



# An economic case for land reform

Douglas C. Macmillan\*

*Department of Agriculture, 505 MacRobert Building, University of Aberdeen, AB24 5UA, 581 King Street, Aberdeen, Scotland, AB24 5UA, UK*

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## Abstract

Land reform is concerned with intervention in the prevailing pattern of land ownership, control, and usage. In the case of land, which is freely traded in the open market, the UK Treasury supports government intervention when some form of market failure has been diagnosed, and if measures to correct for market failure can be shown to be cost-effective. Although market failure has been the subject of intense research effort in the field of environmental and health economics, its potential role in land markets has not been examined. With the prospect of new land reform legislation following closely on the creation of the Scottish Parliament, there is therefore, a need to explore the economic case for intervention in the land market based on market failure. The conclusions, based on the four case studies, are first that market failure is found to be present in the ownership and management of land, and second, that much could be accomplished without the need for new legislation or significant public financing. Although this paper has focused on Scotland and the context for land reform demands differs throughout the world, one conclusion of global relevance is that market failure, rather than the free-market per se is a more likely cause of social unrest over land. This can perhaps be best illustrated by local land monopolies and the barriers that they can create for poorer members of society seeking access to the land resource. © 2000 Elsevier Science Ltd. All rights reserved.

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## Introduction

Land reform is concerned with intervention in the prevailing pattern of land ownership, control, and usage (World Bank, 1975). In many countries the pressures for land reform have arisen as a result of food scarcity and rising population pressures; in others political ideology or an historical sense of injustice have driven the land reform process. For example, in Zimbabwe, an ambitious land reform programme aims to redistribute arable areas originally seized from native people by white settlers in the last century, away from commercial farmers to poor black farmers. In South America, native peoples are fighting to re-establish tribal rights over land expropriated by plantation owners and ranchers, and in Eastern Europe the rapid adoption of a free-market policy has led to the re-privatisation of state-owned land.

In Scotland, the origins of the land reform movement are firmly rooted in the 19th Century, when the same concerns about social equity, poverty and colonialism,

which find resonance today in parts of post-colonial Africa and South America, were very much in evidence. The passing of the Crofters Act more than 100 years ago by the British Parliament, which gave small tenant farmers (crofters) greater security of tenure and control over rent payments, is regarded as the 'high-water mark' of the land reform movement. In a British political context, apart from a brief period following World War I, when an effort was made to create new, small holdings for returning veterans, land reform was not important, and consequently did not attract much attention at Westminster. However, following the creation of the Scottish Parliament in 1999, land reform has once again emerged on to the political agenda, with new legislation to assist community land purchase expected early in the Parliament's first-term (Scottish Office, 1999).

Although land reform is inextricably linked to issues of rural development and employment, the economic case for land reform has not been fully explored. In Scotland, as in the rest of the UK, land is a freely traded commodity and regardless of perceived historical injustices, the rationale for government intervention in land is based on neo-classical concepts of economic efficiency and market failure. Markets will only allocate resources efficiently if

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\* Tel.: 01224-274128; fax: 01224-273731.

E-mail address: d.macmillan@abdn.ac.uk (D.C. Macmillan)

a range of institutional arrangements prevail, such as perfect information and the absence of externalities. Where these arrangements are incomplete market failure will occur.

Although market failure has been the subject of intense research effort in the field of environmental and health economics, its potential influence on land markets, and the land reform debate has not been examined. The purpose of this paper is first to demonstrate the presence of market failure in land and second, to identify relevant cost-effective strategies for government intervention. Rather than attempt a general treatment of market failure in land, the paper concentrates on four case studies of current importance in the land reform debate: red deer management; community land purchase; forestry replanting; and the concentrated ownership pattern of Highland estates.

### Historical context

Although contemporary issues drive the current debate, the prominence of land reform in Scottish political life is perhaps best explained by the impact of the 'Highland Clearances' on the Scottish psyche.<sup>1</sup> Following the final defeat of the Jacobite cause in 1745 at Culloden,<sup>2</sup> and the demise of the clan's military function, clan chieftains turned their attention to wealth creation by adopting new land-based enterprises. The most profound change on the local population was the introduction of sheep at the expense of the traditional cattle-based system.

