

# CHAPTER 5

## ASPECTS OF LVT

To prove legal title to land, one must trace it back to the man who stole it.

David Lloyd George (1863–1945):  
British Prime Minister, 1916–1922

### 5.1 Causes of Land Value

In chapter 2 the relationship between urban land values and location is shown to be fundamental, but within that context it is worth noting how land in general or sites in particular may acquire value. The primary causes affecting land value are:

1. Natural advantages
2. Infrastructure
3. Population Density (agglomeration)
4. The Planning System
5. Security.

It's important to note that, where the causes of land value are concerned, there is a big difference between urban land and agricultural/rural land. With urban land, causes two to five certainly apply but the first

cause, natural advantages, is considerably diminished if not totally absent. With agricultural land, natural advantages are of course of primary importance, while infrastructure is less so, and population density of no significance. Rural land values are predominately due to the providence of nature, whereas urban land values are essentially man-made.

The influence of the planning system has an effect on both urban and rural land values; a rural site, if designated for urban residential use, will gain enormously in value at the stroke of a planner's pen. It is this artificial 'planning gain' that has long been the subject of much discussion. Natural advantages are exceptional in that they are a given; they are relatively unchanging. All the other causes are man-made and are subject to variation.

Where infrastructure is concerned, it is usually assumed that any addition will give rise to a corresponding increase in land values, and this is generally the case, but there are situations where its introduction may reduce land values, for instance to properties adjacent to a new bypass or under the flight path of a new airport runway. Also, where planning is concerned, residential property values may well decline where permission is granted for some adjacent industrial or commercial project. However, the general trend for land values to rise due to any or all the above factors still holds true.

Rather than the value of a site being due to any one cause, it is more likely to be a combination of causes that go towards the demand to occupy that particular site. One thing is certain: the demand for a site

determines its value and in the urban context that value varies according to its location. Adam Smith, in a chapter on the location of housing, noted that:

Ground rents are generally highest in the capital, and in those particular parts of it where there happens to be the greatest demand for houses, whatever be the reason for that demand, whether for trade and business, for pleasure and society, or for mere vanity and fashion.<sup>1</sup>

## 1. Natural Advantages

These causes are in place at the outset as they are provided by nature and simply need to be recognised in order to be exploited. The earliest settlers would establish themselves on the most fertile land with a fresh water source, or at the tidal limit, at the confluence of rivers or where known underground resources were easily accessible. The benefits of natural advantage are more evident in an agrarian situation, or in an industrial context where it is a question of the exploitation of underground resources. In this latter case the effect on land values is indirect, as I explain in the next chapter under Industrial Land Values. With later urban development these natural advantages became overtaken by the man-made advantages of infrastructure and agglomeration.

## 2. Infrastructure

As the community grows, the need for communal facilities increases proportionately. In the earliest stages

these requirements are pretty basic, a village well, a schoolhouse, a bridge. Proximity to these facilities increases land values. In the later, more developed community, the requirements become more advanced: sewerage systems, street lighting, water, gas and electricity services, transport systems etc. All of these facilities may be described as infrastructure, which falls into two types according to how it is financed—publicly or privately. Public infrastructure is financed and maintained through taxation. Private infrastructure is financed through private investment capital and maintained out of profits from charging for the service. In either case proximity of a site to any of these facilities would normally increase its value. However, there are exceptions to this rule, as mentioned previously. Where the land values are adversely affected by new infrastructure, any land-value based tax would be proportionately reduced.

In Britain in the 19th century, the railways were a highly lucrative private investment but were eventually rendered uneconomic with the advent of the internal combustion engine and the growth of road transport. However, having become an integral part of the economic structure of the country they had to be nationalised, in 1948, to maintain the service, on which the country had become dependent. The railways could not be allowed to die away, as had the canal system when superseded by the railways. The subsequent attempt at re-privatisation has never really worked, and the railway system is still heavily subsidised by the taxpayer. Those who have consistently profited from the railways throughout the whole period are the

landlords close to the stations, whose property values have constantly increased.

Also part of infrastructure are services such as those provided by the NHS and the school system. When buying a house, parents will pay extra to be in the catchment area of a good school. This increases the economic pressure locally, which is reflected immediately in higher house prices.

