

THE VALUE AND PRICE OF LAND

Willy Verheye

National Science Foundation Flanders/Belgium and Geography Department, University Gent, Belgium.

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Summary

Land is one of our most precious assets. In traditional societies it is a common good and cannot be alienated nor sold. In a modern free market system land is a commodity that is desired and can be exchanged; its value and price are commanded by offer and demand and by the underlying perception of potential benefits that can be derived from it. Land is finite in extent and is in growing demand; and its value is expected to increase in the future.

Price, in money, is the generally accepted expression to mark and compare land values in a functional market. The price of land is determined by its production potential, and by the present or future services it incorporates; in modern times it has also become an object of speculation.

Conventionally, there are two main approaches to the valuation of land. A first group,

commonly used in developed countries, is inspired on the economic value of the land in comparison with recent sales of similar plots under similar conditions. A second group is focused on the production potential of the land, with some minor adjustments for socio-economic considerations; it is currently applied in rural areas and in regions where there is either no functional market and/or where there are very few land sales. The approach formerly in use in socialist systems and based on the ideological view that land is owned by the state and that those who have acquired it through exploitation do not deserve any compensation, is no longer sustainable.

A representative example of the different methods is given in the second part of the paper.

1. Introduction

Land is one of our most precious assets. It encompasses surface, space, soil, provision of food and water, and a basis for urban and industrial development. Land stands for property and is a production factor besides labor and capital. Land embodies many more dimensions, such as homeland, place of ancestry, a prerequisite for realizing individual freedom, and a basis for survival or wealth. It is also an object that is taxed and desired by governments and interest groups.

Land—and obviously cultivable land—is finite in extent, and its quality is constantly under threat of degradation, mainly as a result of intensive cropping, soil mining and inadequate management, and population pressure (see *Land Use, Land Cover and Soil Sciences*). Today, agricultural outputs have to procure food for twice as many people in the world as there were a generation ago, and in fifty years it is expected to be four times as many. This non-linear relationship that exists between the growth in population and the growth in food resources was first noticed in 1798 by Rev. Robert Malthus.

The next generation is likely to see the highest population that the planet has ever experienced. This growing demand for food cannot be indefinitely obtained from intensification of crop production and biotechnological progress, but requires also the extension of arable land. The overall result is an increasing competition for land (Verheye *et al.*, 1997).

A commodity which is abundantly available has no direct value, but when that same commodity becomes short in supply and/or when different users are competing for, it gets an (exchange) value. This is all the more important for a commodity like land.

In the traditional rural societies of Africa, Asia and South America land is a common good. It is considered a gift from God that allows satisfying primary needs for food and shelter and, therefore, it is not transferable nor has it value. Societies are however rapidly changing, and a growing number of people concentrate in and around cities where they gradually lose the link with ancestral land as a common asset. In an urban society individualism dominates and the desire and competition for individual ownership increases. In this respect land makes no exception.

In a modern functional land market, the desire and ultimately the value and price of land

are mainly commanded by offer and demand and by the underlying perception of potential benefits that can be derived from it. Even in many communal areas in Africa where land is traditionally not alienated, communal land that has been used for a longer period by a family becomes *de facto* “owned”. Informal land transfers (sales) take place at an increasing rate, and the State often turns a blind eye to or virtually accepts this type of market activity.

Land—or property in general—has value because it gives rise to a stream of future tangible or intangible earnings; those define its exchange value in a functional market. In modern societies the exchange value is usually associated with price, and the exchange is operated through a money transfer. Price is thus a parameter to express the (exchange) value of an object or property, and in this respect it is the generally accepted means to compare values in a market.

2. The Concept of Value

Value, in economics, is the esteem in which something is held or can be exchanged under current market conditions. The higher its esteem is, the greater its exchange power. If a commodity that is offered is in great demand, many things usually will be proposed in exchange for it. If the item is held in low esteem, few things will be offered in exchange.