Sheep ranching required the skills and labour of only a few shepherds, hence thousands of people were evicted from their traditional lands. Some emigrated to the 'New World', while others sought work in fast-growing industrial towns and cities. A substantial number were also settled in coastal areas, where each family was allocated a small strip of land with access to the sea.<sup>3</sup> However, the amount of land allocated was rarely sufficient to support a growing population, and families had to supplement their income through employment in one of the landowners' business ventures.

As the prosperity of sheep farming faded, the demand for Highland land for sporting pursuits (hunting and fishing), fuelled by the purchase of Balmoral by Queen Victoria in the 1840s, grew among wealthy Victorians. Land management concentrated almost exclusively on

the production of large numbers of game, especially grouse and red deer, for a hunting season which rarely lasted more than a few weeks. Although conflicts arose between local farmers and sporting estates, large-scale evictions were less frequent than had been the case with sheep farming.

The juxtaposition of a hedonistic gentry, with a peasantry facing poverty and hardship, did however, create economic, social and cultural tensions which led to the development of a land reform movement. In Ireland, which had experienced equally harsh social and economic conditions, the Irish Land Act of 1881 was passed which gave security of tenure to small farmers, and virtually eradicated the old estate system (Hunter, 1976). Enthusiasm for land reform spread to the Scottish Highlands and in 1886 the Crofters Act was passed, which gave crofters greater security of tenure and controls on rent payments.

The passing of the Crofters Act in 1886, was the most significant achievement of the land reform movement. During the period between 1911, when the Small Landholders Act (Scotland) was passed, and 1940, the government attempted to provide opportunities for new small holdings to be created from larger estates (Leneman, 1989). However, these opportunities were never fully exploited<sup>4</sup> and, in contrast to Ireland, large estates still dominate land ownership in Scotland. For example, Wightman (1996) estimates that over 50% of the land area is owned by fewer than 400 individuals or companies.

Today the Highland economy is in transition. The traditional land-based industries of agriculture and forestry are in decline, with new enterprises based on oil, tourism and fish farming taking over. However, the way land is owned and managed is still considered to be an important obstacle to sustainable rural development. Leading advocates of land reform have highlighted numerous aspects of the status quo which still require to be addressed by legislation, including the prevailing feudal system of tenure, restrictions on public access, and the primacy of sporting interests over local economic development.

### Land reform and market failure

Although concerns about economic development feature highly in the arguments of both land reformers and

<sup>1</sup> One could also argue that land reform provides the fledgling Scottish Parliament the opportunity to demonstrate its powers on an issue with broad popular support.

<sup>2</sup> Jacobites were supporters of the exiled Catholic royal family. Charles, the son of James VII of Scotland and II of England, led the Jacobite army to defeat at Culloden Moor in 1745.

<sup>3</sup> Known as crofts.

<sup>4</sup> Resistance from the House of Lords and from Treasury representatives in Scotland partly explains the failure of these policies (Leneman, 1989). However, it must also be recalled that with the creation of the Forestry Commission in 1919, the government provided financially pressed landowners with a less radical, and more lucrative, alternative for their land.

Table 1  
Institutional arrangements required for an efficient allocation of resources<sup>a</sup>

1	Markets exist for all goods and services
2	All markets are perfectly competitive
3	No externalities exist
4	There are no public goods
5	Property rights are fully assigned
6	All transactions have perfect information
7	All firms are profit maximisers and all individuals utility maximisers
8	Long run average costs are non-decreasing
9	Transaction costs are zero
10	All relevant functions satisfy convexity conditions

<sup>a</sup>Ref. Perman et al. (1996).

landowners, each have taken a different view of market economics. Many leading land reformers would appear to distrust the free-market system. One notable land reformer argued strongly for land nationalisation, believing that the market in land had helped to create gross inequalities in power and wealth (McEwen, 1981). By contrast, the Scottish Landowners Federation<sup>5</sup> would appear to have complete faith in the market system, for example by arguing that land reform is unnecessary because land is freely traded and hence the current distribution and the beneficial rights to land must be efficient.