### 3. Population Density (agglomeration)

The simple fact of population presence increases land values. Where all other factors remain unchanged, any population increase will increase the economic pressure within a community. Those who move into a new community need not be active ‘producers’; they may do so simply for residential purposes, but no matter; their mere presence will increase the demand for goods and services, and those who provide the goods and services will prosper and compete for the best sites on which to operate, which will inevitably increase the site values. If the new residents are also working elsewhere within the community, their work will add to the co-operative surplus and the overall wealth of the community. Increases of population due to immigrants willing and able to work will always increase the general level of prosperity. In his book *The Future of Capitalism*, Paul Collier notes,

The gains from agglomeration are generated by interactions between masses of people, and so they are a collective achievement that benefits everyone.<sup>2</sup>

Agricultural and industrial land are exceptions in this context. As shown in the diagrams in Chapter 2, the agglomeration effect is only significant in an urban context. The ‘agglomeration’ of a hundred farms over a vast area would not produce an agrarian economic centre due to location. The location value of farmland would vary only according to proximity to markets, abattoirs, grain storage facilities etc.

#### 4. The Planning System

The planning system represents a massive but necessary interference with the natural development of urban land values. Unrestrained organic growth gave rise to the chaotic squalor of the great industrial cities of the 19th century, and in the 20th century, to the urban sprawl and ribbon developments of the inter-war years; house builders simply developed on each side of existing roads; the easiest option for them. This was seen as a wasteful and inefficient use of land, and attempts were made to bring it under control.

The Housing and Town Planning Act of 1909 was the first of a series of measures that culminated in the 1947 Town and Country Planning Act, which introduced the requirement of planning permission for any development, in particular for any proposed change of use. This gave rise to the phenomenon of ‘planning gain’, where a change of use permission could significantly increase the value of a site, with this increase accruing to the benefit of the landholder.

In 1955 the protective ‘green belt’ zones were introduced around major city conurbations, so

magnifying the issue of planning gain, when a site was re-zoned.

Where land values are concerned, the old natural organic growth at least provided a comparatively smooth transition between different use values, whereas the imposition of zoning introduced very abrupt changes of value on either side of an artificial boundary. On the drawing board, planners may re-allocate an area for a different use or extend a boundary and so alter the potential values of the sites affected.

The differences of use-value vary considerably. Between say light industrial and retail uses the difference may not be great, but where it involves re-zoning of rural land previously within the green belt, for residential development, the change can create enormous differences—by as much as 275 times.<sup>3</sup> This betterment gain is partially redeemed under the present Community Infrastructure Levy, depending on the tariff rate set by the local authority, which is known in advance by the developer. This system is arguably better than the previous 106 agreement, where the payment was negotiated, but it is still only a one-off payment and does not take into account ongoing rental values in the future.

Under an LVT system I would suggest a more productive process. For example, when a change of green belt zoning for housing development is intended, the local authority could compulsorily purchase the land, close to existing use value, with compensation for disturbance to the farmer/landowner. The land could then be sold on the open market for residential development to the highest bidder. The developer would

buy the land in the full knowledge of the future LVT obligation. In this way the farmer would get a fair price plus compensation, the local authority would get the best competitive price with an assured tax revenue base in the future, and the developer would acquire a valuable site at his own price. Any need to appease local residents with particular amenities could be financed from the increased tax revenue.

### 5. Security

All communities require security. The vast majority of people throughout the world want a situation where they are able to live and work peacefully in a secure environment. Except during the period of the ‘troubles’ in Northern Ireland, in the UK we have rather taken for granted the security we enjoy. Lack of security and the rule of law affects the economic circumstances of any community. There are now various official websites showing heat-maps of high crime areas, both nationally and locally. Absence of security discourages inward immigration and investment, impedes productive activity and reduces any desire of outsiders to locate in the community. This of course lowers land values.

An interesting case was in Rio de Janeiro where, from 2008, the authorities conducted a policy of ‘pacification’ in certain slum *favelas*, which had become crime-ridden no-go areas. The police moved in and systematically cleared out the drug-pushers and criminal gangs and maintained permanent street patrols. Once the pacification was seen to be successful, residents and traders moved back in, with the result that property

values increased rapidly.<sup>4</sup> Some favelas were in good locations with stunning views over the ocean but had lost their economic value due to the lack of security.

## 5.2 Ownership of Land

The exercise of power in economic affairs invariably derives from ownership: whoever owns an enterprise or organisation will decide on the laws and procedures that govern it. Whoever owns the elements of production will set the conditions that lead to that production. This applies particularly to land, which is one of the two original elements of wealth creation, the other being labour. Except in slave states, it has always been accepted that we own our own bodies and our own labour, but we do not all own our own land, or perhaps what is more pertinent, the access to land.