In a more common language and in line with Ricardo’s concept (Sraffa, 1951) “value” corresponds to a fair or proper equivalent in money, commodities, etc. for something sold or exchanged; the worth of a thing in money or goods at a certain time, market price; the quality of a thing according to which it is thought of as being more or less desirable, useful, important, etc. Basically there are two types of values, e.g. those that have no direct economic impact and that are not marketable (health for example) and those that can be subject to a deal and that have thus an exchange or sale value, currently expressed by a price in money. Clearly, land belongs to the second type.

The concept of value involves two main conditions: it must be related to a desire and there must be a certain difficulty to obtain it. As the amount of land is finite, and because population pressure and demand for land are increasing, land is becoming both a scarce and desirable commodity, the value of which can still be expected to increase in future.

Value is a typical component of the free market economy. In a Marxist context “value” can only exist as the consequence of an effort to produce a commodity, though if there is no use of it there is—strictly speaking—no real value. Subsequent interpretations stressed the notion of “socially useful production” which implies some reference to demand; consequently, in this context land might then have no value.

Value in general economic theory has often been confined to that of market value. All other uses of the term “value” must be carefully defined so as to avoid confusion with the concept of market value, taking into consideration that the proper basis of valuation is always market value. In real estate valuation there is a risk of confusing the terms value and worth, and in this respect Tegova (1997) has suggested to use only the term

value in expressing objectively established *value in exchange* at a given date, and only to use the term worth in the subjective context of *value in use*.

2.1. Definition of Value

Since market value is mainly determined by the forces of the market at a particular point of time, there can only be one value at one time. Unfortunately, however, the term has often been used in different meanings amongst the real estate valuers. In this context the European Union (EU) established a clear definition in Directive 91/647/EEC and this reads as follows: *Market value shall mean the price at which land and buildings could be sold under private contract between a willing seller and an arm's-length buyer on the date of valuation, it being assumed that the property is publicly exposed to the market, that market conditions permit orderly disposal and that a normal period having regard to the nature of the property, is available for the negotiation of the sale.* In order to avoid different interpretations this definition calls for a number of remarks (Tegova, 1997), including the following:

The price at which land and buildings could be sold under private contract is to be construed to refer to a monetary amount if the land and buildings were to be sold in the open market. The use of the words *private contract* exclude sales by auction to the extent that this would realize a lower price than sales following proper marketing as between a willing seller and an arm's-length buyer, and serves to emphasize that it is a realistic estimate at the date of valuation.

A specific mention of a “*willing seller and an arm's-length buyer*” reinforces the dominance of economic reality, expressed through transactions in the open market, as the best price reasonably obtainable by the buyer. A willing seller is neither over-eager, nor a forced seller prepared to sell at any price, nor one prepared to hold out for a price not considered reasonable in the current market. The use of the term *arm's-length buyer* additionally excludes the bid by a special purchaser prepared to outbid other prospective purchasers due to exceptional personal circumstances (e.g. parent and subsidiary companies, landlord and tenant or adjacent owner).

The term “*on the date of valuation*” refers to the specific nature of the valuation, which assumes that the terms have been negotiated and the transaction completed at the date of valuation. Market conditions may change and the market value as at another date may differ significantly. The definition assumed simultaneous exchange at completion of the contract for sale without any price adjustment for that special factor.

The connotation “*it being assumed that the property is publicly exposed to the market*” means that the asset would be exposed to the market in the most appropriate manner to effect its disposal at the best price reasonably obtainable in accordance with the market value definition. The length of the exposure time will vary with circumstances, but must be adequate to alert a sufficient number of potential purchasers to create a market. Market exposure will take place prior to the valuation date.

The connotation “*that market conditions permit orderly disposal, and that a normal period having regard to the nature of the property, is available for the negotiation of*

the sale” assumes that market participants are alerted to the opportunity through market exposure, but not that a hypothetical/unreal or false market has been created or is to be assumed, neither is a forced sale or one subject to compulsion simulated by the definition, but the sale is conducted in a manner appropriate to actual market conditions. A normal marketing period is one which will vary with market conditions for the type and class of property, land and buildings.

In the light of the remarks above Tegova (1997) has proposed a simpler definition which reads as follows: *Market value is the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.*

Obviously, over a period of time, values will fluctuate above and below a normal level determined by the money earning capacity of the property. Thus, value appraisal is an attempt to approximate market price at a given moment over a period of time. In effect, it measures the magnitude of the entire fund of value that exists for a given set of circumstances.