However, neither analysis is entirely accurate. Current inequalities in land ownership patterns are as much a legacy of historical events and an archaic feudal property rights system, than a consequence of market forces. Of greater relevance to this paper, neither argument recognises the possible role of market failure to land reform.

The efficient allocation of resources in the economy through the market mechanism requires that a range of institutional arrangements prevail (Table 1). Few, if any, markets meet all these requirements and when this occurs 'market failure' can arise. For example, markets cannot control air or water pollution, because pollution is a type of negative externality. A negative externality is where some of the costs of production (poor air quality) are borne by people other than the producer (e.g. local people). Production of the good is inefficient (over produced) because the polluters do not have to meet all the costs of production.

Market failure is an important concept in neo-classical economics as it provides an important rationale for government intervention in markets. For example, the UK Treasury states that government intervention is justified where market failure is diagnosed, and the intervention

strategy is cost-effective in relation to the status-quo (HM Treasury, 1997). Although market failure has been the subject of intense research effort in the fields of environmental and health economics, its potential role in the land reform debate has not been examined.

In this paper the role of market failure is examined for four case studies: red deer and negative externalities; public goods and community land purchase; the monopoly powers of large Highland sporting estates. A special case of market failure, associated with government intervention in forestry, perhaps more appropriately termed 'government failure' is also investigated. These case studies have been selected partly because of their relevance to the current debate, but also because they demonstrate a range of inadequacies in the institutional arrangements governing land markets.

### Case study A: red deer

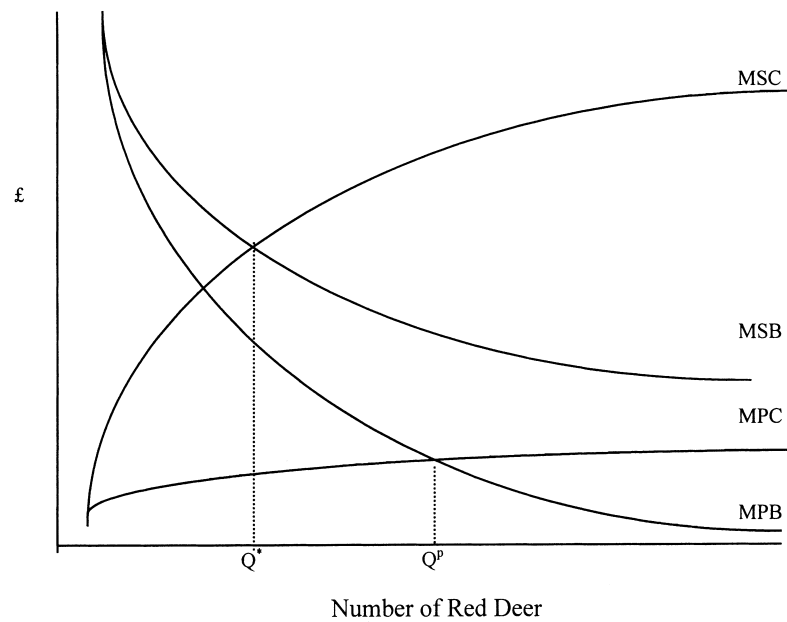
The traditional objective of red deer (*Cervus elaphus*) management in the Scottish Highlands is to maximise the number of trophy stags available for stalking<sup>6</sup>. Trophy stags are valued for their venison, but mainly for their antlers, with income from shooting directly related to the number and quantity of trophy stags shot annually. Owners therefore seek to maximise the number of trophy stags available for stalking by maintaining a high population density of deer. This has been achieved through a combination of underculling hinds, and by the provision of supplementary winter feeding. As a consequence, the Scottish red deer population has increased from 150 000 in the early 1960s, to over 300 000 in the 1990s (Youngson, 1995).

The ownership and management of large areas of the Scottish Highlands for deer hunting has proved especially irksome to land reformers, who view the use of land for hedonistic sporting purposes as a colonial inheritance which prevents development of the land for agriculture, forestry or tourism. While economists are not necessarily concerned with the motives for owning land, the costs which red deer impose on neighbouring land users, local communities, and society represent a form of market failure.

