitors will pay the higher price p_m , rather than p_s for a visit. One possible solution to this inefficient situation is for the government to take over the whole operation; another approach could be to induce the monopolist to charge a price p_s , and permit entry q_s , by subsidising visiting beyond q_m . The total value of the required subsidy is measured by the shaded area in Figure 1.2, between the monopolist's marginal cost and marginal revenue schedules. This solution requires detailed information and is likely to be difficult and costly to ascertain.¹² Usually, the degree of monopoly power of an owner of a heritage property will not be sufficiently great to justify government intervention.

12 It is assumed here that there is zero congestion. As was indicated previously the problem is conceptually more complicated in the presence of congestion, since a separate demand curve and related marginal revenue curve would need to be specified for each level of congestion.

The Discount Rate, Option Values and Existence Benefits

The preservation of National Estate property will confer benefits far into the future and these future benefits must be considered in decision making. A central difficulty with incorporating future values in present decisions is that, as private individuals, we may place too little importance on future benefits relative to present benefits. Government has the responsibility to ensure that future benefits, especially those accruing largely to future generations, are properly taken into account. The means of weighting future benefits is *via* the discount rate — a high rate of discount reflects a low value placed on future benefits and conversely a low rate reflects a high value placed on future benefits.

Apart from the argument that individuals in their private decision-making capacity may be too myopic from the viewpoint of society as a whole, a divergence between the social rate of discount and private discount rates may occur because of private risk-aversion and imperfect capital markets. Risk-averse private investors faced with the choice of developing or preserving a historic site will add a risk premium to the discount rate used to calculate net present values. From society's viewpoint, however, it has been argued by some economists that the appropriate discount rate for the evaluation of investments,¹³ like heritage preservation, is the risk-free rate, and that private investors who use a discount rate which incorporates a risk premium will underprovide preserved historic sites.¹⁴

- 13 Arrow and Lind (1970), for example, argue that the total risk carried by the public sector is shared among so many that each individual's risk burden becomes negligible and thus the appropriate discount rate is equal to the market rate on riskless bonds. But there are economists, for example Hirshleifer (1964), who argue that the government should take as its discount rate the rate of return on capital in private industry of similar riskiness. Some controversy still surrounds the issue of the appropriate social rate of discount.
- 14 It should be noted that this argument implies that all forms of risky investment are inadequate. The argument may be more forceful when applied to the provision of heritage benefits since such investments usually have a very long life and it is long-lived investments which are particularly discriminated against when private discount rates are higher than the appropriate social rate. In the latter situation a case can be made for subsidising these investments, possibly *via* low interest loans.

A related argument applies to the concept of 'merit goods'. It may be argued that the aggregate of the revealed preferences of the individuals comprising society for heritage preservation does not reflect the true preference of society as a whole. Head (1974) proposes two reasons why some goods will have 'merit good' characteristics. Firstly, there may be a lack of information concerning the good, such that the revealed preferences of individuals do not reflect their true demand. Secondly, minors may act irrationally and thus give an inaccurate revelation of their true preferences. It may be argued, for instance, that preservation of the National Estate generates a stronger sense of identity and history for the Australian people, and that this is not properly perceived by individuals and therefore not revealed in their valuations (preferences).

The theory of 'merit goods', in the authors' view, has not yet been rigorously and fully developed and it is difficult to judge whether it is a significant source of market failure with respect to heritage benefits. In any event, the appropriate policy would be for governments to ensure that there is an adequate supply of information to the public on the benefits of heritage preservation.

Finally, we consider two related issues concerning irreversibility (and option values) and existence benefits. The significance of these issues to decisions relating to the preservation of rare natural environments was initially discussed by Krutilla (1967).¹⁵ He defined option values very broadly as arising from the 'willingness to pay for retaining the option to use an area that would be difficult or impossible to replace and for which no close substitute is available' (p.780). Subsequently the concept of option values has been defined more narrowly and precisely.

When a rare and important historic building is demolished and the site developed, say as a block of apartments, it may be either impossible or prohibitively expensive to return the site to its original historic state. On the other hand, if the historic building is preserved it still remains possible for the decision to develop the site to be taken at any time in the future. The characteristic of irreversibility is only a problem where there is uncertainty as to the future benefits from preservation, or development, of the site. It has been

15 See also Arrow and Fisher (1974) and for an early discussion in the context of conservation problems in Australia see Chisholm (1973).

argued by some researchers that private investors, making the preservation *versus* development decision, will base their decision on the *expected* values of the revenues flowing from the two mutually exclusive investments, and that this is inappropriate because no account is taken of the 'option value' associated with the benefits of preservation.¹⁶

Subsequent research, however, has shown that the option value for an individual may be either positive or negative¹⁷ and that for society as a whole, the use of expected values is the best feasible approach.

Finally, there is the question of existence values which may be defined as the utility people obtain from simply knowing that a major item of the National Estate exists. Krutilla (1967) had a concept of existence values in his mind when he observed the satisfaction that many people gained from knowing that parts of the United States remains as wilderness areas 'even though they would be appalled by the prospect of being exposed to it' (p.781).

Existence values exhibit the Samuelsonian jointness of supply characteristic, in that their consumption by one individual does not reduce the supply of existence value available to others. And once a major item of the National Estate has been preserved, the knowledge of its existence is available at zero (or very low) marginal cost to each individual. Unlike participation benefits which can be obtained only by visiting the actual site, problems of congestion never arise with existence values. Whilst the general idea of existence values is fairly widely recognized there appears to be some confusion as to the precise nature of existence benefits.¹⁸

It seems reasonably clear though, that the most meaningful definition of existence values relates to the utility that people obtain from the mere knowledge that a major heritage item exists. As such, no market will operate for existence values though some indication of their value may be indirectly gleaned from looking at related

16 The theoretical concept of 'option value' was first introduced by Weisbrod (1964) and both he and Cichetti and Freeman (1971) argued that option values would be positive.

17 See Henry (1974).

18 Krutilla (1967), for instance, defined existence values very broadly to be part of option values.

markets, like the market for books which describe and contain photographs of the heritage item.

If existence values were believed to be significant for some major heritage project an attempt should be made to take them into account when evaluating social benefits. They may also justify the payment of a government subsidy if the heritage exhibit was privately owned. However, care should be exercised to ensure that existence values and 'merit good' considerations are not simply used to artificially inflate the value of benefits by strong proponents of a particular project.

Summary and Outline of the Study

In this introductory chapter, we have discussed various reasons why the normal processes of the market will not lead to the conservation of the socially optimal amount of the National Estate, or to the socially optimal level of usage of the property once it has been preserved.¹⁹ Briefly these reasons were: firstly, the joint supply nature of many heritage benefits. This means that, at least up to a certain level of visiting, the correct fee to be charged to attain consumption efficiency would be zero. If a private entrepreneur was to allow free access to an exhibit his business would not be viable, yet if he charged a fee to cover his costs the level of visiting to the exhibit would be less than is socially desirable. Without some form of government intervention, there is an inevitable trade-off between production efficiency and consumption efficiency. To correct this situation the government could either subsidise the private owner's operation or acquire and operate the exhibit itself.

The second possible reason for market failure in the provision of heritage benefits is non-excludability. This refers to the situation where it is impossible or prohibitively costly to exclude someone who does not pay for it from enjoying the benefits of a particular heritage exhibit. Government provision would be necessary where price exclusion was impossible, but subsidisation of private owners may be a suitable policy if imperfect price exclusion is possible.

Thirdly, market failure in the preservation of heritage benefits will occur if significant externalities arise from the preservation of

19 Unless it is indicated otherwise, the term 'socially optimal' refers to a Pareto efficient allocation of resources.

heritage property. An externality occurs when the actions of an individual impose incidental services or disservices on others. If, as is likely, the individual does not take these effects into account when making a decision on the preservation of heritage property, the socially optimal level of National Estate preservation will not occur. Ideally, Pigovian taxes (subsidies) set at a rate equal to the marginal external cost (benefit) should be imposed, thus internalizing the externalities. But in some circumstances this pricing policy will not be administratively feasible and some form of regulation (e.g. zoning) may be necessary.

Fourthly, in the case of some heritage properties, problems of monopoly provision may occur. An owner of a heritage property, who has some degree of monopoly power, will charge an entry fee which is too high and induce a visiting rate which is socially sub-optimal.

The final cause of market failure in the provision of heritage benefits arises if there is a significant divergence between private and social discount rates. The use of a private discount rate which is significantly higher than the appropriate social discount rate will give an inadequate weighting to future heritage benefits. Related to the issue of a possible divergence between the social and private discount rates are questions surrounding the concepts of irreversibility and option values, merit goods, and existence benefits. The significance of these concepts for heritage preservation were also discussed.

Whilst there is sufficient evidence of market failure to justify an active role being played by government in heritage preservation, the authors are anxious to avoid leaving the reader with the impression that there is almost complete market failure in the provision and utilisation of heritage property. There are some truly outstanding examples of heritage preservation, like Ghiradelli Square in San Francisco and Larimer Square in Denver, which represent the work of innovative private entrepreneurs. Moreover, even when areas of significant market failure in heritage preservation can be identified there is no guarantee that government intervention will lead to a more efficient allocation of society's resources.²⁰

20 We do not discuss here the issue of potential government and bureaucratic failure to attain efficient allocation of resources. For a discussion of some of these issues in a related context see Chisholm, Walsh and Brennan (1974).

The bulk of the study which follows analyses policies which represent the use of various policy preservation activities undertaken by private persons (or firms), or some form of direct government regulation of heritage property. Firstly however, since some of the possible heritage control measures involve intervention in the land market, the following chapter is devoted to a discussion of the relationship of heritage controls to the operation of the land market.

Chapter 3 contains a description and evaluation of the use of the current income tax deductability provisions as conservation incentives. An alternative system of using tax credits to provide incentives is also proposed, together with a proposal for extending the income tax incentives to apply to restoration outlays on historic properties which remain in private ownership. Chapter 4 evaluates the comparative usefulness of rate reductions and direct subsidies as means of providing assistance to private owners of heritage property, while Chapter 5 discusses the use of direct subsidisation in more depth in two roles. The use of direct subsidies to encourage the preservation of heritage property is evaluated, followed by a discussion of the role of subsidies in ensuring the optimal use of heritage property once it is preserved.

Chapters 6, 7 and 8 present discussions of what may be termed 'regulatory' approaches to ensuring heritage conservation. Chapter 6 assesses the use of zoning as a conservation mechanism. An important part of this discussion revolves around the necessity or otherwise of paying compensation for zoning regulations imposed on private property owners. Chapter 7 evaluates the use of transferable development rights in heritage conservation, while, in Chapter 8, we discuss the role of government acquisition and management of heritage property as a conservation policy.

Chapter 9 concludes the study. It contains a summary of the contents and conclusions of the research and indicates which policies are most appropriate for conserving elements of the National Estate.



Chapter 2

An analysis of heritage controls as they affect the land market

Introduction

It is helpful to discuss heritage preservation policies in terms of their impact on the land market for several reasons. Firstly these policies are, in effect, land use policies as, through them, government is seeking to influence the use of particular sites of land under the assumption that the land market, in the absence of such controls, is not efficiently allocating land among its alternative uses. Secondly, government heritage decisions may influence not only the value and use of the heritage sites, but also the value and use of surrounding land. It is important to identify the nature of these possible indirect effects before implementing the policies. Thirdly, some of the heritage conservation policy measures in current use (analysed later in the report), and some which have been proposed for use, represent explicit manipulation of land use. Consequently, any evaluation of alternative policy measures requires an understanding of the land market and how it might be affected by the implementation of such controls.

As the total amount of land allocated to 'heritage use' is small in relation to the aggregate land market, it is unlikely to have any significant impact on the overall land market. Hence, in analysing the possible effects of heritage controls on the land market, it is necessary to consider only the effects of these controls on the actual properties involved together with any effects the controls might have on neighbouring properties, i.e. externality effects of the controls. People may, for example, value living near a reserved historic or natural area and may be willing to pay a higher price for the privilege of doing so. If this is the case, the preservation of the site(s) will have given rise to a positive externality. Conversely, the situation can be envisaged where, say, a historic building in a commercial area is preserved instead of the site being developed which could possibly lead to a decrease in value for surrounding commercial

properties now denied the spillover economic benefits which might have accrued from development of the historic site. In this case heritage preservation will have given rise to a negative externality.

A simplified analysis of the market for land is now presented.¹ Assume that there are two alternative uses for the land, called 'development' and 'preservation' and that a developer is considering purchasing the land. The results of the following analysis have important implications for the issue of whether compensation should be offered to individuals whose land becomes subject to heritage control.²

The Land Market

Initially assume that there is no likelihood of controls (heritage or otherwise) being imposed on the land market, and that the developer knows with certainty the values the land will have in its developed use. This situation is illustrated in Figure 2.1. The demand curve, D , represents the relationship between the amount of land purchased by the developer and the price he would be willing to pay per hectare of land. Thus for an amount of land Q , he would be willing to pay a price P per hectare.

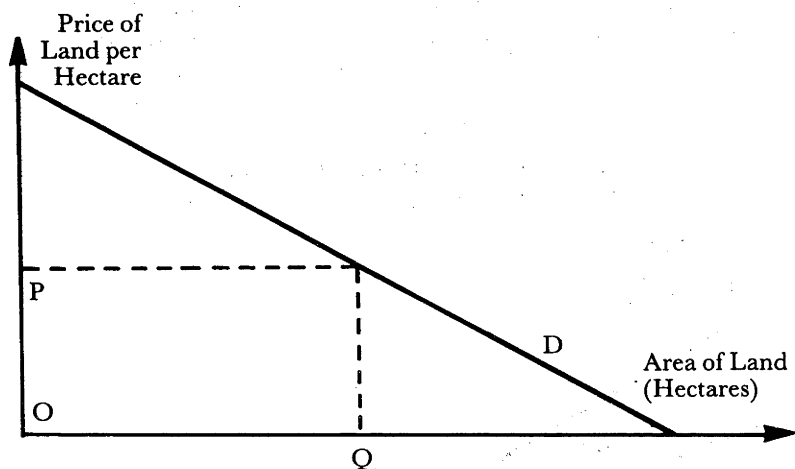
Let us now introduce the possibility of the imposition of heritage controls on the land and consider its effects on the developer's decisions.

Take the case of a developer wishing to buy an amount of land, Q , for commercial development (see Figure 2.2). If heritage controls are imposed he will be unable to develop the land to its full potential and hence it will be worth less to him than if full development were allowed. Accordingly, his demand for land will be lower, say D_1 , giving rise to a unit price P_1 he is willing to pay for land Q . Conversely, if heritage controls are not imposed, he will be able to develop the land to its full potential and his demand for the land will be higher, say D_2 , indicating that he is willing to pay a unit price P_2 .

- 1 In the following analysis we do not deal with the externality effects of any heritage controls imposed as, conceptually, these effects are similar to those on the land directly involved in control (i.e. potential value changes).
- 2 It is convenient to consider these controls as a form of zoning although they could be any type of control which ensures the retention of a given property in its present form.

for the land Q .³ The problem is that the developer is uncertain as to which price he is willing to pay, P_1 or P_2 , since he is uncertain as to whether heritage controls will be imposed or not.

Figure 2.1
A Developer's Demand for Land
Under Conditions of Certainty



The price the developer will be willing to pay will depend on the probabilities he attaches to the two alternative outcomes, heritage control or no heritage control. He will, in effect, act as if his demand for land is the sum of D_1 adjusted by the expected probability of heritage control, and D_2 adjusted by the expected probability of no heritage control. The result may be a demand schedule, D_3 , indicating that he is willing to pay P_3 per hectare of land.⁴ The more likely the developer considers no controls will be imposed, the closer will P_3 be to P_2 .