One of the prime causes of poverty began with the original acts of dispossession, the separation of labour from access to the land by those who claimed exclusive possession—usually by force of arms. This original expropriation has been the cause of much subsequent poverty, making men beholden to the owners of one of the two components of wealth creation, with only their labour to bargain with. The landholders held the whip hand and drove a hard bargain, resulting in the return to labour, in the form of wages, being forced down to subsistence levels. In his book *The Possibility of Progress*, Mark Braund sets it out clearly:

Those who own land are best placed; those who own capital are well placed, but those who only

have their labour to sell can only expect minimal reward.<sup>5</sup>

The great advantage to the landlords was that, by default, they had control over large numbers of dispossessed labourers, whereas the labourers were disorganised individuals, set in competition with each other for the choice of either working for a pittance or starvation. Despite peasants' revolts and Luddite retaliations, this unbalanced master/worker relationship did not change until the realisation dawned on the working people that there was power in numbers—if properly organised; this gave rise to the early trade union movement. But even the revolutions that took place in France and Russia did not change the basic dispensation, where those who held the land also held the reins of economic power.

As was observed by Andrew MacLaren, the independent Labour MP for Burslem in the 1930s and a strong LVT advocate, 'Revolutions take place in the mind, not in the streets.'<sup>6</sup>

The improvement in workers' conditions was hard won over many years, and as with all transfers of power, it was never surrendered, it always had to be wrested. In-work poverty was the norm for the lower classes for many centuries and was only remedied slowly through extending the voting franchise and with the advent of organised labour.

Eventually, the state welfare system, although an unfortunate necessity, became the main source of remediation. But throughout its existence the welfare system has struggled to measure up to the demands

made upon it. Even now, after more than a hundred years of the existence of the welfare state, in-work poverty is returning. Alleviation of poverty is of course a necessary measure, but it is never a substitute for the elimination of the original cause; the expropriation of the land and the channelling of the economic rent into private pockets.

In his book *Silent Theft*, David Bollier comments: ‘We know at some level that nature cannot really be owned.’<sup>7</sup> Also, in the book *Land Value Taxation Around the World*, Robert Keall adds, ‘Private enterprise must not include private ownership of the natural elements of life.’<sup>8</sup> But when the possibility of material gain is at stake it is not always convenient for land to be seen as part of nature.

The idea that land may be owned is very well entrenched with most people in the developed world. Even those who do not own land and have very little prospect of doing so subscribe to the idea. To question this belief would seem perverse to say the least. Indeed, the even stronger assertion that land *must* be owned is almost equally accepted, especially of course amongst landowners. But as Andy Wightman points out in his aptly titled book *The Poor Had No Lawyers*, ‘at a certain level all land tenure systems are made up—fictions that are true only for as long as people believe in them.’<sup>9</sup>

In England land ownership has a long history: After the Norman conquest, the nobles who had supported the king were rewarded with estates of land for their loyal service. The fact that the king had no right to gift

this land carried no weight; no one argued with the king. Kings would also lease or sell off land to finance their frequent wars. In Shakespeare's play, *Richard II*, scene one of act two is about a visit by the king to his uncle, the dying John of Gaunt, who laments the selling off of leases by the king to finance his campaign in Ireland; he makes the telling accusation, 'Landlord of England thou art now, not king.'

The title of this book is taken from the famous 'sceptre'd isle' speech, which stirs the hearts of all English patriots, but the ending of which tells a very different story:

This land of such dear souls, this dear, dear land,  
 Dear for her reputation through the world,  
 Is now leased out—I die pronouncing it,  
 Like to a tenement or pelting farm:  
 England, bound in with the triumphant sea  
 Whose rocky shore beats back the envious siege of  
 wat'ry Neptune,  
 Is now bound in with shame.  
 With inky blots and rotten parchment bonds,  
 That England, that was wont to conquer others  
 Hath made a shameful conquest of itself.  
 Ah, would the scandal vanish with my life  
 How happy then were my ensuing death!