Although the right to hunt red deer on private land is assigned to private landowners, the cost of red deer damage are not necessarily incurred by the owners. Instead, deer damage affects other economic agents (both producers and consumers) and is a classic example of a negative externality. A negative externality occurs when the production or consumption decisions of one

<sup>5</sup> The Scottish Landowners Federation represent the owners of Scotland's largest estates and have been vociferous in their opposition to many land reform measures.

<sup>6</sup> Stalking refers to hunting red deer in Scottish mountains where the openness of the terrain requires a stealthy approach to the deer.



MSC = marginal social cost      MPB = marginal private benefit  
 MSB = marginal social benefit      MPC = marginal private cost

Fig. 1. Optimal red deer population.

agent adversely affect others, and where no compensation is made. The external costs of red deer management are many and varied, and include widespread damage to agricultural crops, over-grazing of in-bye land and hill pastures, damage to forestry crops through browsing and bark stripping, the erection of exclusion fences to protect woodlands, and over-grazing of areas which are important for the natural heritage.

Where negative externalities are present, the economically optimal red deer population will diverge from the market-determined population (Fig. 1). If only private costs and benefits to the estate owner are considered, the optimal red deer population will be relatively high ( $Q^p$ ), reflecting only the marginal private costs and benefits of the landowner. If social costs, including negative externalities, are considered then the socially optimal population ( $Q^*$ ) will be much lower<sup>7</sup>. Although no monetary estimate of this damage has been made at a national level, social costs are likely to run into millions, possibly hundreds of millions of pounds annually. For example, forest damage in Galloway, a region peripheral to the red

deer range in the Scottish Highlands, was estimated at £2 million per annum (Allison, 1990).

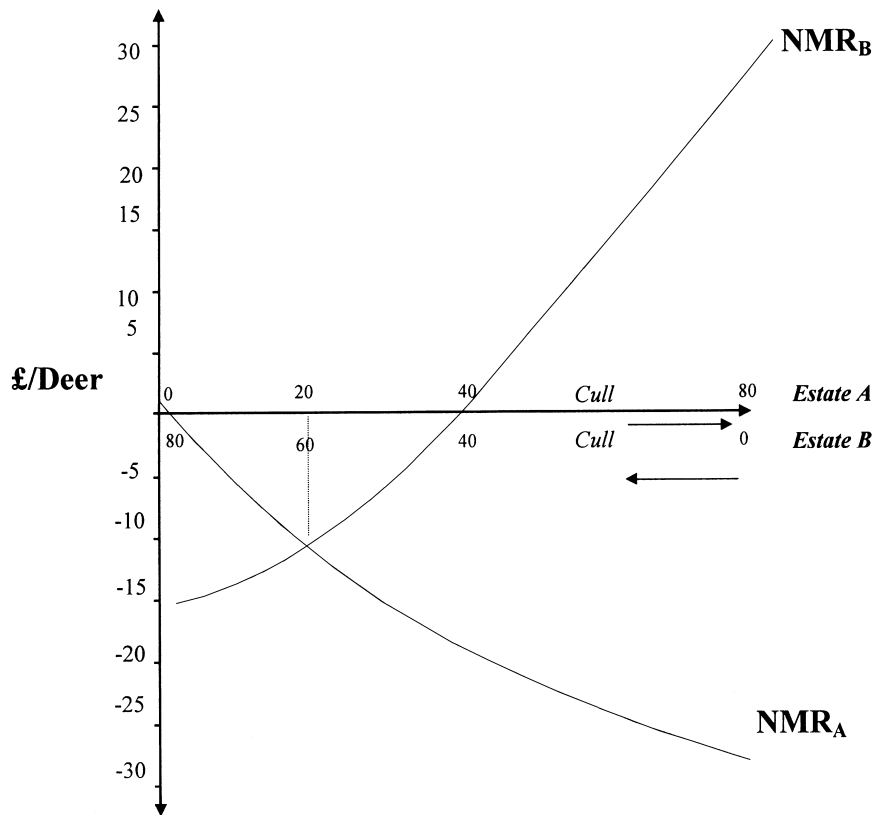
Coase (1960) showed how allocative efficiency could be achieved by internalising external costs through compensation agreements, but this has not occurred in the case of red deer because of high transaction costs. The only alternative available to the State and neighbouring land users is to exercise their right to shoot 'rogue' animals damaging commercial crops<sup>8</sup>. Although the State is empowered to recover the costs of culling operations from owners, it has not done so. Hence, sporting estates have historically had little incentive to control deer numbers, as they do not bear all the costs of the expanding population.