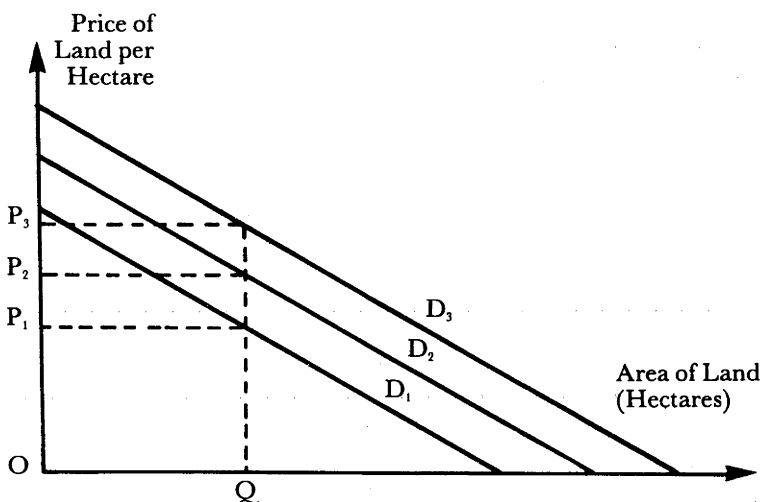
An alternative situation of heritage control can be considered. If the developer were considering purchasing the area for develop-

3 Note that D_2 in Figure 2.2 would be equivalent to D in Figure 2.1.

4 The possibility of heritage controls may also affect the price elasticity of demand for land, but such an extension to the analysis would not alter the substance of our conclusions.

ment as a prestige residential district retaining its historic character, the imposition of heritage controls could increase the area's value to him (say to D_2 in Figure 2.2) while the lack of heritage control, implying perhaps a lack of real historic worth, could decrease its value to him (say to D_1 in Figure 2.2). Again the developer might offer a price P_3 based on D_3 , but in this case D_3 would be the sum of D_1 adjusted by the expected probability of no heritage control, and D_2 adjusted by the expected probability of heritage control. In this case P_3 will be closer to P_2 the more likely the developer expects the imposition of heritage controls to be.

Figure 2.2
A Developer's Demand for Land
Under Conditions of Uncertainty



What are the implications of this uncertainty for compensation for any heritage controls imposed? The following discussion is couched in terms of commercial development as the alternative to heritage preservation, but a similar discussion could be conducted on the basis of other possible development uses.

Suppose that, having evaluated the risks associated with his choice, the developer decides that D_3 is the appropriate demand relationship and that P_3 per hectare is the correct price to pay. Assume now, that after he has purchased the land, heritage controls

are applied to his property so that, with the benefit of hindsight, D_1 would have been the appropriate demand relationship, and P_1 per hectare the relevant price to offer. Should the developer be compensated for the loss $P_3 - P_1$ per hectare due to the zoning decision?

Two cases can be distinguished. Firstly, let us assume that the zoning authority has acted and continues to act consistently in the application of its decisions and that an informed developer purchases land, say with a block of old buildings with redevelopment potential, for P_3 per hectare. It is difficult to sustain an argument that compensation should be offered in this case, since the developer purchased the land with the prior knowledge that there was a chance that it might be zoned unfavourably. If the developer completes the purchase, recognizing the risks involved, it does not seem appropriate that the public should bear the costs of his risk-taking. Even if the developer was unaware of the risks involved and paid P_2 per hectare for the property, compensation of $Q(P_2 - P_1)$ would not be appropriate because the fact that he had not informed himself that there was a possibility that the property would be unfavourably zoned cannot be blamed on society.

The second case that may be distinguished is where the zoning authority suddenly and unpredictably changes its policies and introduces heritage controls on the property in a manner entirely inconsistent with its former approach to such matters. If, after evaluating the risks implied by the previous zoning policy, the developer is led to pay P_3 for the property and the change in policy causes the value to drop to P_1 , the buyer could claim compensation of $Q(P_3 - P_1)$ on the grounds that his initial decision was based on consistent planning policies and the sudden policy change had caused him to suffer a loss.⁵

An example of this might be given by the situation when new heritage legislation is introduced into a jurisdiction giving new powers to the zoning authority to control heritage property. The full compensation of $Q(P_3 - P_1)$ would only be appropriate however, if such legislative changes were entirely unexpected, that is, unexpected due to the operations of the legislative and zoning process, *not* unexpected because of the lack of foresight of the property buyer. It could be argued that such surprise land use decisions

5 In practice, of course, it could be very difficult to establish situations in which there had been policy changes.

represent bad planning since community land use decisions ought to be made in consultation with the whole community. If consultation is carried out and the community is thus aware of the overall factors involved in land use decision making, in this instance referring particularly to heritage controls, it can be reasonably argued that the operators in the land market should bear the risks associated with their decisions, and the costs of these decisions should not be borne by the public *via* compensation payments. It is clear then that one of the prime functions of heritage control authorities ought to be the dissemination of information to the public regarding their modes of operation, the values included in the decision-making process on heritage preservation, and the nature of that decision-making process itself.

Consider now a particular case in which it is agreed that compensation ought to be paid. On the basis of reasonable *prior* expectations, for which the probability of heritage controls being imposed is 0.1, the developer purchases the land at a price of P_3 per hectare. Now assume that there is a complete change in heritage policy such that the probability of that property being zoned for heritage control changes to 1.0. Referring to Figure 2.2, the correct compensation payment is P_3AP_1 per hectare.

Two points need to be made regarding the above compensation payment. Firstly, the correct amount of compensation would not usually be equal to full development value less value in the preserved state, $Q(P_3AP_1)$, since the land would have been worth P_2 per hectare only if the *prior* probability of heritage control was zero. Thus, the simplistic approach, commonly suggested in some of the literature, of setting compensation at developed value minus preserved value is in most cases untenable.

The second point that needs to be made is that the land values, and P_3 in particular, are not capable of objective determination since they are essentially determined on the basis of subjective expectations of probabilities of occurrence of certain events. Thus, in any given situation, it may be impossible to determine the correct level of compensation so that heritage conservation programs which are based on the provision of compensation are likely to be very difficult to put into practice.

There will be some circumstances, however, where some form of compensation is necessary. If a heritage authority significantly and unexpectedly changes its heritage policy causing sudden and sub-

stantial changes in some property values, the affected property owners should receive some compensation, since the authority has in effect changed the property rights from the *status quo*⁶.

Summary

In this chapter we have conducted a brief analysis of the land market in the presence of the possible imposition of heritage controls on property. The analysis is necessary since many heritage preservation policies are, in effect, land use control policies, and their imposition may influence not only the designated heritage land, but also surrounding properties. Indeed, some of the preservation policies in current use, or being proposed, represent explicit manipulation of the land market. In evaluating these policies it is important to have an understanding of how the land market will be affected.

As a relatively small amount of land is involved in heritage control it is unlikely that the imposition of these controls will have a significant effect on the overall land market. The effects are likely to be confined to the property to which heritage controls are directly applied and, if externalities accrue from the controls, also to neighbouring properties.⁷ The presence of externalities is likely (*e.g.* people may place an extra value on living next to a permanently reserved historic area) so that the imposition of heritage controls will often have some effect (usually small) on the value of nearby properties. The value of neighbouring property may rise or fall as a result of a heritage program, but it would be difficult and in most cases impracticable to implement a scheme of compensation (pay-

6 This point has been expanded on by Parish (1977) in his trenchant criticism of the two reports of the Commission of Enquiry into Land Tenures (1973 and 1976). Parish states — '... although it (the Commission of Enquiry) was much concerned with questions of equity, it was singularly blind to the inequities of its own recommendations (p.52). The Commission of Enquiry into Land Tenures did not have a coherent and rational model of the land market underlying its analysis'.

7 In some small country towns, like for instance Braidwood in NSW, where restoration of a number of historic buildings is being undertaken, property values in the whole town may be significantly and beneficially influenced as a result of the heritage program.

ment) for neighbouring properties whose values decreased (increased).

A crucial part of the analysis is the role of *expectations* in the process of land value formation. Whether or not compensation should be paid depends on the mode of operation of the controlling body. If it follows consistent policies so that operators in the land market can form reasonable expectations regarding the likelihood of the imposition of heritage controls on particular property, then it would not seem appropriate for the public to bear the operator's risks in the market and compensation ought not to be paid. If on the other hand, the controlling body is inconsistent in its application of heritage controls so that unexpected and hitherto unlikely decisions are made, a case for compensation can be made.⁸ In practice though, it would be difficult to establish the correct compensation. An important function of heritage control authorities should be to provide adequate information regarding their operations to the public, so that individuals operating in the property market can form reasonable expectations so that through time land values will change reasonably smoothly without large 'jumps'.

Finally, the chapter has briefly discussed procedures for determining compensation in circumstances where it is clearly desirable that compensation be paid.

- 8 It should be noted that in many other areas of government activity, significant *windfall* (unexpected) gains and losses are continuously being imposed on different individuals and groups in society without payment being made, or, compensation received. For instance, when the government changes the rate of interest on government bonds.



Chapter 3

Income tax incentives for conservation

Introduction

The *Income Tax Assessment Act* has been one of the main vehicles for the Federal government's provision of conservation incentives. Section 78 of the Act allows deductions from taxable income for gifts of money or property made by individuals to the National Trusts and the Australian Conservation Foundation. To qualify as a tax deductible expense, the donation of heritage property must be made no later than 12 months after its purchase by the current owner. The property is valued at the lesser of its market value or its acquisition cost to the tax-payer. Income tax deductions based on estimated market value, or production or acquisition cost, are also allowed for gifts of works of art and comparable material donated to public art galleries, libraries and museums. For these types of gifts there is no qualifying time limit placed on the ownership period.¹

A simple example will serve to illustrate the conservation incentive embodied in the deductibility allowance. Under income tax assessment rates current for 1980/81 an individual with a taxable income of \$25,000 will have a marginal tax rate of 46% and will be liable to pay \$7,793 tax. Now assume that this taxpayer donates a property worth \$5,000 to a National Trust body. This amount can be deducted from his taxable income giving a taxable income of \$20,000 liable for assessment. His marginal tax rate remains at 46%, and his total tax liability will now be \$5,493, representing a tax saving of \$2,300 over his initial tax liability. The true cost, or net 'price', of the donation to the donor is thus \$2,700. The incentive, as presently offered, does not apply to outlays made by individuals for restoration and maintenance of heritage property which continues to be held in private ownership. The implications of this are discussed in Section 3.5 of the chapter.

1 Personal communications with Commission of Taxation 15.8.79.

The effectiveness of such deductibility provisions depends on the tax-defined *price-elasticity of donation*, where the 'price' is the net cost to the taxpayer per dollar of giving. It is defined as the proportionate change in quantity (value) of donations divided by the proportionate change in the price of the donations. The higher the price elasticity of donation, the more effective is the measure in inducing conservation decisions.

The rationale for allowing deductibility of property donations in the way stipulated in the *Income Tax Assessment Act* is that, since a property must be donated within one year of its acquisition, it is presumed not to be part of the taxpayer's 'real income'. Therefore the value of the property should be permitted to be deducted from the donor's income in computing his tax liability. Clearly, the time chosen for eligibility is arbitrary. Moreover, there appears to be no rationale for applying a time limit to one class of donations, property given to Trusts, but not to another, art works given to museums.

Under the present *Income Tax Assessment Act* the tax incentive is directly tied to a prospective donor's marginal tax bracket. Another form of tax incentive for heritage conservation which has a neutral impact on prospective donors in different marginal tax brackets is the tax credit system. Under a tax credit scheme, a specified proportion, say 50 per cent, of heritage donations would be permitted to be deducted directly from a donor's tax bill.

In the following sections of this chapter, we consider the implications of the current income tax treatment for heritage donations, the principles of the cost-effectiveness of the income tax incentives, the empirical evidence of the price and income elasticities of donation, the use of a tax credit scheme as a means of providing conservation incentives, and the possible use of the income tax system to provide an incentive for restoration and maintenance of heritage property which remains in private ownership.

Implications of the Current Income Tax Treatment of Heritage Donations

The current income tax treatment of heritage donations was outlined at the beginning of Section 3.1. Several aspects of this procedure need to be examined, particularly the nature of the decision to be made by the relevant National Trust body in accepting the

gift. For ease of exposition, the discussion will be couched in terms of a National Trust body and the donation of historic property, although the analysis is quite generally applicable to donations of other property to other bodies.

The first aspect to be noted is that the decision of whether to conserve a particular property is ultimately made by the National Trust, since it may refuse to accept the donation of a property. It is, then, the National Trust's responsibility to assess the benefits of the property offered and to decide whether or not preservation is warranted. An important part of this decision is the cost to the National Trust of preserving the property. The Trust's acceptance of the property should be governed by whether it considers that the benefits of preserving the property, which flow to society, exceed the cost to society of preservation. The direct costs to the Trust (and society) are the operation and maintenance costs and sometimes restoration costs. This direct cost does not, however, represent the full cost to society of preservation of historic property. The income tax revenue foregone, as a result of allowing income tax deductibility of gifts of historic property, is a real cost to society which the Trust should take into account when weighing social costs and benefits.

The conservation decision is thus essentially made by the National Trust, which chooses from a limited number of properties those which it considers should be conserved. The Trust makes its decision on behalf of the government and, since the government plays no part in evaluating the benefits to society of the various donations, it should be neutral with respect to the level of incentive it provides each potential donor.² That is to say, from both an efficiency and equity viewpoint, the equivalent rate of government subsidy, given through the income tax system, should be uniform across all donors deemed to be eligible by the Trust.

Donations of property and money to the National Trusts and the

2 Note that this discussion only concerns gifts of heritage property subject to Section 78 of the *Income Tax Assessment Act*. Clearly, governments do conduct assessments of the value of the benefits of preserving property (hence we have Heritage Registers which contain selected properties only). But so far as the tax treatment of properties donated to Trusts is concerned, benefit evaluation is carried out by the Trusts and this evaluation plays no part in the offer of tax incentives.

Australian Conservation Foundation may be deducted from the donor's taxable income providing that, at the time of donation, the donor has not owned the property for more than one year. There are a number of criticisms that can be made against the present form of income tax incentive, both on the grounds of efficiency and equity.

First, the size of the incentive is directly linked to the marginal tax bracket of the donor. The present scheme thus offers a greater incentive to a high income donor than it does to a low income donor, regardless of the benefits flowing to society from the donations made by each.³

To examine the differential nature of the incentives offered by tax deductibility, consider the following example, with the income tax schedule as shown in Table 3.1.

Table 3.1
Income Tax Schedule
(1980-81 wage and salary income)

<i>Annual Income</i>	<i>Marginal Tax Rate</i>
\$	
0 — 4041	0
4042 — 17239	32 %
17240 — 34479	46 %
34479 +	60 %

One potential donor has an income of \$100,000 per annum and his marginal tax rate is 60%. Another potential donor has an income of \$10,000 per annum and his marginal tax rate is 32%. Each taxpayer is considering donating identical property with a value of \$5,000 to a National Trust. Each taxpayer could thus deduct \$5,000 from his taxable income if he made the donation.

Now let (d) denote the value of the donation and (m) denote the donor's marginal tax rate. The tax saving for a prospective donor is $(d \times m)$ and the net cost of the donation to the donor is $(d - (d \times m))$. Thus, in our example, by making the donation, the high in-

- 3 A variable rate subsidy would be appropriate on efficiency grounds, only if the price elasticity of giving of donors in different income classes varied in some systematic way. This point is expanded subsequently. The available evidence suggests that there is no such systematic variation in price elasticity, implying that a flat rate subsidy is appropriate.

come (marginal tax bracket) donor would reduce his tax liability by \$3,000, whilst the low income (marginal tax bracket) donor would reduce his tax liability by only \$1,600. The net cost (price) of the donation is then \$2,000 for the high income donor and \$3,400 for the low income donor. In general, each dollar of donation will cost the donor $\$(1-m)$. Thus, under the present income tax deductibility provisions, the tax-defined price of an equivalent donation is lower for a high income (tax bracket) donor than for a low income (tax bracket) donor.

Two other more pragmatic points can be raised against the tax deductibility provision as it now stands. Firstly, the current legislation discriminates completely against a large class of potential donations, namely, that property which has been in a potential donor's ownership for more than one year. Much property of historic worth will have been in the ownership of one person or family for many years yet this category of property currently receives no tax incentive for conservation. Secondly, under the current tax legislation, since the donation is tax deductible in the year of donation only, the size of the incentive offered is limited by the income of the donor. For example, with a donation worth \$50,000 a person on \$10,000 income per year would only be able to deduct \$10,000. On the other hand, a richer donor, say with \$50,000 income, would be able to deduct from his taxable income the full value of the donation. Thus, as the tax system is structured, there is a further bias favouring high income donors.

Despite the above criticisms of the present income tax deductibility provisions, as they apply to heritage conservation, it is still possible that tax deductibility is a cost-effective incentive measure in that it induces donations to recognised causes of greater value than the revenue lost to Treasury. We now turn to an assessment of the cost-effectiveness of tax deductibility as a means of providing conservation incentives.