The later enclosures were no more than blatant acts of theft of the land from the peasants, and throughout these times there were always lawyers willing to legitimise these acts of theft with 'legal' documents granting titles. These were passed down through the generations, gaining in validity simply through the

eneration bestowed by antiquity. Wightman notes, 'The role of the law has historically been to serve the interest of those in power.'<sup>10</sup> He also notes that the purpose of the Law of Prescription introduced in Scotland in 1617 was 'to legitimise in the eyes of the law the theft of Church lands.'<sup>11</sup> The benefit to be gained was of course the economic rent, which accrued as a matter of course to the landowner and which Henry George later described as continuous robbery:

This robbery is not like the robbery of a horse or a sum of money, that ceases with the act. It is a fresh and continuous robbery, that goes on every day and every hour.<sup>12</sup>

It is a sad fact that there has always been a minority within the legal profession that have colluded for centuries in perpetuating an injustice that, apart from times of war, has arguably brought more misery and hardship to a great many ordinary people than any other single cause, and continues to do so to the present day. Certainly, the majority of lawyers remain true to the ideal of justice through good laws, but there are others who have used their skills, for no little reward, in the interests of wealthy and powerful clients.<sup>13</sup>

But from the point of view of those who advocate LVT, the ownership of land is not the main point; it is the ownership of the economic rent of land that matters. Of course, these two aspects are connected but in his wisdom, Henry George recognised that to avoid conflict with the great landowners, the two could be treated separately. The ownership of the land could continue, but not the ownership of the economic rent.

Let the landholders have, if you please, all that the possession of the land would give them in the absence of the rest of the community. But rent, the creation of the whole community, necessarily belongs to the whole community.<sup>14</sup>

However, George also recognised that with a 100% LVT landowners would have no financial interest in continued ownership, so to avoid the land being neglected or abandoned he allowed that a proportion should be left to the landlord as a payment for good stewardship.<sup>15</sup>

The notion of landownership has a very powerful hold in the US. One reason for this is the influence of the English political philosopher John Locke (1632–1704). He had a particular view of private property in land, and strongly influenced the American Founding Fathers in drawing up the constitution. In his *Second Treatise of Government*, published in 1689, he proposed that work applied to land was a qualification for ownership. This view coloured a great deal of thinking on the issue of private property, in particular that of land, and gave rise to much debate, which continues to this day. The critical paragraph in his treatise is reproduced here in full:

Though the Earth, and all inferior Creatures be common to all Men, yet every Man has a Property in his own Person. This no Body has any Right to but himself. The Labour of his Body, and the Work of his Hands, we may say are properly his. Whatsoever then he removes out of the State that Nature hath provided, and left it in, he hath

mixed his Labour with, and joined to it something that is his own, and thereby makes it his Property. It being by him removed from the common state nature placed it, it hath by his labour something annexed to it that excludes the common right of other Men. For this Labour being the unquestionable Property of the Labourer, no Man but he can have a right to what that is once joined to, at least where there is enough, and as good left in common for others.<sup>16</sup>

Although Locke was right in making the connection between ownership and work, or more precisely the ownership of the wealth created through work, he was wrong to extend that ownership to the basic resource from which the wealth was created.

Most would accept that no matter for how long or how hard our fishermen have worked, though they are entitled to ownership of their catch, they are not entitled to ownership of the ocean, or even a part of it.

However, Locke qualified his view with a proviso in the very last line—‘where there is enough and as good left in common for others.’ And it is this proviso that has thrown doubt on the theory and left room for much debate ever since. However, his writings carried great weight thereafter and became a primary justification for land ownership. Quite possibly it influenced the American Homestead Act of 1862, which granted the early settlers not only ownership but also the security they wanted and deserved due to their hard work.

In a paper published in 1968, ‘The Tragedy of the Commons’, the American biologist Garret Hardin

consolidated the belief that land had to be owned—either privately or by the state. His theory became very influential amongst economists, especially with the neo-liberals, who embraced the idea of private ownership. It provided them with a further moral justification. Hardin's theory was later debunked by the Nobel economics laureate Elinor Ostrom, but not before it had gained widespread popularity.<sup>17</sup>

In Britain, the notion of the ownership of land—public or private—is now virtual holy writ with most people, and the idea is naturally reinforced by the increase in the number of homeowners, especially in the last 50 years. One might say that land ownership has become democratised with the increase of homeownership. The land is seen as an integral part of one's home, one's property, and any attempt to alter that status is strongly resisted as an attack on one's private property. But at the same time the same people can be more amenable to the idea of the non-ownership of other natural resources, such as minerals in the ground, fish in the sea, water resources and so on—these are perhaps less personal than one's own back garden. It is highly unlikely that this view about land will change, and as Henry George pointed out, it does not need to for the collection of the economic rent. It is from this point of view that LVT becomes practicable.