The current approach of the Deer Commission<sup>9</sup> is to rely on the voluntary principle, with landowners being asked to undertake a culling programme agreed through their local deer management group. Although over 50 such groups have been created covering the entire range of red deer in Scotland, recent evidence suggests that this voluntary approach has not been effective. For example

<sup>7</sup> For completeness, the social benefits of red deer are also included in Fig. 1. These are unknown but are likely to be small in comparison to the social costs, and relatively elastic with respect to deer numbers. For example, the enjoyment some individual tourists may get from seeing a herd of deer is unlikely to be heightened substantially as a result of observing 100 or 200.

<sup>8</sup> Under the 1996 Deer Scotland Act, these powers were also extended to the protection of the natural heritage, for example to conserve native woodlands.

<sup>9</sup> The Deer Commission is the government agency responsible for monitoring and controlling deer populations.



**$NMR_A$  = Marginal Net Revenue Curve for Estate A**  
 **$NMR_B$  = Marginal Net Revenue Curve for Estate B**

Fig. 2. Optimality of a tradable deer cull quota system.

in 1995/96 the hind cull was 2000 animals less than the 27 000 needed to prevent the population from increasing (Gordon-Duff-Pennington, 1997).

This situation has arisen primarily because the cost of culling hinds on a number of estates, exceeds the revenue obtained from venison sales. A more cost-effective approach would be to introduce a tradable enforcement obligation on estate owners which would legally require estates to meet a specific cull target. As in the case of pollution permits, the ability to trade obligations would ensure that culling was achieved at least cost to estate owners and the national economy. The obligation would ensure that the costs of culling were borne by sporting estates, and not by other land uses or by the tax-payer (effectively internalising the external costs of red deer management for sport).

Fig. 2 illustrates how a tradable culling obligation would be more cost-effective than a strict regulatory approach. Estate A and B are neighbouring estates, but for a variety of reasons face different net revenue functions for culling: Estate B is able to shoot up to 40 deer profitably, while culling can only be done at a loss on

Estate A. If each estate is required to shoot 40 deer to reduce the local deer population to a sustainable level, both estates would benefit if they trade quota up until the point where the marginal net revenue from culling is the same for both estates. In Fig. 2, this point occurs where marginal net revenue is negative (£-10/deer), with a cull of 20 on Estate A, with Estate B fulfilling its quota of 40 deer, plus a further 20 deer on Estate A. As the marginal net revenue function for B is negative, but higher than that for A to the right of this point, Estate A would have to offer compensation with the quota obligation. If the net revenue curves of both A and B were positive, trading would still be more efficient, although the culling obligation would have a positive value rather than a negative one.

Permits could be made available for different categories of animal (stag, hind, etc.), with the total number of permits determined by the Deer Commission. Deer herds roam over wide areas, hence it would be necessary to establish cull targets for estates through Deer Management Groups, with individual targets determined by land area and deer density. The State would be empowered to

redistribute permit allocations (including stag permits), away from those estates which consistently fail to fulfil their full quota to other estates, hunting clubs, or to the local community, with any associated costs being met by the original estate. Overall the State's role would be restricted to setting the annual cull obligation based on scientific criteria<sup>10</sup>, and the administration of the permit system for which a small charge could be levied per deer.

Permit systems typically exhibit dynamic efficiency. Hence, it is likely that the cost of culling would fall in the long term, as estates became more cost-efficient at culling, (for example, by selling hind stalking to a broader client base than for trophy stags). However, it is likely that land values will fall because most estates will either have to incur higher culling costs than they do currently, or be forced into broadening their client base to meet their quota target. The latter option will reduce costs but would undermine the price premium sporting estates enjoy on the grounds of social exclusivity. (In the Scottish Highlands, stalking is typically restricted to the owner, his/her personal friends, and to wealthy clients who pay in excess of £1000 for a trophy stag).