Cost-Effectiveness of Income Tax Incentives

The cost-effectiveness of an income tax incentive for heritage conservation may be defined as

$$\frac{\text{Value of donations induced by the incentive}}{\text{Cost of the incentives to government in foregone revenue}}$$

If this ratio is greater than one, the income tax incentive is a cost-effective means of attaining conservation of heritage property. That is to say, the value of extra donations induced by the incentive is greater than the cost to the government in terms of foregone revenue. If the ratio is less than one, direct purchase of heritage property by government is a more efficient means of attaining its conservation.

As indicated earlier, the cost-effectiveness of tax incentives depends on the *price elasticity* of donations. In this context, price elasticity refers to the proportionate change in the value of donations made for a given proportionate change in the tax-defined price of the donations.⁴

To illustrate the crucial importance of the price elasticity of demand for donations, consider the following simple examples in which the initial and new donation prices, initial quantity of donations, and elasticity of demand for donations are assumed to be known. We wish to determine how the quantity of donations will vary as the price elasticity is altered. In each case, the benchmark from which comparisons are made is one in which no income tax incentives are given. The price of one dollar of donation of heritage property is thus one dollar and the cost to government is zero. In the benchmark situation it is assumed that one million dollars' worth of heritage property is donated. Now assume that the donation of heritage property is made tax deductible and that for simplicity there is a uniform tax rate of 30 per cent. The additional heritage donations, attributable to the income tax incentives, and their cost to government for a range of price elasticities are presented in Table 3.2.

- 4 Hence with a price elasticity of .5, a change of 10% in price would be associated with a 5% change in the value of donations. Own-price elasticities of demand, such as the one discussed here are usually negative, reflecting the fact that as price increases, quantity demanded will decrease and *vice versa*. For changes such as those being analyzed here, the elasticity is given by

$$e = \frac{\frac{Q_2 - Q_1}{Q_2 + Q_1}}{2} \div \frac{\frac{P_2 - P_1}{P_2 + P_1}}{2}$$

where P_1 and Q_1 represent the initial price and quantity and P_2 and Q_2 represent the new price and quantity.

Table 3.2

Additional Heritage Donations and their Cost to Government

<i>Price Elasticity</i>	<i>Additional Heritage Donations</i>	<i>Cost to Government</i>
	\$	\$
-0.5	193,000	358,000
-1.0	429,000	429,000
-1.5	720,000	516,000

The results given in Table 3.2 show that if the price elasticity of heritage donations is (absolutely) greater than one, then tax deductibility will be a cost-effective means of attaining heritage conservation. On the other hand, if the elasticity is (absolutely) less than one, the measure will be cost-ineffective. This indicates that one way of increasing the cost-effectiveness of the current tax deductibility provisions for heritage donations is to raise the price elasticity of donation, especially of money gifts, to the National Trusts and the Conservation Foundation. For instance, major heritage items could be identified in the eyes of the public using media advertising and contributions could be ear-marked for specific projects regarding these items. In this way people can clearly identify with heritage items which, through their contributions, they have helped to preserve or maintain. The tax deductibility of such contributions could also be advertised to ensure that knowledge of the incentive is widely disseminated.

This type of procedure is a common means of inducing donations. One Australian example, detailed by Sinden (1976), deals with steps taken to ensure the survival of the Hairy-Nosed Wombat (*Lasiorhinus latifrons* Owen) in South Australia. As a result of extensive advertising and publicity, sufficient money (\$27,000) was donated by individuals to purchase about 1800 hectares of agricultural land to be protected as habitat for the rare wombat. For donations over \$6 ("the cost of 'one wombat acre'" (Sinden, 1976, p.7)), the donor received a certificate (thus identifying him closely with the campaign) together with the possibility of receiving a year's subscription to the journal *Natural History* free of charge. These incentives are similar to those offered under the *Income Tax Assessment Act*, but represent an incentive in kind instead of a monetary incentive. As a result of the advertising campaign and the incentives offered, the

conservation campaign was successful and it seems that a similar approach might also be successful in promoting the conservation of various heritage items using the *Income Tax Assessment Act*.

Empirical Evidence of Price Elasticity of Donations

In this section we assess the available empirical evidence on the value of the price elasticity of donations. The only empirical work known to the authors is based on United States data. While care should be exercised in generalising the results to other countries, they may be taken as providing some indication of the situation in Australia. The United States research also indicates the kind of data required if such an analysis were to be conducted in Australia.⁵

Some early research was undertaken by Taussig (1967). He analyzed a large number (47,678) of U.S. tax returns for the year 1962 in which contributions to charities, other educational and hospital institutions etc. were itemised. Taussig examined the relationship between the contributions made by individuals and their disposable incomes and marginal tax rates, (m) .⁶ The relationship was examined by grouping individuals into disposable income classes. The results indicated that, within each income class, the amount of contributions was very responsive to changing income (income elasticities varied between 1.3 and 3.1), but was only responsive to the marginal tax rate for disposable incomes above \$100,000 per year, and then only weakly so. Thus Taussig concluded that the incentive embodied in tax deductibility was very weak and that tax deductibility was a cost-ineffective means of providing incentives to make donations to charities and other institutions.

In a later study Schwartz (1970) examined the relationship between *per capita* donations, the price of donations $(1-m)$, *per capita* disposable income of donors and *per capita* national disposable income. The last variable was included in an attempt to assess

5 In Appendix 1, we detail the data needed for an analysis of the cost-effectiveness of tax deductibility measures in Australia. Consideration might be given to making a collection of these data in order to establish more positively the effectiveness, or otherwise, of incentives provided by tax deductibility in Australia.

6 Note that Taussig measured the response of contributions, to (m) , not $(1-m)$.

whether the income of individuals, other than the donor, had any effect on the amount of contributions made by the donor. Data were taken from U.S. tax returns for the years 1929 to 1966, omitting 1951 and all odd years after 1954. The relationship was then examined for three income classes (0-\$10,000 pa, \$10,000-\$100,000 pa and over \$100,000 pa) for the whole time span and also for the time span split into 1929-43 and 1944-66. The results indicated that, in comparison with Taussig's results, the response of donations to variations in the individual's income was less (elasticities for the whole time period were between about 0.3 and 0.9). The response to the price of donations was higher, though still inelastic (elasticities between -0.4 and -0.8) meaning that tax deductibility, although cost-ineffective, was less so than was suggested by Taussig's analysis.

A more comprehensive analysis of U.S. income tax returns was conducted by Feldstein (1975a). Tax returns for the even years between 1948 and 1968 were used to investigate the relationship between average charitable contributions for various income classes, the price of donations (1-m) and the donor's income.⁷ The basic conclusion of this research was that the price elasticity of donations was about -1.2, indicating that tax deductibility was probably a cost effective means of providing donation incentives. The income elasticity was about 0.8. More detailed analysis tended to indicate that the price elasticity was slightly lower for higher income groups but the decreases were not statistically significant.⁸

The question remains as to which of the above sets of results reflects the real sensitivity of charitable donations to the price of giving. For several reasons, it is likely that Feldstein's results are best. Taussig measured income net of taxes paid whereas the appropriate measure is to use income net of taxes that would have been paid had no contributions been made. Taussig's measure intro-

7 The donor's income was measured as his gross income less the tax that would have been paid if no charitable contributions had been made.

8 It should be noted that, if the price elasticity was higher for high income classes than low income classes, then it is possible that income tax deductibility is more efficient than a system of tax credits (examined below). However, if the price elasticities are roughly equal for different income classes (the implication of Feldstein's results) then a tax credit system is both more efficient and more equitable than a tax deductibility system.

duces a higher and incorrect correlation between income and contributions, since his income variable is, in a sense, a function of those contributions. This fact tends to be borne out in his results which indicated a quite elastic relationship between income and contributions. A second problem with Taussig's analysis is that he uses the marginal tax rate for actual taxable income, i.e. income net of contributions. As Feldstein observes (p.97), 'this introduces a spurious positive association of price and giving and therefore biases the negative price elasticity towards zero', since a donor who gives more to charity will, other things being equal, have a lower marginal tax rate, (m), and thus a higher donation price, ($1Am$). A third important problem with Taussig's analysis was that it was confined to only one year's data which led to problems in correctly specifying the effects of income and price on giving.

Several problems are also evident in Schwartz's analysis. The main problem arises from the way he separated the data, which led to the analysis of very small samples giving rise to errors in the estimation of the effect of price and income on donations. Schwartz also used single annual averages to represent wide ranges of price and income in each analysis group, thus losing much information from the data.

A major problem evident with all three studies is that they take no account of possible wealth effects on donations. The omission of any consideration of the influence of wealth on donations was forced by the use of tax return data which did not contain such information. If the proportion of assets to income rises with increasing income, the effect of this omission could be to decrease the price elasticity for donations from current income at high income levels. This possibility is tentatively suggested by Feldstein's work in which a small, but non-significant, decrease in price elasticity with increasing income occurs. Further work by Feldstein (1975b) suggests that the cost-effectiveness of tax deductibility may vary according to the donee organisation. Using data gathered from tax returns in 1962, Feldstein estimated the relationship between donations to certain classes of donee bodies (e.g. religious institutions, hospitals, etc.) and donor income and price. He found that the price elasticity of donations varied according to the donee body. Donations to religious institutions were unresponsive to price changes while donations to all other classes were reasonably responsive to price changes but to varying degrees. The prices elasticity of donation to

the donee group which would appear to include the category of heritage donations was high (-2.6), but care should be taken in generalising this result to Australia.⁹

Feldstein and Clotfelter (1976) conducted a study using household survey data rather than data derived from income tax returns. The level of charitable giving in 1963 was related to disposable income, the price of giving, the individual's wealth and various personal characteristics of the individual, such as age. The results were generally consistent with those obtained in the earlier study by Feldstein (1975a). The price elasticity of giving was found to be (absolutely) greater than one (-1.1 to -1.6) with a lower income elasticity of about 0.8. Increasing wealth had a weak positive effect on size of donations, but there were difficulties in measuring an individual's true wealth.

Subsequent econometric studies have produced estimates of the same order of magnitude, implying that charities gain more in contributions from tax incentives than government will lose in tax revenues.¹⁰ All of the preceding studies (with the exception of Schwartz (1970)) have used samples of individuals based on cross-section data. In a recent study, Clotfelter (1980) derives estimates of the price and income elasticities of charitable giving in the United States based on time-series data. The main result to emerge from this study is that the estimates of *short-run* price and income elasticities are lower than estimates produced by the cross-section models, although most estimated long-run elasticities are similar to previous elasticities. And it is therefore inappropriate to use elasticities estimated from cross-section equations as predictors of short-run changes in charitable giving.¹¹

The foregoing evaluation of income tax deductibility shows that, although tax deductibility may not be the most efficient available

- 9 Feldstein's description of this category is imprecise — 'libraries, museums, zoos, musical organizations, and literary, educational and scientific foundations' (Feldstein, 1975b, p.210).
- 10 See Feldstein and Taylor (1976), Boskin and Feldstein (1977), Dye (1977), Abrams and Schmitz (1978), and Reece (1979).
- 11 In a related vein, Zellner (1977) and others have warned of the possible danger in using cross-section estimates of charitable giving to simulate the dynamic effects of changes in tax policy.

mechanism of providing an incentive for heritage conservation, it is nevertheless likely to be reasonably cost-effective. We now turn to a consideration of a tax credit system as an alternative means of using the income tax system to provide conservation incentives.

Providing Conservation Incentives via Tax Credits

Under a tax credit scheme, if a heritage donation worth \$X was made to a Trust, then a specified proportion of \$X could be deducted directly from the donor's tax bill.¹² For example, consider the case of rich and poor donors, the rich donor with \$100,000 worth of income and a tax liability of \$51,466, the poor donor with \$12,000 income and a tax liability of about \$2,547.¹³ With a 50% tax credit, if both donate heritage property to the value of \$2,500, the tax liability of each would be reduced by \$1,250. Thus the tax credit system, unlike the existing deductibility against taxable income, offers the same incentive to each donor to contribute the heritage property. Providing that a donor has sufficient tax liability, from which to deduct the full tax credit, the incentive is independent of the donor's marginal tax bracket.

Under the present *Income Tax Assessment Act*, the value of donations is deductible in the year of donation only. If such a provision were to apply to a tax credit scheme, the incentive which could be offered to a donor in any one year could not exceed the size of his annual tax bill. This constraint could be overcome by allowing carry-forward of the tax credit over say a five year period.

For example, if a donation worth \$50,000 was made and it was deemed appropriate to offer a 50% tax credit, one way of doing this would be to decrease tax paid in the current year by \$25,000. An alternative method which would be necessary if the tax bill was not large enough to accommodate such a credit in one year would be to drive the tax bill to zero in each year, carrying forward any excess credit, until the full credit was utilised. The scheme is illustrated in Table 3.3 for a total allowable credit of \$25,000.

12 In expenditure terms, a 100% tax credit for a donated item is equivalent to government purchase at the item's value. At lesser rates of credit (say 50% or 20%) a tax credit scheme is operationally equivalent to a matching grant scheme.

13 The tax liabilities have been calculated from the rates shown in Table 3.1.

Table 3.3
Operation of Hypothetical Tax Credit Scheme

	<i>Year</i>				
	1	2	3	4	5
Illustrative tax liability without credit	6000	7000	5000	5000	5000
Credit allowance	6000	7000	5000	5000	2000
Tax actually paid	0	0	0	0	3000
Remaining credit	19000	12000	7000	2000	0

Ideally, there would be an interest adjustment to any credit carried forward to reflect the fact that money received in the future is worth less than money received now. Table 3.4 illustrates such a scheme using the above example and an interest rate of 5%. However, it may be costly to administer such refinements to the basic scheme.

Table 3.4
Operation of Hypothetical Tax Credit Scheme with Interest Adjustments

	<i>Year</i>				
	1	2	3	4	5
Credit (+ interest) carried forward	25000	19950	13598	9028	4229
Tax liability without credit	6000	7000	5000	5000	5000
Credit allowance	6000	7000	5000	5000	4229
Tax actually paid	0	0	0	0	771
Remaining credit	19000	12950	8598	4028	0

The cost-effectiveness of tax credits should be also assessed in order to determine whether a tax credit scheme is an efficient means of delivering conservation incentives to potential donors. Within the scope of this project, this has not been possible. Nevertheless, there are some indications of the potential effects of a switch from tax deductibility to tax credits. Feldstein (1975b) concluded that, based on his analysis of income tax returns in the U.S. for 1962, replacement of the then current tax deductibility provisions by a

30% tax credit system would have increased total giving by about 15-20%, but that this increase would have been offset by a roughly equivalent loss in government revenue. The increase in donations was not spread evenly over recipient groups — the group of donee bodies which appears to contain heritage donations would have gained about 20-40% in contributions while educational institutions would have lost about 20% and hospitals 10% in contributions. Such a potential distributional impact would need to be carefully assessed before any change to a tax credit system was implemented. In addition, the impact on total giving of a change to a tax credit scheme is by no means certain. For example, Feldstein and Clotfelter (1976) in a study based on household survey data, concluded that switching from tax deductibility to a 30% tax credit system would have increased total contributions by only 1 per cent. It is apparent that a much more detailed study of the practical implications of a tax credit scheme is required if its implementation as a heritage conservation incentive is being seriously considered by policy makers.¹⁴

Another feature of a tax credit system which makes it more desirable than tax deductibility is that the incentive offered by a credit system is more easily varied than that offered by tax deductibility (Kahn 1960, p.88). Under a tax credit system, the incentive offered can be changed simply by altering the proportion of the donation offered as a credit, whereas, under tax deductibility, to change the level of incentive provision would require a change in the income tax rate schedule. A variation in the proportionate credit offered might be desirable to fit public revenue requirements or to offer higher or lower incentives to induce higher or lower overall donations.

A final advantage of the tax credit system over a tax deductibility system is that different credit rates could be applied to heritage property of varying social values. For example, an outstanding class of items may have close to 100% tax credit whilst those with a substantially lower social value may have a rate of say 25%.

14 In a theoretical study Hochman and Rodgers (1977) support a tax credit system on the grounds that subsidies, justified by the public good or externality characteristics associated with charitable donations, can be made to more closely approximate the efficient optimum under a tax credit system than under the present U.S. income tax system.

Income Tax Incentives for Restoration of Historic Property

As was indicated in the introduction to this chapter, the present income tax incentives in Australia do not apply to outlays made by private owners for conservation and restoration of heritage property. Taxation incentives for the restoration of historic buildings and cultural property are widely used in other countries. For example, in the United States under the 1976 *Tax Reform Act* and the 1978 *Revenue Act*,¹⁵ a taxpayer is permitted to amortize over a five year period any capital expenditure incurred in an approved rehabilitation of a certified historic structure.