2.2. Types of Value

When it comes to the assessment of value, a distinction has to be made between exchange value, real value and sales value. The **exchange value** is commonly associated with a price and is expressed in money, because this is the only generally accepted means to compare values. One obtains the **real value** when there is a balance between offer and demand. If the offer exceeds the demand, then the value decreases; in the opposite case it increases. Value is thus a relative concept which varies in time and as a function of circumstances. While real value corresponds to a commonly accepted value for everybody, the **opportunity value** involves also the personal appreciation of one or more individuals. The opportunity value of a special biotope for example will be much higher for a botanist-environmentalist than for a farmer who wants to make a meadow or for a real estate investor who wants to construct a building on the spot.

The **sales value** is highly influenced by personal appreciation and circumstances, and is therefore rather variable in time and space. If a company wants absolutely to expand business, the owner of a neighboring piece of land can obtain a good deal in selling his/her property. If the company has no interest to buy, the land price may be much lower, though the final outcome may remain variable.

The latter situation might indeed occur when some employees might prefer living nearby their work and would therefore like to bid for it in the market (high demand, high price), or they might not like it as for example in the case of a polluting environment (low demand, low prices). The picture changes obviously if the land owner has no direct incentive to sell the land.

The examples above show that the sales value of land under certain conditions can be very variable, and that the concept of defining the value of land on the basis of average sales prices of similar plots in the surroundings must be used with extreme care.

3. Value and Price of Land

3.1. Earnings from Land

As indicated above, land has value because it may give rise to a stream of future incomes which consist of a volume of goods, services and satisfactions which accrue to the owner. In other words, the material value of a land depends upon the goods and services emanating from it. Obviously, these earnings will not necessarily come from the land in the strict sense, but from the property as a whole (e.g. land and buildings) which is related to it. It is the stream of income or earnings, both tangible and intangible that can be converted into a fund which is the value of the property. The size of the fund of value can be ascertained only when it enters the objective situation of the market and is expressed as a price which buyers are prepared to pay and sellers will take at a given time (FAO, 2003).

The nature of the earnings that can be expected from land is multi-faceted and in this context a clear difference must be made between land in rural and urban environments; in the latter situation land is often associated with property. In a rural environment land is primarily a basis for crop production and a source for food supply in general. Land allows growing trees and forests for fuel-wood and shelter, to store water for human consumption and irrigation. It provides space for living, construction and the development of a variety of social activities. Land has thus a production value; it is a primary commodity and a commercial asset.

In an urban or suburban environment the expected earnings are mainly linked to the type and nature of buildings that can be constructed on the land, and the services that can be generated from them: business, commerce, residential, public services, etc. This follows the theories of Alonso (1964) and Muth (1969), who, independently of each other, have developed a model that explains the price of the land as a function of the activities that take place on it. According to those authors land use is thus determined by the rent-paying ability of different economic functions in urban areas, such as retailing, industry and residence.

These factors determine to a large extent the rents that can be obtained. Obviously, in this context the size and location of the plot and the nature of the real estate component are of primary importance, while the production component as described above has much less meaning.

Moreover, large surfaces of land have neither a productive nor a real estate value but are nevertheless held in property because of tradition, customary rules, prestige or other non-economic reasons. Entire zones are reserved for wildlife and nature protection and are not for sale. Although it is difficult to rate the productive or real estate value of this land, it is not free but has—besides its direct income from tourism—only a moral, social or aesthetic value. In between those two extremes there are cases where land, despite its low direct or immediate productive value, is relatively well-priced because it is considered a potential economic investment for the future, for example in the case of anticipated but unexplored mining potential. Poor agricultural land with little or no production potential may at once become very expensive by a simple decision of zoning

or its selection for city extension.

The above indicates that there is a clear difference between natural (productive) value and economic (real-estate) or ecological (nature conservation, environment) values of land. The former deals with a value pertaining to the knowledge of the natural physical properties of the soil and their impact on production. The second emphasizes also on expected benefits which are not necessarily linked to its present use and production potential, as well as on the stabilizing role of land in an inflationary money market.