The introduction of obligatory quota system would, therefore, have wider ramifications for land reform and the economic development of rural areas. For example, lower land prices would generate more opportunities for diversifying land ownership in Scotland through community land purchase. Investment in forestry and small-holding would also be favoured by a fall in sporting estate values.

There would also be other benefits to the local economy. Higher levels of culling and a broader client base would also help create more jobs and economic activity in rural areas due to increased expenditure on accommodation, supplies and other services associated with hunting. Also, if opportunities to hunt became more widely available due to the quota system, it can be envisaged that poaching, and the problems poaching creates for scientific management and animal welfare, would diminish.

### Case study B: community land purchase

The relationship between rural communities and owners of large estates has often been tense and acrimonious. This can be attributed to the control which the latter exercise over land-based development opportunities as the major landowner and feudal superior. Some

rural communities have responded to this impasse by launching a public appeal to buy the local estate when it has come on to the market. For example, the islanders of Eigg (a Hebridean island off the west coast of Scotland) and the crofters of Assynt (in the north-west Highlands), have both succeeded in purchasing their land after highly successful public fund-raising campaigns.

Many people who donate to such land purchase appeals do so, even though they will not directly benefit. As in the case of donations to environmental charities, altruistic concerns tend to stimulate giving. For example, a study conducted during the Isle of Eigg appeal, found that over 90% of people who donated funds to the appeal were anxious to protect the culture and way of life of the islanders, despite having never visited the island, nor likely to do so (Macmillan et al., 1999).

However, public appeals do not produce an optimal level of community ownership for two reasons. First, public appeals for community land purchase are vulnerable to free-riding behaviour. In other words, some individuals will not contribute to an appeal for funds even when they have a positive willingness to pay because they expect that others will contribute sufficient funds to purchase the land. Second, charitable appeals face very high transaction costs associated with information provision, contractual details concerning ownership rights, and the actual collection of donations. As most rural communities do not have the experience and fund-raising skills of environmental charities, these transaction costs are likely to be a major obstacle to concluding successful purchases.

Recently the government has introduced or proposed several innovations to assist community land purchase. In 1997, it established the Community Land Unit within Highlands and Islands Enterprise, to provide advice and support. More recently, it has proposed new legislation to give rural communities more time to bid for land when it comes on the market, and a Scottish Land Fund, financed with revenue from the National Lottery, as a means to aid community 'buy-outs' (Scottish Office, 1999).

Although the creation of a Land Fund will avoid the drawbacks which private donations face in terms of free-riding and high transaction costs, direct state intervention in land purchase is likely to perform less well with respect to targeting of financial assistance. Individual donations are driven by personal preference which, in the context of community land purchase, is likely to be influenced by factors such as location, historical context, and management objectives. By eschewing the market-oriented approach of charitable giving in favour of a Land Fund, there is a risk that the mechanism will become heavily politicised and subject to sustained criticism from various quarters (e.g. the Scottish Landowners Federation, and presumably communities which do not receive funding).

<sup>10</sup> Just what the cull should be is of course debatable. In an economic sense, the optimal cull would be where the marginal social costs of red deer equal the marginal social benefits. Currently the Deer Commission is attempting to apply the scientific criteria of 'carrying capacity' to determine desired cull rates.