Commonly, it will be more efficient from society's viewpoint to encourage restoration and operation of heritage property by private owners, rather than receiving property as a tax-deductible donation and the capital and administrative expenses of its operation then being met by a National Trust or the Australian Conservation Foundation. In the authors' view, a strong case exists for extending the income tax incentives so that comparable incentives are provided for both restoration and operation of historic property by private owners and for donation of historic property to an appropriate conservation authority. At present, the income tax incentive applies only to the latter.

A possible approach would be to allow, say, 50% of approved conservation and restoration outlays to be deducted from the owner's taxable income over a five year period. Deductions could be limited to properties on the Register of the National Estate.¹⁶ The principles set out in the Australian International Council on Monuments and Site Guidelines for the conservation of places of cultural significance could be used as the standard for certifying *bona fide* conservation and restoration work.

Ideally, as our discussion in the preceding section indicates, the incentive should be in the form of a tax credit rather than a deduc-

15 For a detailed description of the application of these tax incentives see, 'Tax Incentives for Rehabilitating Historic Buildings', U.S. Department of the Interior (1978) and Tucker (1979).

16 This would include outlays incurred in the protection of Aboriginal sites listed on the Register of the National Estate which were approved by an appropriate State Aboriginal Authority.

tion against taxable income. Under a tax credit scheme, the size of the incentive for conservation and restoration would be independent of each owner's marginal tax bracket.

In addition to the need to certify that certain standards are met with regard to the quality of the conservation and restoration work, it also may be necessary to tie the granting of the tax incentive to a minimum public visiting requirement. When the nature of the historic property is such that public visiting is socially desirable it could be required, for instance, that the property be opened to the public during weekends and public holidays.

Finally, it may be argued that owners of an historic property who receive a subsidy, *via* an income tax incentive for restoration work, should be taxed on any capital gains attributable to such work, which may be made if they subsequently sell the property. But unless there is a comprehensive capital gains tax, which there is presently not in Australia, this argument is untenable. The important point is that any requirements with regard to permitting public visiting etc., upon which the granting of the tax restoration incentive to the original owner was contingent, should continue to be enforced regardless of any transfer of ownership. It should be clearly understood by any prospective buyer of such a historic property that the bundle of property rights to which he would acquire title is constrained with respect to his obligation to permit certain levels of visiting. These constraints then would be explicitly taken into account by a prospective purchaser in determining the price he would be prepared to pay for the historic property.¹⁷

Summary

In this chapter we have assessed the theoretical basis for the choice between different income taxation measures for providing heritage conservation incentives. It was argued that the government should provide an incentive to heritage donors which does not vary with the marginal tax bracket of a prospective donor. It was shown that a

17 This approach has been proposed by the Australian Heritage Commission (1979) who have also suggested that authorities like the Victorian Historic Buildings Preservation Council, the New South Wales Heritage Council and the South Australian Heritage Committee, could act as adjudicators.

tax credit incentive system was capable of delivering such an incentive whereas the alternative tax deductibility system, such as that operative now, discriminates between donors by giving larger subsidies to donors in higher marginal tax brackets. The latter system could only be justified on efficiency grounds if richer donors demonstrated a higher price elasticity of donation than poorer donors and the available evidence suggests that this is not the case. However, an assessment of available data, based on a number of United States research studies, indicated that tax deductibility is probably a cost-effective incentive mechanism in that it induces additional donations of a higher value than the cost of the foregone tax revenues to Treasury.

Similar detailed research studies have not been carried out with respect to a tax credit scheme for charitable donations. However, there is indirect empirical evidence and some theoretical evidence which suggests that the introduction of a tax credit scheme would have a significant impact on the distribution of donations between income groups and would probably raise the total amount of donations by a fairly small amount. Thus the use of a tax credit scheme in Australia for heritage conservation would appear to be at least as cost-effective a measure as the current income tax deductibility provisions and most importantly it would be more equitable.

In the event that the income tax system continues to be a major vehicle for heritage preservation incentives in Australia some current restrictions should be relaxed. Firstly, deductibility should be extended to permit donations of heritage property which have been in the present ownership for a period exceeding one year. Secondly, provision should be made for carry-forward of deductions (tax credits) against future taxable income (tax liabilities), preferably with a mechanism for interest adjustment.

Finally, the present income tax incentives in Australia apply only to donations of heritage property and not to outlays made by private owners for conservation and restoration of heritage property. The authors believe a strong case exists for extending the income tax incentives — preferably under a tax credit scheme — to apply to outlays made by private owners for conservation and restoration of heritage property.



Chapter 4

The use of rate reductions and direct subsidies as conservation incentives

Introduction

Rates are levied by Local Government bodies in order to finance the provision of services. They are based upon the unimproved, the improved, or the assessed annual values of the property, but in each case represent a tax on the property either in whole (improved value-based rating) or in part (unimproved value-based rating). The tax forms part of the operating costs of the property and a reduction in rates is commonly used as a means of subsidising the continuing existence of certain properties in given uses. Thus agricultural land on the outskirts of urban areas may be subject to rate reductions to provide an incentive to maintain the land in agricultural use.

Similar provisions apply to some heritage property. Under the *NSW Heritage Act, 1977*, for example, property subject to a Permanent Conservation Order, or a Conservation Scheme, is required for rating purposes to be given a 'heritage valuation'. This valuation essentially takes into account the restrictions on development imposed by the provisions of the Act. Although a heritage valuation may on occasions be higher than an ordinary valuation, thus increasing the landowner's rate payments, the main intention of the Act in this instance is to reduce the land's valuation, thus reducing rate payments and subsidising the present use of the property.¹

In evaluating rate reductions as a means of subsidising heritage conservation, comparisons will be made between rate reductions and the use of explicit subsidies, such as direct grants. In Chapter 5, the use of such explicit subsidies will be evaluated in more depth. It is contended by Stober and Falk (1967) and others that a decrease in rate payments is an inefficient means of encouraging private indi-

1 A higher heritage valuation is a reflection that a heritage designation may sometimes increase a property's value as was discussed in Chapter 2.

viduals, or firms, to undertake heritage conservation. In particular, it is claimed that rate reductions are inefficient when compared with direct subsidies offering an equal level of assistance. It will be shown that this conclusion is correct only if costs incurred by rating bodies are not reimbursed by the Federal Government. In general, and considering the national community as a whole as distinct from the local community only, rate reduction and subsidy schemes are equally cost-effective. Administrative costs also appear to be similar under the two schemes with the possible exception of additional costs associated with making property valuations which may be required with a rate reduction scheme.

Later in this chapter we address the issue of whether rate reductions *per se* are an effective means of attaining various objectives such as the preservation of historic property. There is a considerable body of evidence which suggests that such measures are not effective instruments in influencing overall land use, although they may influence some individual allocation decisions.² To begin with, however, we are concerned with examining the cost-effectiveness of rate reductions and direct subsidies as a means of encouraging the preservation of heritage property.

The Cost-Effectiveness of Rate Reductions and Direct Subsidies

To assess the cost-effectiveness of rate reductions and direct subsidies, it is necessary to assess both the costs of the program to the community and the benefits of the program to the recipient. Cost-effectiveness³ is defined here as

$$CE = \frac{\text{Value of the Rate Reduction or Subsidy to the Recipient}}{\text{Cost to the Community}}$$

The cost-effectiveness of rate reductions will be examined first, followed by an analysis of the cost-effectiveness of a direct subsidy.

2 See, for instance, Coughlin *et al.* and Schwartz *et al.* (1976).

3 The reader should note that the term 'cost-effectiveness' is defined somewhat differently, in the context of rate reductions and subsidies, from the definition adopted in the preceding chapter on income tax incentives.

Benefit of Rate Reductions to the Recipient

Under Section 72 of the *Income Tax Assessment Act*, payments of rates and land taxes are allowable deductions for land or premises used for 'gaining or producing income or carrying on a business for the purpose of gaining or producing income' or for 'a dwelling, flat or home unit that is used by the taxpayer ... as his sole or principal residence'. (See 72(1B)). Deductions under the second category are limited to \$300; all rate and land tax payments are deductible for the first class of property. Thus the benefit received by the owner of heritage property under a rate reduction or rebate scheme, will not be equal to the dollar reduction in rates but must take account of the marginal tax rate of each individual. To the extent that rates are reduced, taxable income will increase, and the liability to pay income tax will increase by an amount determined by an individual's marginal tax bracket. The higher an individual's marginal tax bracket, *ceteris paribus*, the smaller the benefit of a rate reduction.

The benefit of the program to the recipient may be expressed as

$$B_1 = \sum_{n=0}^N \frac{A(1-m)}{(1+r)^n}, \quad (\text{Eq. 1})$$

or

$$B_2 = \sum_{n=0}^N \frac{A-300m}{(1+r)^n}, \quad (\text{Eq. 2})$$

Where

B_1 = the present value of the benefits to the recipient for rate reductions (A) < \$300 for private residences and total rate reductions for income earning premises.

B_2 = the present value of the benefits to the recipient when $A > \$300$ for private residences. (Thus this expression does not apply to income earning premise).⁴

4 In the following discussion, this distinction in application needs to be borne in mind.

- A = the annual rate reduction, which for ease of exposition is assumed to be constant.
 m = the marginal tax rate of the recipient ($0 \leq m \leq 1$).
 r = the recipient's discount rate
 N = the number of years over which the program of rate reduction is expected to continue.⁵

The Cost of Rate Reductions to the Community

The cost of rate reductions to the community will depend primarily on the particular definition of 'community' adopted. If the community is defined to be the local area in which the historic property is sited, the cost will differ from that which applies if the community is defined to be the national community. Each of these cases now will be taken in turn and it will be shown that the inferiority implied by Stober and Falk (1967) of rate reduction schemes *vis-à-vis* subsidy schemes, holds only when the restricted definition of 'community' is adopted.

The Local Community

For each year of the rate reduction scheme, the local community will lose a certain amount of revenue from rates. The overall cost to the local community can thus be expressed as

$$C_1 = \sum_{n=0}^N \frac{A}{(1+i)^n}, \quad (\text{Eq. 3})$$

where C_1 = the present value of the costs to the local community,
 and
 i = the local community's discount rate.

The National Community

With this wider definition of community, the cost of the program differs. It is assumed that the annual reduction in rates (A) remains

- 5 If the rate reduction program were expected to apply for ever, Equations (1) and (2) above would simplify to

$$B_1 = \frac{A(1-m)}{r} \quad \text{and} \quad B_2 = \frac{A-300m}{r}$$

the same. However as was previously indicated, the recipient now pays an additional amount of federal income tax due to the reduction in rates. The additional tax would be A_m when $A \leq \$300$, and $300m$ when $A < \$300$. Thus the annual cost to the national community would be $A(1-m)$, and $(A-300m)$. The overall costs would be

$$C_2 = \sum_{n=0}^N \frac{A(1-m)}{(1+d)^n}, \quad (\text{Eq. 4})$$

and

$$C_3 = \sum_{n=0}^N \frac{A-300m}{(1+d)^n}, \quad (\text{Eq. 5})$$

Where C_2 = the present value of the costs to the national community when $A \leq \$300$.

C_3 = the present value of the costs to the national community when $A < \$300$, and

d = the national community's discount rate.

The Cost-Effectiveness of Rate Reductions

Using the definition of cost-effectiveness given above the cost-effectiveness of a locally based rate reduction program may be expressed as

$$CE_1 = {}^b1/C_1 = \frac{(1-m) \sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+i)^{-n}} \quad \text{for } A \leq \$300 \quad (\text{Eq. 6})$$

and

$$CE_2 = {}^b2/C_1 = \frac{(A-300m) \sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+i)^{-n}} \quad \text{for } A > \$300 \quad (\text{Eq. 7})$$

In general, the cost-effectiveness of a locally based rate reduction program, CE_L , equals KD_1 where

$$K = 1 - m \text{ for } A \leq \$300,$$

$$K = \frac{A - 300m}{A} \text{ for } A > \$300, \text{ and}$$

The cost-effectiveness of a nationally based rate reduction program may be expressed as

$$D_1 = \frac{\sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+i)^{-n}}$$

$$CE_3 = {}^B1/C_2 = \frac{A(1-m) \sum_{n=0}^N (1+r)^{-n}}{A(1-m) \sum_{n=0}^N (1+d)^{-n}} \text{ for } A \leq \$300, \quad (\text{Eq. 8})$$

and

$$CE_4 = {}^B2/C_3 = \frac{(A - 300m) \sum_{n=0}^N (1+r)^{-n}}{(A - 300m) \sum_{n=0}^N (1+d)^{-n}} \text{ for } A > \$300, \quad (\text{Eq. 9})$$

Equations (8) and (9) both simplify to the same relationship so that the cost-effectiveness of a nationally based program (CE_N) may be expressed as

$$CE_N = \frac{\sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+d)^{-n}} \quad (\text{Eq. 10})$$

We will denote the RHS of Equation (10) as D_2 .

The Cost-Effectiveness of Subsidies

We now turn to an evaluation of the cost-effectiveness of direct subsidies as conservation incentives. A subsidy paid to assist in the retention of heritage property is non-taxable.⁶ Hence the recipient would be able to use all the funds received for preservation purposes. Thus, for an annual subsidy of amount A , the benefit to the recipient would be

$$B_3 = \sum_{n=0}^N \frac{A}{(1+r)^n}, \quad (\text{Eq. 11})$$

and the cost to the community would be

$$C_1 = \sum_{n=0}^N \frac{A}{(1+i)^n}, \quad (\text{Eq. 12})$$

if the local community pays the subsidy,

or

$$C_4 = \sum_{n=0}^N \frac{A}{(1+d)^n},$$

if the national community pays the subsidy.

- 6 Section 26(g) of the *Income Tax Assessment Act* states: 'The assessable income of a taxpayer shall include any bounty or subsidy received in or in relation to the carrying on of a business ... and such bounty or subsidy shall be deemed to be part of the proceeds of that business'. When questioned on the interpretation of a subsidy received to aid retention of historic property, whether in private or business use, officers of the Taxation Office (ACT Branch) stated that the amount would be regarded as a capital receipt or gift and therefore would not be taxable under the income tax laws. Any such subsidy paid by Government would be exempt from stamp duty and, where gift duty is assessable (Victoria and South Australia), from that also. Thus, in summary, subsidies for preservation of historic property are non-taxable.

Hence the cost-effectiveness of a subsidy program if the local community pays the subsidy is

$$CE_5 = B_3/C_1 = \frac{\sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+i)^{-n}}, \quad (\text{Eq. 13})$$

And if the national community pays the subsidy the cost-effectiveness is

$$CE_6 = B_3/C_4 = \frac{\sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+d)^{-n}} \quad (\text{Eq. 14})$$

Note that the RHS of Equations (13) and (14) equals D_1 and D_2 , respectively.

In the following section, the various factors which influence the cost-effectiveness of rate reduction and direct subsidy programs for heritage conservation are examined making use of the above set of equations.

Influences on Cost-Effectiveness

Various factors will influence a rate reduction or subsidy program's cost-effectiveness and these will now be briefly considered.

The Relative Private and Community Discount Rates

The cost-effectiveness of the different schemes will vary according to the relative sizes of the discount rates which apply to the individual receiving the subsidy and the community bearing the costs. For example, consider the influence of relative discount rates on the cost-effectiveness of a national subsidy scheme as shown in Equation (14). The higher the private discount rate (r), relative to the community's discount rate (d), the smaller will be the private present value of the stream of subsidy payments relative to the present cost of the subsidy to the community, and thus the lower the

cost-effectiveness. A similar result obtains for a locally based subsidy program (Equation 13) and a nationally based rate reduction program (Equation 10).

The Life of the Project

To the extent that the community discount rate (i or d) is lower than the private rate (r), the cost-effectiveness of both rate reduction and subsidy programs will decrease the longer the life of the project. For example, for a national subsidy scheme it has been shown that

$$CE_N = \frac{\sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+d)^{-n}}$$

And if $d < r$ then

$$\frac{\sum_{n=0}^N (1+r)^{-n}}{\sum_{n=0}^N (1+d)^{-n}} < \frac{\sum_{n=0}^N (1+r)^{-(n-1)}}{\sum_{n=0}^N (1+d)^{-(n-1)}}$$

In other words, the cost-effectiveness of a program with an (n) year life will always be lower than a project with a life of $n-1$ years if $d < r$. In the limit, as (n) approaches infinity, the cost-effectiveness will approach d/r . A similar result also obtains for a locally based subsidy program and a nationally based rate reduction program.