As a direct follow-up of the considerations above it is important to distinguish between different types of earnings, especially when those are related to taxation. In this context it is important to differentiate between bare land and built-up areas, in particular because the value of the real estate part can by far overrule the value of the naked land surface.

Land value for taxation in its simplest form relates to the natural value of the land, e.g. without structural improvements. This is often referred to as the *naked value*. However, in assessment for taxation purposes the definition often also allows for the inclusion of site improvements which may be invisible, for example the benefits of clearing, filling and draining the land. In Australia, land value in this sense is therefore also referred to as *site value*.

The former concept stands in clear contrast with (*improved*) *capital value* (Australia and most Commonwealth countries) or *total value* (Denmark and most European countries) which corresponds to the full market value of the property, including land and buildings, but excluding machinery, furniture and animals. The best economic use is the basis for valuation, and—as is particularly the case for Denmark (see also section 6.2)—all public regulations related to planning and environmental issues affecting the value of that land are taken into consideration.

3.2. Price of Land

Price is a parameter to express the value of an object or a property. Price, expressed in money, is the generally accepted means to compare values in a market. The price of land corresponds, according to Walters (1983) to “the value of ownership of stipulated rights in perpetuity, and is equal to the estimated present value of the expected future appropriations of rents. It is however also affected by uncertainties about net rent, interest rates and inflation. In other words, the value of land depends as well on the evolution of rents”.

There is a fundamental difference between price and value. Market price designates what a property might be sold for at a specific period in time; value designates a property’s actual worth in relation to other similar properties (Ewert, 1979). This difference between “price” and “value” stems from the premise that there are significant variations in intelligence, knowledge and willingness that enter into the process of establishing price as compared to value, and that value has to be based on consideration of much wider basic income or money returns than enter into the day to day deliberations that establish market price.

For decision-making about land the relevant concept is in any case not the price but the opportunity cost. Land cannot be reproduced and is spatially linked to specific location. Although land may be extra-ordinarily valuable in the center of a city, it is impossible to produce more of it, and the amount must be taken as given. At this moment, the opportunity value of the land, as perceived by the individual person (for example because of its location) is more important than its intrinsic production value (FAO, 2003). In economic theory the opportunity cost is defined as the cost of the most appropriate alternative use, i.e. the cost of a piece of land as compared to what could have been done with that same money if it had been used for something else.

Under free market conditions one would expect the price of land to be such that, on average, land earns a rate of return in the long run roughly equal to that of other assets of similar risks and characteristics. Walters (1983) rightly argues in this context that the price of land is, however, not determined by its production value only, but also by the services it incorporates at present or will incorporate in the future (extension of cities over formerly rural areas for example), and those are expressed in a price elasticity. Moreover, the amount of serviced land is limited and even determined, not by the normal rules of profitability of supply, but by institutional, administrative and financial abilities of the authorities to install desired services. The land supply may further be limited by planning or zoning restrictions, and by various rationing or allocation arrangements deemed in the public interest. Such restrictive mechanisms ensure that any urban land that is marketed commands generally a much higher price than would occur in a free market based on production aspects only (FAO, 2003).

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Biographical Sketch

Willy Verheye is an Emeritus Research Director at the National Science Foundation, Flanders, and a former Professor in the Geography Department, University of Gent, Belgium. He holds an M.Sc. in Physical Geography (1961), a Ph.D. in soil science (1970) and a Post-Doctoral Degree in Soil Science and Land Use Planning (1980).

He has been active for more than thirty-five years both in the academic world, as a professor/ research director in soil science, land evaluation, and land use planning, and as a technical and scientific advisor for rural development projects, especially in developing countries. His research has mainly focused on the field characterization of soils and soil potentials and on the integration of socio-economic and environmental aspects in rural land use planning. He was a technical and scientific advisor in more than 100 development projects for international (UNDP, FAO, World Bank, African and Asian Development Banks, etc.) and national agencies, as well as for development companies and NGOs active in inter-tropical regions.