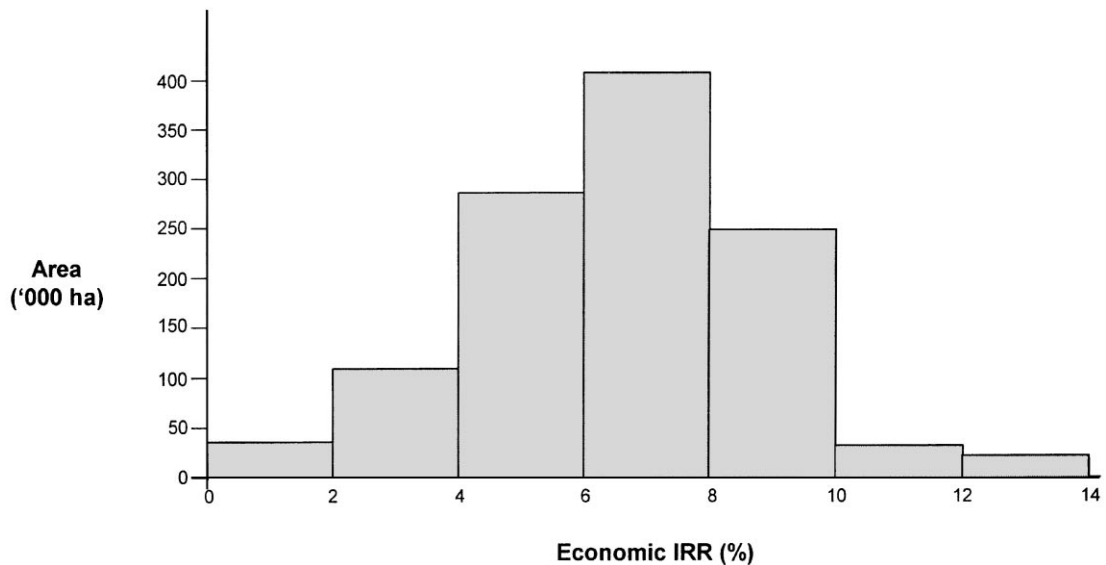


Fig. 3. Economic internal rate of return (IRR) from replanting commercial forests in Scotland.

A more market-oriented solution would be the establishment of a charitable trust to organise and administer land purchase appeals on behalf of rural communities. Although it would have a distinctly different remit (and Board) from the National Trust for Scotland, a Community Land Trust could operate in a similarly successful fashion, with land purchases determined by public donations, rather than government officials. Some public funding of the Trust would be justified on the grounds of free-riding, but this should be directed towards reducing administration and transaction costs rather than preferentially subsidising the purchase of one or two selected estates.

### Case study C: forestry replanting

In the current land reform debate, it is often overlooked that a government agency, the Forestry Commission (FC), is the single largest landowner in Scotland with approximately 1.6 million acres of land (Wightman, 1996). Till the 1960s, the primary aims of the FC were to establish a strategic reserve of timber in the case of war, and to create employment in rural areas. More recently forestry investment, including the replanting of harvested stands, has been justified on the grounds that woodlands provide a range of non-market benefits such as recreation, landscape enhancement, carbon storage and habitat creation. In the private sector, planting subsidies, administered through the Woodland Grant Scheme (WGS), are provided to encourage the provision of these non-market benefits. Although consistent with economic theory in the sense that state finance is being used to increase the supply of woodland benefits which the mar-

ket would not otherwise provide, there is little evidence that forestry investment decisions have been guided by economic efficiency.

The government test discount rate for forestry investment, when non-market benefits are included, is currently 6% (HM Treasury, 1997). A cost-benefit analysis (Macmillan, 1993) of replanting commercial forests, which incorporated monetised values for a range of non-market benefits, revealed that almost 40% of the forest area in Scotland would fail to achieve this rate (Fig. 3). These forests are characterised by poor financial returns from timber, remoteness, and low or even negative values for non-market outputs such as recreation. Replanting these forests is therefore not justified in economic terms and would represent a case of government failure in the land market.

An economically efficient option for the FC would be to cease forestry activity in these areas and place the land on the open market (after harvesting the timber). However, as the land has no economic value, and with demand from private forestry investors likely to be limited<sup>11</sup>, one option would be to give the land to local communities for a nominal sum. The transfer of land from FC ownership would not only contribute significantly to the government's aim of diversifying land ownership in Scotland, it would constitute a saving to the tax payer.

<sup>11</sup> It can be expected that demand for this land would be fairly low if WGS funds are withheld. As the rationale for grant support for private planting is the provision of non-market benefits, there would be strong argument against WGS funding for replanting uneconomic forests.