The Marginal Tax Rate of the Recipient

The level of the recipient's marginal tax rate will exert an influence only on locally based rate reduction schemes. If for simplicity we assume $i = r$, then from observation of Equations (6) and (7) it is clear that the cost-effectiveness of locally based rate reduction schemes is dependent upon the recipient's marginal tax rate. The higher the marginal tax rate, the lower will be the cost-effectiveness of the program, as a result of the higher income tax liability of the recipient.

A Comparison of the Cost-Effectiveness of the Various Rate Reduction and Subsidy Programs

The following comparisons between the various programs for conservation are now made

- (a) Locally based rate reduction programs *versus* locally based subsidy programs;
- (b) Nationally based rate reduction programs *versus* nationally based subsidy programs;
- (c) Locally based subsidy programs *versus* nationally based subsidy programs.

Locally Based Rate Reduction Programs Versus Locally Based Subsidy Programs

The cost-effectiveness of a locally based rate reduction program may be compared with that of a locally based subsidy program by considering Equations (6), (7), and (13) and noting the definitions of K and D_1 . Since $K > 1$, KD_1 will be less than D_1 . Thus a locally based subsidy program will always be more cost-effective than a locally based rate reduction program. This result is similar to that obtained by Stober and Falk (1967).

Nationally Based Rate Reduction Programs Versus Nationally Based Subsidy Programs

A comparison of Equations (10) and (14) shows that the cost-effectiveness of both these forms of incentives is equal to D_2 . Thus on the grounds of cost-effectiveness alone it is not possible to establish the superiority of one scheme over the other. The result obtained by Stober and Falk (1967), referred to above, is therefore only applicable if the community bearing the costs of the program is defined narrowly as the local community in which the rate reduction is applied, rather than the national community.

Locally Based Subsidy Programs Versus Nationally Based Subsidy Programs

These two programs may be compared by considering Equations (13) and (14). The numerator is identical in both equations and the relative cost-effectiveness is therefore dependent on the relative

magnitude of the discount rate appropriate to the national community (d) *versus* the discount rate appropriate to the local community (i). If the discount rate relevant to the local community is greater than that for the national community, a locally based subsidy program will be the more cost-effective, since the present value of the cost of the subsidy to the local community will be lower than the present value of the cost to the national community.⁷

The above results indicate that at least one scheme is clearly deficient when compared to the others. The locally based rate reduction scheme is less cost-effective than all other schemes and will henceforth be disregarded. Therefore, if the heritage preservation program is to be based on local incentives only, local subsidies are superior to local rate reductions. The choices beyond this are less clear. In particular, if the local community's discount rate (i) is the same as the national community's rate (d) the three remaining schemes (local subsidy, national rate, and national subsidy) are all equally cost-effective. Usually the local community, within which the heritage property lies, would prefer that the national community met the cost of providing the conservation incentive.

Two problems arise when using rate reductions as a means of providing subsidies for the retention of heritage property. Firstly, it is obvious that the limit to assistance is set by the level of the rate bill, yet a higher level of assistance may be required to ensure retention of the property in its desired form. Secondly, the operation of a rate reduction program commonly relies on the establishment of a 'current use' value, as distinct from a 'highest and best use' value, on the supposition that the former eliminates any value attributable to the potential for development of the land and thus reflects its real value in its current use.⁸ Basing rate reductions on this premise implies that the rate bill is reduced as a form of compensation for loss in property value. However, it should be recalled that the results of the analysis in Chapter 2 indicated that a property would not always lose value by virtue of designation as a heritage property and that, even if it did, the relevant amount of compensation could

7 Generally, we would expect the local community to have a higher discount rate than the national community. Hence a locally based subsidy program would normally be more cost-effective than a nationally based subsidy scheme.

8 See for example the NSW *Heritage Act*.

be impossible to determine. Hence a rate reduction scheme (or any subsidy scheme for that matter) which is based on a distinction between 'current' and 'highest and best' uses is meaningless in terms of providing an appropriate level of assistance.

The choice between assistance programs may in practice come down to that between locally and nationally based subsidy programs. As shown previously, the relative cost-effectiveness of these two schemes hinges on the relative discount rates of the two communities. It is likely that the national discount rate will be lower than the local discount rate so that a locally based scheme will be more cost-effective. However, the choice may not be made solely on the grounds. For example, if some of the benefits of the heritage property accrue outside the local administrative area it is appropriate that at least some of the costs of providing the conservation incentive be borne outside that area. It is also likely that the ability of the national community to fund such assistance is greater than that of the local community. For these reasons, a national or partly national subsidy scheme is likely to be preferable to a purely local one. We turn to a more detailed discussion of subsidies in the next chapter. To conclude this chapter we briefly review some overseas empirical evidence regarding the usefulness of rate reductions as a conservation measure.

Are Rate Reductions Effective Conservation Incentives?

Use of rate reduction as a means of encouraging the preservation of agricultural and open space land (especially in areas close to cities where development pressure can be high) is common in the United States (Coughlin *et al.* 1967). It may take various forms. Firstly, there is pure rate reduction where the sole measure is a reduction in rate payments according to some current use *versus* a developed use criterion. The second form requires the payment by the landowner of the accumulated reductions (with or without interest) if he converts the land into an ineligible use, whilst the third form combines the reduced rates with a type of 'zoning contract' wherein the landowner agrees to retain the land in its designated use for a stipulated number of years. Sanctions such as those in the second variant are included for early withdrawal of the land from the contract.

The critical question with all these schemes is whether the magnitude of the tax saving is enough to offset any capital gains to be made by allowing development of the land. Clearly this will depend on the demand for land for development and thus on the price offered for the land. Various empirical studies have been conducted in the United States in an attempt to ascertain whether rate reductions have been effective in modifying the pattern of land use, primarily in slowing development of agricultural land for non-agricultural uses.

Coughlin *et al.* (1967) studied highly productive farmland in Ohio from 1964 to 1969, and 1969 to 1973, respectively, and found that generally land taxes 'had no discernible effect on the rate of change of land in farms' (p.175). In heavily urbanised areas land taxes were found to have a small effect on the rate of loss of agricultural land, but this effect was overwhelmed by development pressures. On less productive land the lowered taxes did slow the loss of land from agriculture; but as farming in these areas was only marginal, in the long run much of the land would have ceased production, and it is by no means desirable to provide incentives for the unproductive use of resources to continue in this way.

The most detailed research on the influence of rate reductions has been conducted in California where a rate reduction scheme similar to scheme three above operates. Various studies (e.g. Hansen and Schwartz (1975) and (1976), Gustafson and Wallace (1975) and Daugherty (1977)), conclude that the program has been ineffective in stemming the development of agricultural land. The main problem has been that the incentives offered the landowners by tax reduction have been much less than the capital gains they anticipate from development. Hence the landowners have in large measure declined to include their land in the program.⁹ This has especially been the case where development pressure is high, e.g. near city boundaries; yet this is obviously the most critical land as far as the program is concerned.

The conclusion of this research then, is that rate reductions are generally an ineffective means of preserving land in some designated use. If, as was concluded above, a subsidy based program is

9 Whether these expectations of development are correct does not matter. It is the mere presence of the expectations that induces the landowners to stay out of the land retention program.

found to be preferable to a rate-reduction program, it seems appropriate to disregard the latter as an effective assistance mechanism for the preservation of the national estate. Consequently we turn in Chapter 5 to a more detailed consideration of the nature and possible uses of subsidies as conservation incentives.

Summary

In this chapter we have examined the cost-effectiveness of rate reduction and direct subsidy programs as means for providing heritage conservation incentives to individuals and firms. Programs based on the national community were evaluated, as well as programs based on the local community.

If the conservation program is purely locally based (i.e. the local community pays the subsidy or gives the rate reduction without reimbursement by the Federal Government) the results of the analysis show that it will always be more cost-effective to pursue a direct subsidy program than a rate reduction program. The cost-effectiveness of nationally based rate reduction and subsidy programs was found to be the same, and both of these forms of incentive could be expected to be less cost-effective than locally based subsidy schemes.

Various factors, however, lead us to suggest that, overall, a nationally based subsidy program is the preferable alternative. Firstly, the incentive offered in a rate reduction program is constrained by the size of the rate bill while there is no such limit to the potential size of a direct subsidy. Secondly, overseas studies indicate that, because of the limited scope of rate reductions, they tend to be an ineffective means of inducing the retention of land in a particular use. Thirdly, in comparison with locally based subsidy schemes, the national community has a greater ability to fund a subsidy scheme, and moreover it is appropriate for it to do so if the benefits of preserving the heritage property accrue widely outside the local area.



Chapter 5

The use of direct subsidies as conservation incentives

Introduction

In the previous chapter, the cost-effectiveness of direct subsidisation was examined alongside that of rate reductions. It was concluded that, in general, a program of direct subsidies (nationally rather than locally based) was superior to one of rate reductions. In this chapter, after considering the preservation decision itself, we examine the use of direct subsidies in more depth to determine the potential scope for their use as heritage conservation incentives. It will be shown that a flexible use of direct subsidisation provides a means of overcoming many of the problems associated with the provision of heritage benefits that were discussed in Chapter 1.

Legislation in several Australian states empowers governments to assist property owners directly to retain and maintain heritage property on behalf of society at large by giving them cash grants, loans or subsidies. The intent is to enable them to carry out any work needed to keep the property in adequate 'heritage condition' and to assist them to pay any costs associated with not altering the land use to the detriment of the heritage nature of the property. For example, the South Australian *Heritage Act*, 1978-79, requires the South Australian Heritage Commission to advise the relevant Minister regarding the provision of financial assistance to persons or bodies to aid the preservation and enhancement of registered heritage items and areas. The assistance may take the form of grants or loans, either with or without interest. Similarly, the N.S.W. *Heritage Act*, 1977, establishes a fund out of which finance for grants or loans (with or without interest) can be disbursed for promoting and assisting the conservation of heritage items.

To avoid wasting funds, assistance should ideally be directed only to cases where the work desired by society would not have been undertaken in the absence of such assistance. If, for example, a property owner is going to restore his property (e.g. a historic

homestead) and then open it and charge the public an admission fee, the prospective income should be sufficient incentive to undertake the restoration and maintenance. Any government assistance would merely be an income subsidy for the owner and would provide no additional 'heritage benefits' to society. While an examination of the likelihood of restoration and maintenance being conducted in the absence of government incentives is outside the scope of this study, it must be taken into account in making the decision to give assistance.

Once preservation and assistance have been decided on, the funding body must decide on the level of subsidy (i.e. full funding, 50% of costs, etc.) which in turn will depend on the level of funds available to it and the number of other eligible projects. The level of funds will depend on an assessment of the benefits to society of preserving and maintaining the items concerned *vis-à-vis* the benefits of other social programs. The distribution of those funds available to heritage preservation should be made on the basis of a comparison of the benefits of the different heritage projects to which the funds might be applied. As was mentioned previously, if the government is unable to assess the relative benefits of the projects then a flat rate subsidy is appropriate. However, under the various heritage programs, governments themselves typically do conduct assessments of the merits of different (potential) heritage properties. So with subsidy measures, (as opposed to the taxation incentive programs described previously which operate quite differently) variable subsidy rates should be used.

The direct provision of funds entails consideration of the form in which this assistance is provided — whether by loans (and if so at what interest rate and under what repayment conditions), lump sum grants and subsidies, or annual grants and subsidies.¹ Loans

1 The supervision of such assistance, regardless of its form, is important if the schemes are not to involve a wastage of funds. This will entail specifying conditions upon the granting of the assistance which guarantee that restoration work is carried out. For example, restoration and maintenance standards might have to be set, and if the government desires that the heritage property be used by the general public the assistance may need to be tied to the owner's granting of a certain level of public access to the property (say a set number of days a week). Clearly supervision costs need to be taken into account in any overall assessment of such schemes.

for example, may be an appropriate form of assistance if the owner ultimately intends to sell the property or manage it on a commercial basis — cases in which, as we saw above, subsidisation may be unwarranted — but presently does not have the funds to conduct the required maintenance work on the property. Subsidisation may be appropriate where the owner wishes to continue occupying the property on a private basis and therefore does not wish to donate it to a Trust in the near future. A lump sum, or equivalent annuity payment, might be made to the owner in return for guarantees that upon his death, or his intention to sell, the property would be entrusted to an appropriate managing body such as a National Trust or the government. The phasing-out of Estate Duty legislation, and the consequent loss of incentive to bequeath heritage property to Trusts etc. could make such a scheme an important contributor towards conserving the National Estate.

A somewhat different use of subsidisation, aimed at ensuring the *optimal consumption* of heritage benefits once preservation of heritage property has been undertaken, centres on the appropriate level of visitor fees. As was indicated in the introduction of the study, if a private individual is to provide heritage property for society he will need to charge a sufficient price per visit to cover his costs. It may be optimal for some heritage exhibits to be provided free of charge, at least up to a certain visiting rate. The private operator would either go out of business if he charged a zero fee, or would charge a positive entry fee which would lead to sub-optimal numbers of visitors. In these cases, it may be appropriate for the government to subsidise entry fees to the point at which the entrepreneur's average costs are covered.² This would ensure that society would gain the maximum benefit possible from preservation of the heritage property. In this sense it is not possible to separate a consideration of the costs of different policies from their benefits, and a full assessment of such a visitor-subsidy scheme would need to take these into account.

The Preservation Decision

In deciding whether to preserve a heritage item or not, all present and future costs and benefits of that preservation should be considered. If the present value of the benefits of preservation are found

2 The issue of the correct subsidy is discussed later in the Chapter.

to be greater than the present value of preservation costs then it would be in society's interest to preserve the property. This comparison of benefits and costs requires that they be commensurable. The measurement of the benefits provided from the preservation of heritage property is largely outside the scope of this study so we make only two observations. Firstly, to ensure that the benefits and costs are measured correctly, any externalities arising from the preservation of the heritage item should be included, since to omit them could lead to the preservation of the incorrect amount of heritage property from society's point of view (see Section 1.2.3). Secondly, an appropriate discount rate must be chosen to make future benefits and costs comparable with benefits and costs received and incurred at the present point in time. The outcome of the analysis can be strongly influenced by the rate of discount used. Higher discount rates tend to bias decisions against 'long-lived' projects such as heritage preservation.

Consider now a property that has been evaluated and found to warrant a preservation subsidy. Assume also that the property has been in the hands of the owner for many years and the owner is thus ineligible to receive any income tax deductions in return for donating it to a Trust. What incentives are provided at present to ensure that the property will be preserved?

One current incentive is provided by the deductibility provision contained in the Federal *Estate Duty Assessment Act*, whereby donations made to the various National Trust bodies in Australia are deductible from the value of a person's estate when death duty is levied. How effective is this incentive likely to be for inducing donations of heritage property? As with income tax deductions (see Section 3.3), the cost-effectiveness of estate duty deductions depends on the price-elasticity of donations, the higher the price elasticity of giving, the more cost-effective the measure. The only relevant evidence known to the authors is once again from the United States. Boskin (1976) analysed data from samples of individual estate tax returns in 1957-59 and 1969. For both sets of data he found that the price-elasticity of donations was generally (absolutely) greater than unity, indicating that estate tax deductibility was a cost-effective means of providing incentives for charitable contributions (i.e. induced more contributions than tax revenue foregone by Treasury). The price-elasticity varied with the size of the assessable estate, with lower values for larger estates. This

indicates that the measure was less cost-effective and in some cases cost-ineffective for larger estates. Most of the donations came from larger estates.

Feldstein (1976), using a time series of cross sectional data (from 1948 to 1963) obtained results which are broadly consistent with Boskin's, although Feldstein's results are quite variable depending upon the form of equation used to estimate the elasticities. Both studies were subject to practical difficulties caused principally by less-than-ideal sets of data. These led to the omission from the empirical analysis of several theoretically relevant variables, which may have induced biases in the estimates of price-elasticities of giving. Given this qualification,³ it appears that estate duty deductibility might be a cost-effective incentive for inducing donations of heritage property, at least of smaller estates.

Care should be exercised in extending these results to Australia. If the results are applicable to Australia, then the repeal of the estate duty legislation will remove a cost-effective heritage conservation incentive and some scheme will be required to replace it. A subsidy scheme based on the following lines could be used to provide similar conservation incentives. The subsidy scheme is likely to be preferable to the estate duty deduction scheme since the latter provides an incentive only when the estate is liable for taxation, and this would not apply to all estates. The subsidy scheme on the other hand could be applied to all properties.