There is no need to alter the existing arrangement of land ownership, providing the economic rent is duly surrendered. This separation of land ownership from land rent must be understood and accepted by the general population, but therein lies the difficulty. A great deal of this book is about explaining this

distinction and thereby providing a justification for LVT, but in this process it is worth considering the notion of ownership in general, apart from that concerning land.

If we accept that all (physical) wealth arises from work carried out on land (all natural resources), the wealth so produced rightfully belongs to whoever has carried out the work—physical or mental. It is the work element not the land element that provides the claim to ownership. The land element is provided by nature and is fixed; the work element is provided through human effort and is variable. One may say that the individual ownership of wealth due to work is legitimate but the individual ownership of land or any other natural resource is not.

In July of 2013, in a High Court ruling over a dispute on fish quotas, Justice Cranston ruled that, ‘No-one can own the fish of the sea.’<sup>18</sup> There is the ring of truth about this statement. But if we were to extend this idea to the ownership of all natural resources, then they could only be owned collectively by the whole human race. Everyone on the planet would in effect become a shareholder in whatever wealth resulted from the exploitation of these resources. They would therefore be entitled to a dividend from any surplus after the return to labour had been deducted. Although this would be impractical to administer under current circumstances, it would be fair in principle.

As an illustration of this: In January 2019, \$3.1 million was paid for a 278 kg bluefin tuna in the Tokyo fish market.<sup>19</sup> Disregarding for the moment the

deductions due to wastage and labour, the total value of this one fish divided between the 7.8 billion humans on the planet would be about 0.04 US cents each. This might not sound very much, but in 2018 the world catch of tuna amounted to about 5 million tonnes.<sup>20</sup> At an average dockside price of say \$2 per kg the total sale value would be \$10 billion. Deducting say 50% for labour and processing costs this would still leave \$5 billion which, divided by 7.8, would provide an annual dividend of 64 US cents to everyone on the planet. This return is for tuna only. Add to this amount the returns for whales and the other sea fish and the total would result in an amount very beneficial to those in the developing world living on \$2 a day. This dividend is the equivalent of a rent due to ownership. It is similar to the rent paid to a private landlord for the use of a property. One could extend the above example to include the returns arising from all the world's other natural resources, where no one is the owner but everyone is a shareholder—a concept that is the basis for resource rents (see Resource Rents, below).

Land is considered to be the primary resource. Other than those who depend for their livelihood and sustenance from the sea, we can live without eating fish or burning coal, but we cannot live without land, and the collection of the resource rent of land, the economic rent, goes to whoever controls the land—the private owner or the government representing the people—but it hinges very much on our view of ownership.

There is no justification for any claim to ownership of land through any natural law. The land title documents drawn up over the centuries, are no more

than legalisations of original acts of appropriation or theft. It could be argued that we who are proud owners of the site upon which our houses stand are receivers of stolen property, at least where the site is concerned. We are of course able to deflect this accusation by producing our 'legal' documents. We can also take some comfort in numbers: some 60% of all homes in the UK at present are owner-occupied. Additionally, it is reassuring to know that Winston Churchill, that great LVT advocate, said: 'We do not want to punish the landlord, we want to alter the law'.<sup>21</sup>

And so the situation will no doubt continue for the foreseeable future, but, as has been said, the critical issue is not the ownership of the land but the ownership of the economic rent. In a stable society people require security, both for their legitimate property and also for the continuing use of the land they occupy—the security of tenure. Security of tenure can always be provided through a leasehold system which sets out the terms and conditions of occupation, and where the freeholder is the government.

Such a system has operated successfully for many years in Hong Kong, where one of the conditions for leaseholders is the surrender of an annual ground rent (a quasi LVT) to the government.\* However imperfect, it works well for Hong Kong and enables other taxes to be kept low. The system is described very well in Andrew

---

\* It should be added that the government of Hong Kong, as the freeholder, derives more revenue from the sale of the leases by auction at regular intervals.

Purves' book *No Debt, High Growth, Low Tax*.<sup>22</sup> A similar system operates in Singapore, and whatever deficiencies there may be in those two states with civil freedoms and wealth distribution, Hong Kong and Singapore are recognised as highly successful and prosperous city states; they came first and second respectively in the World Economic Freedom Index in 2019.<sup>23</sup> They are both countries which show how even a modified form of LVT is effective in raising revenue.