### Case study D: local land monopolies

Scotland has one of the most concentrated forms of land ownership in the world, with almost 50% of the total area owned by just over 600 individuals, companies or trusts (Wightman, 1996). As much of this land is held in the form of large contiguous estates, often over 10 000 ha in size, a single owner can hold monopoly power over land use and development in an entire locality. For example, a local developer wishing to purchase land for housing in a specific location often has no alternative but to approach the local estate. Depending on circumstances, the estate owner may refuse to sell or to sell, only at a very high price.

Where specific areas of land have been identified as essential for economic development, local authorities have been able to use their powers of compulsory purchase. However, to date these powers have been used only sparingly, for example in road building where there are no alternative routes. This is partly because the process is time-consuming and expensive, but also because of the rather limited 'interpretation' by local government placed on both 'essential economic development' in the context of monopolistic control of land.

Economic development is multi-faceted, and it can be argued that in rural areas relatively small-scale agricultural, forestry and fish farming developments are essential to economic development, providing jobs and stimulating the local economy. Similarly, the pervasive effect of monopoly powers on land price and availability is not fully recognised. Unlike other factors of production (or most consumption goods for that matter), land is spatially defined and strictly limited in supply, hence it can be argued that all land is unique. That is, no two hectares of land share the same characteristics in terms of location, bio-physical potential, or indeed cultural heritage. For example, a rural community looking to purchase the local estate would not be very interested in buying any other Scottish estate!

A broader interpretation of both economic growth and monopoly power could justify greater use of compulsory purchase, for example to bring about community ownership as the government has suggested. Indeed, there is no reason why it should not be exercised on behalf of individuals with proposals for small-holding, forestry and tourism enterprises. One major disadvantage of relying on compulsory purchase is that the current process is time consuming and expensive. The Scottish Parliament should therefore consider the creation of a Land Commission with specialist staff, to process applications for compulsory purchase in a cost-effective manner.

A pre-condition for a monopoly to develop is the existence of an effective barrier to entry. In terms of land in Scotland, this is achieved in part, by the sheer size of estates which enables only the very rich to bid. However,

land reformers have long suspected that there are other barriers. For example, some very large estates have been bought and sold in a veil of secrecy, despite considerable public interest and well publicised bids by local consortia involving public agencies, conservation groups and local communities (e.g. Mar Lodge Estate and Glenfeshie in the Cairngorms). In other cases, estates have not been sold to the highest bidder (e.g. Gaick Estate) because the management objectives of the prospective owners were not compatible with sporting interests. A Land Commission could also be given powers to investigate anti-competitive practices in the sale and purchase of large estates.

Although the wider application of compulsory purchase through a specialist Land Commission will help reduce land-based barriers to development, it is unlikely to bring about a substantial diversification in ownership in the Scottish Highlands. A more strategic approach is also required to encourage a less concentrated pattern of landownership. With more landowners, there would be greater competition among landowners, hence lower land prices and more opportunities for economic growth. A mandatory deer culling system would, by reducing the demand for large sporting-type estates, allow more land to come on to the market. Another option would be to remove the anomaly in the Succession (Scotland) Act 1964, which allows land to be passed directly to a single successor. Unlike other property, the spouse and children have no right to a legal share, and as a consequence, large estates have not had to be divided into smaller parcels (Callander, 1997).

### Conclusions

The overall conclusions of this paper, based on the four case studies examined are first, market failure is present in the ownership and management of land in Scotland and second, past state intervention has not been very effective. Inadequacies in existing legislation have been identified or, in the case of red deer control, the government has chosen not to exercise their powers to the full. Forestry replanting, represents a special case where direct state intervention is actually responsible for failure in the land market.

As the political landscape shifts to favour land reform measures, the analysis presented in this paper suggests that much can be accomplished without the need for new legislation or additional public financing. For example, the introduction of mandatory deer culling quotas would be more cost-effective than current arrangements and would, by reducing the demand for sporting land, offer opportunities for diversifying landownership in Scotland.

Although this paper has focused on Scotland and the context for land reform demands differs throughout the



world, one conclusion of global relevance is that market failure, rather than the free-market per se is a more likely cause of social unrest over land. This can perhaps be best illustrated by local land monopolies and the barriers that they can create for poorer members of society seeking access to the land resource.

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