The basis of the subsidy scheme is that, instead of providing the conservation incentive after the owner's death, it is provided to the owner in return, say, for a guarantee of donation to a National Trust or government body at the time of the owner's death. Consider for example a property whose value as a heritage site is \$50,000 which, after considering the costs and benefits of preservation, the government wishes to secure as a part of the National Estate. Under the estate duty legislation, if the property were donated to a National Trust, its value could be deducted from the assessable value of the estate. If the owner's estate had attracted a marginal tax rate of 60 cents in the dollar, donating the \$50,000 property would save his estate \$30,000. An equivalent subsidy scheme is easily imagined where the owner receives the \$30,000 payment in some form such as a lump sum or an annuity. An

3 Boskin considers (p.49) that such biases are not likely to be very significant.

allowance must be made for the timing of the payments, however, since \$30,000 now is worth more than \$30,000 at some time in the future, say at the time of the owner's death. The necessary lump sum payment now would be that amount which, if invested at a chosen interest rate, would grow to equal \$30,000 at the time of the owner's death. A table of sample lump sum payments is given below. Taking the second entry in Table 5.1 if the owner were paid \$11,307 now, this would grow to approximately \$30,000 after 20 years at an interest rate of 5% per year.

Table 5.1

Present Lump Sum Payments Equivalent to \$30,000 at Death

<i>Chosen Interest Rate</i>	<i>Years Until Owner's Death</i>	<i>Present Lump Sum Payment</i>
5%	10	18417
	20	11307
	30	6942
10%	10	11565
	20	4404
	30	1719

An equivalent means of paying this subsidy would be by equal annual payments up to the time of the owner's death.⁴ Table 5.2 shows the level of annual payments which are equivalent to the respective present lump sum payments shown in Table 5.1

The possibility of providing initial preservation assistance to owners of heritage property by loan financing was mentioned earlier. It was pointed out that this could be considered an appropriate policy in situations where the owner wished to sell the property following its restoration, or manage the property as a 'profitable' commercial heritage exhibit, but lacked the funds to preserve and restore the property.

⁴ The government would bear the risk of the owner's living longer than expected. Expectations of longevity could be obtained from routine life tables as used by life assurance companies.

Table 5.2
Annuity Payments Equivalent to \$30,000 at Death

<i>Chosen Interest Rate</i>	<i>Years Until Owner's Death</i>	<i>Annuity Payment</i>
5%	10	2385
	20	907
	30	445
10%	10	1882
	20	517
	30	182

The potential exhibitor may require government loan assistance to establish the operation. As mentioned earlier, the choice of discount (interest) rate can have a significant impact on project evaluation, and, in particular, it was pointed out that it might be appropriate for the evaluation of heritage projects to use a discount rate lower than, say, private finance companies might use. If this is the case, it may be difficult for the potential heritage exhibitor to obtain finance through commercial channels to establish his operation, and the government could consider intervening to provide the owner with a low interest loan for the establishment of his business.⁵

In contrast to this 'profitable operation' case, it was pointed out in Chapter 1 that, if a private owner were to operate a feature of the National Estate as a public exhibit at the socially desirable level of usage, in many cases he would incur a financial loss since the optimal fee will be less than the average cost of allowing a visitor to see the exhibit. In the following section of the study we examine subsidisation arrangements which would allow the owner to cover all his costs and would also act to ensure that the exhibit operator chose the socially desirable level of visiting.

Subsidising the Operation of Heritage Exhibits

In discussing the subsidised operation of a heritage exhibit it is useful to split the treatment according to whether the optimal fee charged for visiting the exhibit is positive or zero.

5. The long term government bond rate may be a reasonable discount rate to use.

Optimal Entry Price is Zero

In the case illustrated in Figure 5.1 below, the optimal level of visiting is at point C where the demand curve (D) and the marginal cost curve (MC) intersect.⁶ At this level of visiting, the average cost of a visit is OA, so that by allowing visitors free entry the operator would incur a total loss of ABCO. Thus the subsidisation by the government could be tied to the visiting rate. If such a per-visitor subsidy (OA per visitor) were instituted, it would pay the operator to operate his exhibit up to the level of C visits, since to the left of C he will not cover the costs of the operation. No visiting will be generated in excess of C, since to the right of point C there is no demand at a positive price and a government subsidy would not be given for visiting levels in excess of C. Under this scheme, the optimal level of usage would occur and the exhibitor would break even on his operation.

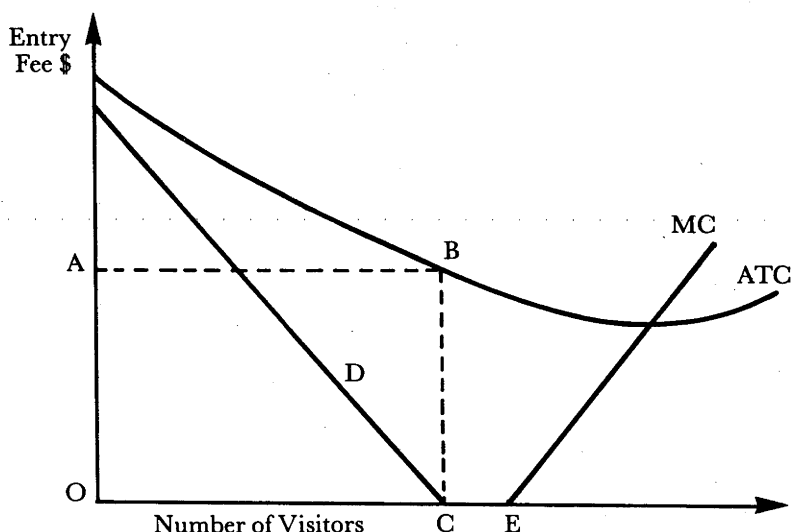
An alternative to such subsidisation is for the government to operate the exhibit, charging a zero entry fee. This option is examined in more detail when government ownership is considered.

Optimal Entry Price is Positive

The situation where a positive entry fee is appropriate is analogous to the outcome illustrated in Figure 5.2. Once again visitors are charged an entry fee which equates the marginal cost of the operation with the demand for the benefits of that operation. The optimal entry fee is P and the optimal level of visiting is Q. At this visiting rate, the average cost of a visit is OA, of which OP is recovered as an entry fee, leaving a net loss per visit of AP. The appropriate subsidisation structure is then to pay the operator a subsidy per visit of AP while requiring him to charge a fee OP for each visit.

6 MC lies along the horizontal axis until point E, at which point marginal costs become positive, due, say, to increasing supervision and maintenance costs or the need to provide additional car parking facilities. Alternatively, the marginal cost curve could be thought of as reflecting congestion costs which are zero up to point E. But the strictly correct conceptualization of congestion costs would require specifying a separate demand curve for each level of congestion.

Figure 5.1
Optimal Entry Price is Zero

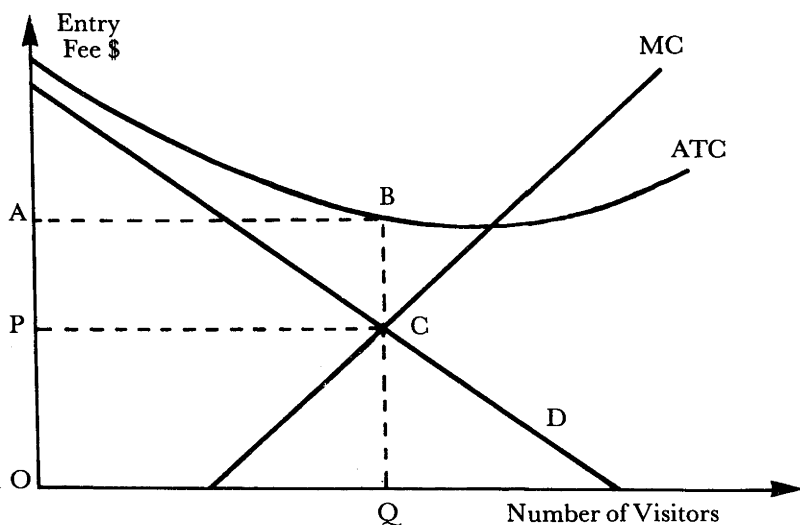


Once again this arrangement will induce the exhibitor to operate at the optimal visiting level, Q , as to the left of this level he will not cover his pre-visit costs and will incur a loss. To the right of Q , and with a charge of OP operating, no more visitors will wish to enter the exhibit as, beyond that point, their marginal valuation of a visit (as expressed by the demand curve) is less than the fee. So, as before, the optimal level of visiting will have been induced with a subsidy of $ABCP$ to the exhibitor.

Summary

In Chapter 4 of this study the cost-effectiveness of direct subsidies was compared to that of rate reductions as a means of providing preservation assistance to the owners of heritage property. It was concluded that a nationally based subsidy program would be as cost-effective as a nationally based rate reduction program, but that it would probably be preferable on other grounds such as providing greater flexibility in the level of funding. The analysis conducted in the present chapter has sought to illustrate the flexibility of direct

Figure 5.2
Optimal Entry Price is Positive



subsidisation as a means of providing conservation incentives.

A subsidy scheme designed to replace conservation incentives as embodied in estate duty legislation was detailed. The subsidy as envisaged could be more widely applied than just to those properties in estates liable to taxation. The scope for subsidised loans to persons establishing heritage exhibits for commercial purposes was also discussed. A major benefit of the use of direct subsidies to assist in the maintenance and operation of heritage exhibits, is that they provide a mechanism for attaining the socially optimal level of visiting to the exhibits once they have been preserved.

In order to ensure that the best use is made of funds available for subsidies, the scheme would need to be carefully supervised to ensure that any conditions placed on the use of the funds were complied with and that, where possible, subsidies were directed only to worthwhile projects which would otherwise not have been undertaken.

Chapters 3, 4 and 5 of the study have dealt with conservation policies which operate primarily by giving fiscal or monetary incentives to private individuals to preserve and/or maintain heritage property. The following three chapters discuss conservation poli-

cies which are primarily regulatory in nature and which do not rely on any fiscal or monetary incentives in their operation.



Chapter 6

The use of zoning to conserve heritage property

Introduction

Zoning as a form of land use control has been commonly employed to regulate the land market on the premise that, in the absence of some form of intervention, the market would not function properly in allocating land among different uses.¹ Different potential causes of market failure were discussed in Chapter 1; two of these causes have been the basis of arguments in favour of using zoning as a regulatory mechanism. First, it was assumed that significant externalities were present in the land market and that, if the market was left unregulated, any given use could be subject to harmful spillover effects arising from other uses of neighbouring land. This led to the establishment of a hierarchical zoning classification (Maser *et al.*, 1977) in which those land uses judged to have harmful external effects on other types of land use were excluded from the areas containing those latter uses. However, any land use which was not thought to impose detrimental effects on other land uses could be included in areas containing those uses. The second and more recent rationale for zoning regulations appears to be that the unregulated market fails adequately to take account of some present and future values in allocating land among different uses. Thus, it is argued, it is appropriate for governments to regulate the land market to ensure that particular uses, like open space and

1 There is debate on whether or not zoning is an effective measure in regulating the overall land market. Some studies in the United States conclude that zoning is an effective measure, *e.g.* Sagalyn and Sternlieb (1973), Siegan (1972), and Stull (1975) while other studies have concluded that zoning has no measurable impact, *e.g.* Crecine *et al.* (1967), Rueter (1973), and Maser *et al.* (1977). The impact of zoning on the overall market is not of concern here since the impact of any heritage zoning on the overall land market would be negligible. However, certain forms of spot and area zoning may have a significant impact on specific sites and local land markets.

historic sites, are catered for. It is the argument which seems to underlie the use of zoning as a National Estate management tool.

Zoning has been used mostly in the context of the preservation of historic property. This is, in effect, a form of spot zoning where specific buildings or properties are designated to provide society with historic benefits and are not permitted to be used or developed for any other purposes. As with taxation incentives, the use of zoning in this way is intended to effect the preservation of the property concerned and has nothing to do with assisting in the property's restoration and maintenance.

Examples of such an approach to heritage preservation are provided by legislation in both NSW and Tasmania. Under the NSW *Heritage Act*, 1977, property which, upon further investigation, may be determined to be part of the State's environmental heritage is placed under an Interim Conservation Order — virtually a 'holding zone' which prohibits the alteration of the property during the period it is subject to investigation. If it is then considered to be warranted, property can be placed under a Permanent Conservation Order or a Conservation Scheme. These classifications are effectively 'no development zones', but may be revoked at a future time if it is deemed necessary. A similar provision exists under the Tasmanian *Local Government Act*. Councils may declare areas under their jurisdiction to be Historical Areas within which any development must accord with the historic properties already there. Thus the zoning provision is designed to protect the overall historic character of the area concerned rather than to preserve any specific building.

The crucial question in such zoning decisions is that of how property owners are affected.² For instance, it is commonly claimed (cf. the deliberations of both the Else-Mitchell Commission of Enquiry into Land Tenures and the Gobbo Inquiry on Town Planning Compensation in Victoria) that public zoning decisions can and do lead to landowners suffering capital losses or experiencing capital gains. Consequently, any evaluation of zoning as a conservation measure must take account of these possible effects on landowners.

A measure which has been proposed to assist heritage conser-

2 The zoning decision may affect the owners of the property actually concerned, as well as owners of surrounding property, as was indicated in the discussion of the land market.

vation, and which is somewhat similar to zoning in practice, is the use of conservation easements. Some simple examples serve to illustrate the nature of the proposal. Consider first a building on a potential development site, whose street frontage is to be preserved for its architectural and historic value, but whose interior is of little social value. One means of effecting the desired preservation would be for the government to purchase an easement over the frontage, allowing development of the site to proceed so long as the street frontage was retained. A second example is that of an open space area, parts of which are of considerable scenic or wildlife significance due to unusual vegetation cover, but which faces a threat of clearing and development for agriculture. Again, a means of preserving the critical land areas would be by government purchase of an easement over the land, permitting development for agriculture provided that the areas of unusual vegetation cover were retained in their present state.³

In practice, the use of conservation easements in this way is a form of compensatory zoning for heritage preservation. For some properties particular land uses are either designated or prohibited, and compensation offered according to the loss in value incurred in that process. Thus it is appropriate to include the use of easements in the evaluation of zoning as a heritage preservation tool.

An Evaluation of Zoning as a Heritage Conservation Policy

There can be little argument over whether spot zoning for heritage purposes is effective. Clearly, once the zoning provisions are legally imposed, the property concerned is 'preserved' and its use cannot be legally altered in ways which would contravene the zoning regulations. The area of argument that does exist regarding the use of spot zoning as a conservation tool concerns the effects it has on the property owners immediately concerned, and also to a lesser extent the effects (if any) on owners of adjacent property. In practice the

3 This is particularly relevant in Australia where at present Section 75A of the *Income Tax Assessment Act* provides that the capital cost of land development may be deducted from taxable income over a ten year period. That is to say, a tax incentive is given for land development, but no comparable fiscal incentive is given for preserving rare wildlife habitats or scenic areas.

argument revolves around whether the property owners affected ought to be compensated for the regulations imposed and, if so, by how much.

Any determination of this issue of compensation must rest on an examination of the impact of heritage zoning on the value of the property. In general, it was argued in Chapter 2 that full compensation should be payable only if, at the time of acquisition, the zoning decision could not reasonably have been anticipated by the current owner, owing to the fact that the control authority subsequently changed its mode of operation. Let us assume, initially, that such is the case and that, therefore, compensation ought to be paid to the property owner.⁴ The problem now is how to measure the amount of compensation. It is intuitively appealing to suppose that the correct amount of compensation would be the difference between the value of the land under heritage control (current use value), and the value of the land in its most profitable use in the absence of any heritage controls (developed use value). This would be correct if the appropriate values could be measured. Parish (1977) argues that in practice these measures are likely to be very difficult to determine, and ultimately may be based on purely arbitrary decisions defining 'current' and 'developed' uses. For example, Parish states (p.41)

'... If the value of land devoted to separate, single-unit dwellings is enhanced by the prospect of its future suitability as a site for row houses, this element is part of its existing value, if existing use is defined broadly to encompass all relatively low-density housing. But if existing use is defined narrowly as detached, single-unit houses, it is part of development value. Similarly, land values in a newly-fashionable suburb might incorporate the expectation that demand will increase because of the influx of high-income home buyers. Is housing for affluent families a different use from housing for poor families? Virtually any change (or expected change) in the value of land can be classified as developmental or otherwise, depending on how narrowly 'use' is defined'.