Various partial forms of LVT are practised beneficially in many other countries including Denmark, Estonia, Taiwan, Australia and the USA. In these countries it makes little difference whether the land is owned privately or by the government. As long as the land rent is collected by the government, the system can work effectively.

### 5.3 Resource Rents

Amongst economists it is generally understood that the word 'land' includes all natural resources, all gifts of nature, natural forests, wildlife, minerals in the ground, fish in the sea etc. This definition raises the question of ownership, exploitation rights and also the concept of resource rents. Justice Cranston's ruling on fish could apply equally to all natural resources.

It is debatable whether land is actually a natural resource. Food, air and water are not seen as resources but as the very essentials of life; land is just as essential. Resources may be considered as necessary for civilised life but not for life itself; human beings existed and flourished, however primitively, before the discovery

of minerals, coal or oil. However, for the purpose of this book land is treated as a natural resource (see Chapter 13, Definitions), if not the most fundamental of all resources. The questions raised here are about the control or ownership of these resources and who should receive the benefits.

The basic principles that govern land value taxation may be applied equally to all natural resources. As all natural resources are a gift of nature they cannot be owned, not even by governments or nations. Public custodianship may be accepted by general consent as a practical administrative necessity, but a wise government would be careful to distinguish this from ownership.<sup>24</sup>

If ownership of a natural resource is to be allowed, then the benefits derived may be equally claimed by all human beings on the planet, who could be seen as the collective beneficiaries. This raises the issue of the practicality of determining such an equal shareholding. This problem has been resolved historically by the convention of accepting that each nation (or tribe) may claim ownership of those resources over which it has territorial control; so natural forests, minerals, water, oil or fish in the sea are allowed to be claimed by mutual unwritten consent amongst all nations.

Fishing of the open seas beyond territorial limits has always been seen as open to all; inside these limits disputes are commonplace. This dispensation has obtained throughout history (despite periods of warfare) but is now coming under some strain with the

exponential growth of world population, the rise of international corporations and the acceleration of globalisation. Claims for the ownership of natural resources are now put forward by private companies on the strength of their new control, not of territory, but over the economies of the erstwhile owners. The private economies of corporations are now often greater than those of the host countries, so they are able to dictate the terms of gaining access to resources. These developments have given rise to a new awareness of the value of the world's natural resources and the issue of ownership.

The principle guiding resource rents, is that no individual or organisation has the right to appropriate or exercise control over any gift of nature without recognising a debt to society in the form of an appropriate payment. Such payment may be described as a 'resource rent'. A land value tax is a similar payment, which is not strictly a tax but rather a payment to society for the beneficial occupation or use of a site. In a system of private land ownership this payment is made to the landlord. In his book, *The Corruption of Economics*, co-authored with Mason Gaffney, Fred Harrison makes the interesting point, 'The tenant does not claim that he is being taxed when he pays rent to the private landlord!'<sup>25</sup>

However, where LVT is concerned, it is important to distinguish between rural land and urban land. Rural land may have value already due to natural circumstances, and this may be increased through directly applied work. The three-dimensional resources of coal, oil, fish etc. are tangible physical resources that

require work to convert them into useable wealth.\* Urban land, however, requires no such work; it simply has to be there. With urban land, what is being considered is a two-dimensional area on the surface of the earth that has enhanced value because of its location within a man-made agglomeration.

Where natural resources are concerned, the increase of land value due to agglomeration does not apply; the natural resource may be remote from the location that benefits from its exploitation. The increased land values in Aberdeen are due to remote ‘work on land’ a hundred miles away in the North Sea. For all these reasons it is more appropriate for the wealth derived from natural resources to be taxed through a licensing or leasing system, whereby a private entrepreneur is granted a lease to exploit the natural resource for an agreed return over an agreed period to the controlling government—a resource rental.

Another option is for the government to invite companies to bid for a contract to carry out the extraction. Whoever came in with the best rental offer would get the contract for a fixed period.

---

\* An exception has to be made for the electromagnetic spectrum, which, as an intangible resource, requires no work for extraction but only for exploitation. It is undoubtedly a resource from which a revenue may be derived for its use. In his book *The Stewardship Economy*, Julian Pratt notes that in the year 2000 the British government received over £22 billion from private companies in payment for 20-year licences granting access to the radio spectrum.<sup>26</sup>