These problems arise because, as was shown in Chapter 2, the future expected uses of land are taken into account by the market in

4 The reverse of the following argument would apply to owners whose property values increased because of the introduction of heritage control.

determining its current value. Hence it is extremely difficult in practice to distinguish between that part of the value of a property which is attributable to its present use, and that part of its present value which reflects anticipated future use. For example a piece of property may be valued at \$20,000 by three individuals, but each may have different reasons for valuing the property at that amount.

	A	B	C
	\$	\$	\$
Value of expected utility of land as home site	5,000	10,000	15,000
Expected increase in market value of land consequent upon rezoning of land for development	15,000	10,000	5,000
Total Value	20,000	20,000	20,000

The market value of this piece of land is the result of demand and supply forces of many individuals like A, B and C. If the decision was made to rezone the land for development there would be no issue of compensation because this action was in accord with general expectations. If, on the other hand, the zoning authority suddenly and unpredictably designated the property as a heritage site, prohibiting development but allowing continued use as a dwelling, the owner would lose the development value he attributed to the site. The correct compensation payments would be \$15,000 to A, \$10,000 to B, or \$5,000 to C, depending on who owned the property.⁵ The appropriate amount of compensation would need to be established case by case, and this would involve ascertaining the property owner's perceptions of the components of the property's value, particularly its development value. The need for individual investigation would be likely to render a conservation scheme based on zoning and compensation impractical. Moreover there is a considerable incentive for the individual to overestimate the development value of the property to himself, in the hope of maximising compensation payments.

- 5 In reality the assessment of the correct compensation payment would be even more difficult than this simple illustration indicates since it is likely that individuals would also attach different values to the expected (dis)utility if the whole neighbourhood was zoned as a heritage site.

Related to this issue is the rather intriguing proposition, advanced by Hagman and Misczynski (1975) of a comprehensive 'windfall' and 'wipeout' tax and compensation scheme. The essential idea is that activities whether of the government or of private individuals which cause windfalls (capital gains) for some properties, commonly cause wipeouts (capital losses) for others. They believe that windfalls should be at least partially recaptured *via* a tax, and the revenue so raised used to compensate those who suffer wipeouts. On the basis of our preceding discussion, it should be clear that the authors of the present study would be very skeptical of the practicability of such a scheme.

Summary

This chapter has considered the use of zoning as a means of ensuring the preservation of heritage property and particularly whether compensation ought to be paid to an owner affected by zoning regulations. In Chapter 2 it was established that full compensation would be appropriate only if, at the time the current owner acquired the property, heritage zoning could not reasonably have been anticipated due to the fact that the heritage controlling authority subsequently changed its mode of operation. However, even if it was established that compensation should be paid to particular property owners, the appropriate amount would usually be extremely difficult to determine with any precision. In the authors' view a zoning approach based on compensation payments, does not appear an efficient method of heritage conservation, and compensation payments should be confined to clear-cut cases. The use of zoning should be restricted to situations in which it is socially desirable to have a whole neighbourhood (or small town) designated as heritage property. In most cases, a system of monetary and fiscal incentives for heritage control will provide a more subtle and efficient policy mechanism.

Finally, heritage authorities should disseminate information on their mode of operation as widely as possible and follow a consistent policy so that expectations of future land uses can be reasonably formulated by private land owners.



Chapter 7

Transferable development rights

Introduction

Much attention has been focussed on 'transferable development rights' as a means of preserving heritage property, especially in the United States.¹ The technique has been promoted as being particularly useful for effecting the preservation of historic buildings in areas subject to high development pressures, such as commercial and office areas in cities (Costonis, 1974). It has also been proposed that a transferable development rights system completely replace the current planning and zoning system (Foster *et al.* 1975).

The concept of transferable development rights has its basis in the view that fee-simple ownership of property confers on the owner a bundle of rights in a given property. One of these rights, a development right, has been defined as 'the right that permits the owner to build upon or develop his land' (Chavooshian *et al.* 1975. p.171).² Under the various transfer schemes to be considered, the development right could be sold to an individual other than the fee-simple owner, or to the government. Underlying the concept of transferable development rights is the notion that the development potential of a parcel of land can be severed from the physical location of that parcel.

The right to develop a property carries with it the potential for

- 1 A fairly recent collection of papers aimed at describing the technique and its possible applications can be found in Rose, J.G. (ed.), (1975), *Transfer of Development Rights*, Center for Urban Policy Research, Rutgers — the State University, New Jersey. See also, Schnidman, F., *Transferable Development Rights*, in Hagman, D. and Misczynski, D. (eds.) (1978), *Windfalls for Wipeouts*, American Society of Planning Officials, Chicago.
- 2 In quantitative terms, Shlaes (1975, p.331) defines a development right as the difference between the building density allowed on the land by zoning or other regulations and the existing density of building on the land.

significant financial gain for the property owner. Owing to changing zoning regulations stemming from population changes, technological change, and so on, many potential heritage items come to be located in areas where the permitted level of development on the heritage sites exceeds their current levels of development. The choice then facing the owner of the heritage property is to retain the item in its existing state and forfeit its potential development value or to develop the site and realise its full value. Depending on the rating and taxing system, the owner may also be required to pay rates and land taxes assessed on the basis of the potential value of the site rather than its value in its present use. This cost may in some cases absorb a substantial proportion of the income from the existing use of the property, creating further financial pressure to develop the site.

In order to remove or lessen these pressures to develop rather than preserve heritage sites, a scheme of development rights transfer would enable the right to develop a particular site to be separated from the other rights inherent in land ownership.³ The development right could then be transferred to other sites owned by the same person, sold to other individuals for use elsewhere, or appropriated by government to use as it wished.

Variants of the basic transferable development rights scheme will be described in the next section. Then an evaluation of transferable development rights as a conservation policy will be made.

A Description of Transferable Development Rights Scheme

Several types of transferable development rights schemes have been devised, differing mainly in the regulations governing the transfer of rights. All the schemes are based on a land use plan which

- 3 There are precedents for such severance in current United States legal practice. For example, a farmer may sell the development rights of his land parcel to a nearby community that desires to maintain a greenbelt. The farmer keeps the land and the community gets the development rights; then the two are severed. The community has bought a guarantee that the land parcel will continue as a greenbelt.

establishes acceptable uses for the various sites (e.g. open space, residential and commercial) just as in current zoning plants. The schemes envisage that certain areas or sites would then be designated as transferor districts which would be preserved in their current use and which would thus have excess development potential available for transfer to other locations. Other areas or sites would be designated as transferee districts, and these would be deemed eligible to receive extra building density. Following designation, transfers of space would be allowed. After the transfer of rights, the transferor site would be rated and taxed at its current use value, reflecting the fact that no further development was to be allowed.⁴ If any development rights continued to be held by the transferor, these would be rated and taxed in the same way as his property holding would be. Once the transfer of rights is made or a development right is used, the rights involved cease to exist (Foster *et al.* 1975; Gilbert, 1970).

The different development rights transfer methods will now be described. For the purpose of exposition, the methods will be discussed in terms of the preservation of historic buildings, though the general principles would remain the same when applied to other property.

Strict Limitation of Allowable Transferee Sites

Under this scheme, transfer is limited to adjacent sites and/or to sites owned by the same owner. It has been used in several instances in Sydney to preserve historic buildings (Healy, 1975), but has some obvious limitations.⁵ If the adjacent sites are not being developed, or if the owner of the property in question owns no other property with the potential for development, the rights cannot be used and are thus valueless. In these circumstances, there is no incentive provided for the retention of the property. Only in a few

4 As was argued in Chapter 6, 'current use value' is likely to be an arbitrary and somewhat meaningless concept. For the purposes of this description, it is accepted that such an objective value exists and can be measured.

5 The pioneer in this use of transferable development rights appears to have been the City of New York. New York's use of this type of transferable development rights evolved from a series of amendments to the Zoning Resolution made since 1961 and has been used both for the conservation of historic buildings and other landmarks, and also for open space preservation.

special situations would the required transfer conditions be fulfilled. The other variants of the development rights transfer concept are generally preferable.

A Free Market in Development Rights

Under this scheme, once the quantity of available development rights has been established by zoning regulation, a market would be established in which the rights could be traded among developers and/or property owners. Trading would be subject to the overall limitations of established zoning regulations and would, in essence, be an extension of the land market. The price offered for the development rights would be related to the price of other land in the vicinity of the site. James (1976) views this use of development rights as an extension of the existing building bonus schemes whereby extra floor space can be added to a building in return for the provision of open space areas, shopping arcades, *etc.* on the site. In this case the viability of development right transfer would be determined by the price of the rights *vis-à-vis* the cost of obtaining bonuses by providing such amenities. In the case of the preservation of historic structures, a serious limitation of this free market system of trading in rights is that it does not guarantee the preservation of the historic structure. Obviously the rights must be used *in situ*, they cannot be used for other sites. Therefore if no buyer can be found for the rights over a certain structure, the structure may be destroyed.⁶ The final variant of the rights transfer scheme attempts to overcome this problem.

A Development Rights Market with Government Intervention

This scheme would function in exactly the same way as the former one, except that the government (local, state, or national), would be a potential buyer in the market, with the power to resume rights if necessary. Hence it would be in a position to effect the preservation of any desired building or site by purchasing the development rights from that site and holding them for sale to developers for use on other sites. Of the three types of development rights transfer schemes, this last scheme seems most appropriate as a heritage

6 There would also appear to be a potential problem of the market being 'too thin'.

preservation mechanism since government can guarantee the preservation of a specific heritage property.⁷

In summary, the intent of these transfer schemes is to preserve a heritage property by providing a mechanism whereby the revenues obtained from the sale of the development rights attached to a heritage site provide an incentive for its preservation. A supplementary aim is to aid in the maintenance of the property by reducing its running costs through rates and land taxes based on lower 'current use' values.

An Evaluation of Transferable Development Rights Schemes

Two features of transferable development rights schemes need to be examined in evaluating the schemes. Firstly, there is the nature of the incentive mechanism itself, the revenues obtained for rights sold; and secondly, there is the subsidy implied by rating transferor properties on the basis of a 'current use' value rather than a 'highest and best use' value. These two features are now discussed in turn.

The use of transferable development rights is in many respects similar to compensatory zoning as a policy approach to conservation. There is one important difference. When using zoning and easements the government must decide firstly, how much development is to be prohibited (by varying zoning regulations) and secondly, whether and to what extent the property owner is to be compensated. With a transferable development rights scheme, the government decides only on the amount of development to be prohibited and leaves the relevant valuation to the market in which the transferable rights are traded. The price paid by buyers of the development rights provides the compensation to the owner of the heritage site for the prohibition of development. Where resumption of development rights by the government is used the transferable development rights system becomes the same as a compensatory zoning approach, since the government must again decide on both the quantity of restriction and the value of compensation necessary.

A transferable development rights scheme is therefore similar to

7 Such a process is not new and is illustrated by the purchase of rights by government to allow utility lines to cross private property.

a compensatory zoning system for encouraging conservation, and causes similar problems. The decision on the extent to which a site can be developed may be essentially arbitrary and may not truly reflect the development potential of the site (cf. Parish 1977, p.43). Furthermore, as was pointed out in the discussion on the land market, the decision on whether to offer compensation, and the appropriate amount of any such compensation, is by no means an easy one to make. In addition, the compensation received as a result of trading the development rights might bear little relationship to the optimum amount of compensation since the price offered for the rights will depend on the anticipated returns from development of transfer sites and not on the social benefits of preservation of heritage property on transfer sites.

There is one further problem with the use of transferable development rights that does not arise with the compensatory zoning approach. In the former case, the costs of the conservation program will be borne by only one group of society (say, property developers) rather than by the whole of society. If the benefits of the conservation program accrue to the whole of society then it is appropriate for the whole of society, and not just one group within society, to pay for the program. It is likely that, in requiring developers to purchase the development rights, a capital loss will be imposed on the developers. To see this, recall the discussion of the land market conducted in Chapter 2. In offering a price for land, a developer will consider all the future uses to which the land will be put. Thus future higher density usage of land will already be incorporated in a present higher offer-price for the land. If the developers are now required to pay for development rights to increase the density of buildings on their property, they will have paid twice to obtain the entitlement to increase density. There is consequently a likelihood that a capital loss would be imposed on such owners of property at the time of announcement that a comprehensive development rights system was going to be introduced.

The second feature of transferable development rights schemes which would need to be examined is the subsidy implied by reduced rates for preserved property. Chapter 4 contained a detailed analysis of the effectiveness of rate reductions *vis-à-vis* direct subsidies as conservation incentives and it was concluded that direct subsidisation was generally preferable. Hence it would appear that the property maintenance incentive embodied in the various develop-

ment rights transfer schemes which seek to reduce costs by basing rates and land taxes on lower 'current use' values, would be inferior to a system of direct subsidies.

Summary

Several conclusions emerge from the discussion of transferable development rights. Firstly, the system of defining the development potential of a site is a rather arbitrary one. Secondly, as with compensatory zoning, the decision of whether to offer compensation for a freeze on development is complex, and in many cases payment of compensation may not be justifiable. If it is deemed necessary to pay compensation, the appropriate amount is likely to be extremely difficult to determine, since it is in large part based on the *expectations* and utility functions of individual land owners. Thirdly, if a comprehensive transferable development rights system were to be introduced, it is likely that the costs of conservation would be significantly redistributed toward a particular group of land owners and developers, and that this group would suffer a capital loss at the time of announcement of the scheme. Other questions and issues which need to be answered by the proponents of a transferable development rights program include procedures for establishing the boundaries of the conservation and development areas and determining the number and type of development rights to be issued and their allocation among land owners. Moreover, if a government were to participate actively in the development rights market, a new agency would need to be set up. Such an agency would need to have considerable expertise in land market operations both to 'fine-tune' the zoning arrangements and to bid for development rights associated with specific properties it believes should be preserved as heritage sites.

The general conclusion then, must be that a transferable development rights scheme has very limited potential as a mechanism for conserving the National Estate.



Chapter 8

Government acquisition and management of heritage property

Introduction

Traditionally one of the principal means used by governments in Australia to preserve heritage property has been acquisition and management by government.¹ In recent years legislation has placed more emphasis on the continued private ownership of heritage property with scope for government assistance,² but government ownership and control remain an important part of heritage preservation procedures.

Government acquisition and management of heritage property is the most extreme form of intervention in response to perceived market failure. The need for such action in particular instances is due to the type and extent of market failure. For example, if price exclusion is impossible (i.e. the owner of the property cannot stop people who do not pay a fee visiting the property) then the government will usually have little choice but to own and manage the property, financing the venture from consolidated revenue. Consider, for instance, a large wilderness and wildlife area which is visited by people who enter the area at widely different points. If a private individual owned the area it could be impossible, or at least prohibitively expensive, for him to locate each visitor and obtain the appropriate fee. Consequently the owner has no incentive to retain the area in a wilderness state if there is any net income to be obtained from alternative uses of the land. In order to preserve the wilderness area, it would be necessary for the government to acquire the land. Visitors would have free entry because, under any

- 1 See for example the National Parks legislation in the various States and the Commonwealth, all of which, by and large, only extend protection to heritage property which is under government ownership.
- 2 See for example the NSW *Heritage Act*, 1977, the South Australian *Heritage Act*, 1978-79 and the *Aboriginal Heritage Act*, 1979.

form of ownership, it is assumed too costly to exclude those who do not pay.

Government provision may also be necessitated in cases where price exclusion is possible. If there is substantial market failure for other reasons, then it may be less costly for the government to acquire and manage the operation than to devise and administer a complex set of incentives. Such an incentive structure would be required to induce the private owner to provide the socially optimal level of supply of property and permit the socially optimal level of visiting. Take the wilderness area as an example. Even if it were feasible to locate each visitor at reasonable cost and obtain payment of a fee, from the viewpoint of consumption (utilization) efficiency the socially optimal fee will be zero. In such a case the private owner is, of course, most unlikely to provide society with the optimal level of heritage benefits. One course open to the government, as was analyzed in Chapter 5, is to pay the owner some level of subsidy per visitor (the difference between the owner's average costs per visitor and the socially optimal fee). But devising an appropriate incentive scheme could be complex and costly to administer, and government acquisition and management of the wilderness area may be the most efficient method of provision.

In many situations, heritage benefits will be jointly provided with other private goods, and, although no specific payment is made by those consuming the heritage benefits, their level of provision and utilization may nevertheless be optimal without government intervention. For example, the innovative preservation by private entrepreneurs of old buildings together with the incorporation of a wide variety of shops and restaurants. In the United States, good examples of such innovation are Ghiradelli Square in San Francisco and Larimer Square in Denver.³

- 3 The Rocks area in Sydney represents a successful case of a largely government planned heritage project. The intent in citing the above American examples is not to suggest that private development of such a project would be superior to public planning and development, but rather to illustrate that private entrepreneurs can provide some outstanding heritage benefits efficiently when the provision of heritage benefits can be financed via jointly supplied private goods.

In the next section of the chapter we compare the relative costs of subsidisation of heritage preservation, and ownership and management by government.

A Comparison of the Costs of Subsidisation and Government Ownership as Conservation Policies

If the government is to acquire a heritage property it will be required to make an initial outlay for the purchase of the property which could be large.⁴ Under a system of private ownership and government subsidisation, the cost of the subsidy would basically be substantially less than the government outlay required for acquisition. On the other hand, with government ownership, the government will also obtain some revenue from those exhibits for which it is possible and desirable to charge entry fees.

Management costs will obviously be incurred regardless of the conservation policy pursued. But these costs may not be the same under government and private ownership. For example, the private owner may have a strong preference for heritage benefits and thus a desire to live on the premises.⁵ In many cases the current owner will have a considerable pride in the property and be experienced and knowledgeable in the running and maintenance of the property. It could be more costly therefore to arrange for a government employee to perform the same job of permanent caretaker as a subsidized private owner, especially if the optimum visiting hours were confined to weekends when wage rates for the employees would be high.

If the government were to purchase a property for heritage purposes the property would be removed from the local rating rolls, causing a loss to the relevant local government body. This loss would need to be taken into account, though in many cases it would be small. It might be necessary, for instance, for the government

- 4 Determining the appropriate compensation for acquisition by government (i.e. the 'acquisition price') would appear to raise problems similar to those encountered in determining compensation for imposed zoning restrictions. Recourse to administratively determined 'fair market prices' does not guarantee that the right amount of compensation will be paid.
- 5 The owner is thus the recipient of non-monetary 'income' and requires a lower monetary income than a paid employee.

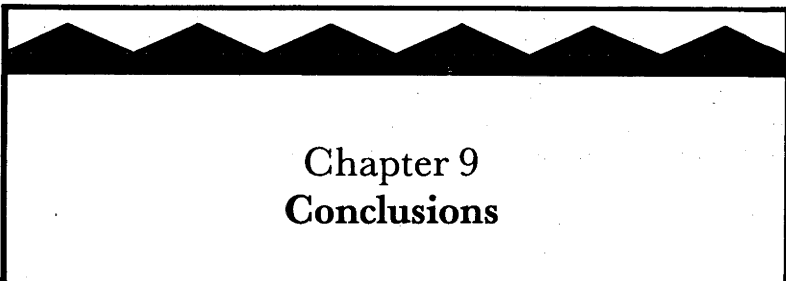
heritage body to reimburse the local government body to the extent of the lost income from rates. Even if such reimbursements are not made, the cessation of rate payments still represents income loss to the overall government sector.

The final cost to be considered applies only to the private ownership-government subsidy scheme. This is the cost of administering the scheme to ensure that any requirements associated with subsidisation, such as allowing a certain number of visitors per year or carrying out restoration work to some stipulated standard, are complied with. Depending upon the degree of surveillance required, the costs of enforcement could be high.

Summary

In this chapter the question of government ownership and management of heritage property as an alternative to subsidisation of private ownership has been considered. In some cases where the market fails completely in providing heritage benefits, there is no alternative to government provision. Cases of such complete market failure are rare in the authors' view and more usually the choice will be between government ownership and the subsidisation of continued private ownership. In these cases the choice hinges on the complexity of devising a subsidy scheme and the costs of implementing it, compared with the costs of government ownership and operation.

At the beginning of this Chapter it was noted that in recent years heritage legislation in Australia has placed more emphasis on the continued private ownership of heritage property with scope for government assistance. In the light of the discussion in the Chapter, the authors consider this a very desirable trend. It is important, however, that any government subsidies are clearly tied to socially desirable visiting rates for privately owned heritage property.



Chapter 9

Conclusions

This research project is concerned with evaluating the effectiveness of various policy measures designed to ensure the preservation of particular elements of Australia's heritage. The need for some form of government action in the area of heritage preservation was discussed in Chapter 1. Due to the nature of heritage preservation, it was concluded that in the absence of any government intervention, market forces would be unlikely to bring about either the socially optimal level of provision of heritage items, or the socially optimal level of utilization (consumption) of benefits from the heritage property which was preserved.

Briefly, the characteristics of the market for heritage benefits which necessitate some form of government intervention, are the following. Firstly, because heritage property commonly has 'joint supply' characteristics, the appropriate entry fee to an exhibit will, in the absence of congestion costs, need to be zero if the consumption efficiency criterion is to be met. But clearly if no entry fee is charged, a private entrepreneur has no incentive to provide the heritage property. There is thus an inevitable trade-off between attaining *production* efficiency and *consumption* efficiency with goods which have the joint supply characteristic. In general, a free market will preserve too little heritage property and exclude too many people from consuming the benefits of that heritage property which it does supply.

Secondly, certain heritage exhibits may be 'non-excludable'; it may not be possible to collect an entry fee from visitors. In this case preservation by private entrepreneurs is unlikely and government action would usually be required to keep such exhibits available.

Thirdly, there may be 'externalities' associated with the preservation of some heritage property which lead to preservation of less than is socially desirable. An individual will not usually take these spillover effects into account, say, when deciding whether to demolish or preserve a historic building. He may decide to destroy the

building, whereas if all the external benefits conferred by the historic building were taken into account, preservation would have been preferable from society's viewpoint. Where externalities cause significant divergences between private and social costs and benefits of heritage preservation, government action may lead to a more efficient allocation of heritage resources.

Fourthly, private owners of heritage property will commonly have some degree of monopoly power. A private monopolist, acting to maximize profits, will charge a fee higher than is socially desirable and as a consequence restrict the level of visiting to a socially suboptimal level. Some form of government action may then be necessary, such as providing a subsidy the payment of which would be contingent upon the monopolist meeting a specified minimum visiting rate.

The final area of potential market failure in the provision of heritage benefits, centres on the discount rate used in project evaluation. Private individuals, whether as a result of imperfections in the capital market or of other causes, may attach too little importance to future benefits flowing from heritage preservation relative to the higher benefits in the short-run obtained from development of a site. Related to the question of possible divergences between private and social discount rates are issues of option and existence values, irreversibility, and merit goods. These issues were also discussed in Chapter 1.

An exercise which involves identifying different potential sources of market failure and discussing them at some length may give the reader the impression that the private market fails almost completely in the provision and use of heritage property. The authors are anxious to avoid conveying this impression. There are some outstanding examples of heritage preservation, like Ghiradelli Square in San Francisco and Larimer Square in Denver, which represent innovative private entrepreneurship. Moreover, even when areas of significant market failure can be identified, there is no guarantee that government action will lead to a more efficient allocation of society's resources.

In general, however, there is sufficient evidence of market failure to justify an active role being taken by government in heritage preservation. The remainder of the study analyses policies which aim by various means to subsidise heritage preservation activities undertaken by private persons (or firms), or which represent some

form of direct government regulation of heritage property including government acquisition. The analysis of market failure in heritage preservation is important, since the choice of the appropriate policy instrument(s) is largely dependent upon the type(s) of market failure.

In Chapter 2, the impact of heritage controls on the land market was discussed. Several important conclusions were drawn from the analysis. The small amount of land involved in heritage control means that such controls will have little effect on the overall land market. The effects are likely to be confined to the property directly concerned in control, and sometimes to surrounding properties. The imposition of controls may increase or decrease the value of affected properties. The imposition of heritage controls which prohibit certain forms of development does not always lead to the property being less valuable to a private owner.

The issue of compensation for property owners subjected to heritage controls is more subtle than many writers appear to have recognized. The mode of operation of the heritage control authority is critical to this issue. If the authority follows a consistent policy (which does not include compensatory payments) so that operators in the land market can form reasonable expectations of the likelihood of the imposition of heritage controls on various properties, then market property values will reflect these expectations. In these circumstances, the *status quo* of the property rights to the option to preserve a heritage item (prohibit development) are clearly understood by the market to be vested with society and compensation ought not to be paid.

If on the other hand a heritage control authority is inconsistent in the application of heritage controls, or significantly changes its policy at some point in time so that unexpected and hitherto unlikely decisions are made, there is a case for compensation. Such action by a heritage control authority is likely to have a significant impact on property values at the time of announcements since they could not reasonably have been anticipated by the market. In practice, though, it would be very difficult for various reasons to establish the correct compensation due to a particular individual, especially when individuals have a considerable incentive to overstate the amount of compensation they should receive. Thus an important function of heritage control authorities should be to provide the public with adequate information about their oper-

ations and to follow a consistent policy, so that individual participants in the land market can form reasonable expectations.

In Chapter 3, we analysed the use of income tax incentives as a means of subsidising both donations of heritage property and the restoration and preservation of such property by private individuals. Two forms of tax incentive were examined — the current Australian system of deductibility from taxable income of heritage donations, and a tax credit scheme which has been proposed as a replacement for the current scheme. Under the current scheme of income tax deductibility, the size of the incentive is a direct function of the marginal tax bracket of the donor, with high income donors being given a larger incentive to make donations. On the other hand, the incentives offered by a tax credit system do not discriminate between donors in different marginal tax brackets. Donations of equal value receive the same effective subsidy providing that a donor has a positive tax liability from which to deduct the tax credit. It would be desirable to have carry-forward provisions, preferably with an interest rate adjustment, so that the full incentive would continue to apply if a donor's tax liability was zero in some years. Also, if income tax incentives for heritage preservation continue to be offered, the current restriction confining the tax deductibility to heritage property owned for less than one year prior to donation should be abolished since it discriminates against the preservation of a large amount of heritage property.

The present income tax incentives in Australia, unlike those in some other countries, apply only to donations of heritage property and not to outlays made by private owners for conservation and restoration of heritage property. Usually, it will be more efficient from society's viewpoint to encourage restoration and operation of heritage property by private owners, than to incur the capital and administrative expenses of operating donated property. In the authors' view a strong case exists for extending the income tax incentives, preferably under a tax credit scheme, to apply to outlays made by private owners for conservation and restoration of heritage property. Eligibility for the tax incentive should be contingent on the quality of the conservation and restoration work meeting specified standards, and on a minimum visiting requirement (if the nature of the heritage property is such that public visiting is socially desirable).

Empirical research work conducted in the United States seeks to

measure the tax-defined price elasticity of charitable donations and to determine whether tax deductibility of these donations is a cost-effective measure. The results from this research suggest that tax deductibility for heritage donations is probably a cost-effective measure insofar as the tax revenue foregone by Treasury is less than the additional heritage donations induced by the income tax incentives. The cost-effectiveness of income tax deductions depends on the tax-defined price elasticity of donations; the higher the elasticity the greater the cost-effectiveness. Thus, to improve cost-effectiveness the government could attempt to raise the price elasticity of donation. For instance, it could publicise specific conservation projects and also publicise the fact that donations for such projects were tax deductible.

In Chapter 4 the use of rate reductions as a conservation incentive was discussed, and compared with the use of direct subsidies. It was concluded that if the conservation program is locally based then direct subsidisation is more cost-effective than rate reduction as a heritage preservation measure. If, however, the conservation program is nationally based then subsidy and rate reduction programs are equally cost-effective and the choice needs to be made on other grounds. As with conservation incentives based on income taxation, the limit of an incentive offered under a rate reduction scheme is the size of the rate bill. There is no such limitation on direct subsidisation and this, together with the greater flexibility available in using direct subsidies, leads to the conclusion that an incentive program based on direct payment of subsidies is preferable. Moreover, overseas research suggests that rate reductions are ineffective in altering private land use decisions to any significant extent. There is thus little role for rate reductions in a heritage conservation program.

The use of direct subsidisation was evaluated in greater depth in Chapter 5. Subsidisation has a role in two areas. Firstly, it can be used to induce the initial conservation of heritage items, and secondly, it can be used to assist the maintenance and operation of heritage exhibits. In the latter role it provides a policy instrument for inducing the socially optimal level of use (visiting) of a heritage exhibit. The phasing out of Estate Duty legislation is likely to remove a fairly cost-effective incentive for donation. In order to retain such property in heritage condition a replacement incentive may be required. Such an incentive could take the form of a lump

sum or annual grant in return for a guarantee of donation of the property at the owner's death. In some cases, especially where commercial heritage use is to be made of property after restoration, this form of subsidy may be inappropriate, and low interest loans are likely to be a more appropriate means of assisting this class of owner to preserve his property. For a heritage exhibit already in operation, it was shown that a per visitor subsidy could be used to assist the private owner in covering his costs, at the same time ensuring that the socially optimal level of use was made of the exhibit.

A major advantage of direct subsidisation is that it provides very flexible means of assistance. Other means of providing incentives, e.g. using the income tax system or reducing rates, are by comparison very rigid and cannot be readily altered to suit different situations. The fact that direct subsidisation can be used to ensure the optimal utilization rate of heritage property, whereas the other subsidy schemes cannot, is a further factor in favour of direct subsidisation as the preferred policy alternative for providing conservation incentives.

In order to maximise the effectiveness of direct subsidies, it is necessary that any conditions placed on the granting of the subsidy, such as restoration standards or visiting requirements, be adequately enforced. It is also important to ensure, as far as possible, that subsidies are directed to projects which would otherwise not have been undertaken. In this latter respect, direct subsidies have a further element of flexibility not found in income tax incentives or rate reductions.

Chapters 6, 7 and 8 of the study focus on 'regulatory approaches' to effecting the preservation of heritage property, as an alternative to fiscal and monetary incentives. Chapter 6 discusses the use of zoning and conservation easements to safeguard heritage property. The crucial issues here are whether the imposition of heritage zoning controls exert a significant influence on land values, and if they do, whether the affected owners should be compensated (taxed) for the reduced (increased) property value. Based on the discussion of the land market in Chapter 2, it was concluded that a zoning approach to heritage conservation, based on compensation payments, was not an efficient means of conserving heritage property. While it is difficult enough to establish whether compensation ought to be paid, it is even more difficult to determine the correct

amount, since it depends on individual expectations and utility functions.

These criticisms also apply to the use of schemes involving transferable development rights as a conservation mechanism. Such schemes, which are evaluated in Chapter 7, have recently been proposed as a replacement for zoning and also for use in preserving specific buildings of heritage interest. Transferable development rights schemes have further disadvantages which the authors consider render them even less suitable than compensatory zoning as a conservation mechanism. Defining the transferable 'development potential' of a site in quantitative terms is essentially arbitrary, and requiring developers to pay for this development right for use on their property is likely to impose capital losses on them at the time of announcement of a transferable development rights scheme. In effect, the cost of heritage conservation would be largely transferred to one group in society rather than distributed over the whole of society. A further criticism of the use of transferable development rights as a heritage conservation measure is that the amount of compensation paid (i.e. the price received from the sale of the development rights) may bear little relationship to the true amount of compensation payable since it will be largely determined by the demand for development in the area where the space is to be used. For these reasons, the implementation of a comprehensive transferable development rights scheme as a conservation mechanism seems neither warranted nor desirable.

The final conservation mechanism, examined in Chapter 8, was for the government to acquire and manage heritage property on behalf of society. In Chapter 1 this was seen as the appropriate means of conserving property in situations of complete market failure. For example, where the owner of a heritage property cannot stop people who do not pay an entry fee visiting the property, the government will need to acquire and manage the property if it is to be preserved. The operation of the heritage property will be financed from consolidated revenue rather than by user fees.

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Heritage Conservation in Australia

Market forces, by themselves, are unlikely to bring about the preservation of as many of our heritage properties as we would like.

Nor are we likely to be able to enjoy the benefits of our heritage properties to the extent that most in our society would wish them to be enjoyed if we leave all the problems of access and upkeep to the forces of a market-based economy.

Market solutions are also unlikely to give enough weight to the benefits to future generations of preserving heritage property.

This book examines the reasons why private owners may neglect to preserve heritage property or to make it available for public benefit, and assesses various measures that might be employed to change this situation.

While justifying the involvement of governments in heritage conservation the book gives examples of innovative private market initiatives and of instances where government intervention may be ineffective.

It considers various kinds of policy measures which might improve our record of heritage conservation.

The measures outlined include land market controls, income tax incentives, rate reductions, subsidisation and various types of regulatory controls.

These policy alternatives are examined according to their effectiveness in dealing with the particular circumstances of each item of heritage property.

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