

Some Microeconomic Aspects of Land Ownership

Paul VAN DER MOLEN, The Netherlands

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SUMMARY

Land administration (*'the process of determining, recording, and disseminating information about ownership, value and use of land when implementing land management policies' according to UN Land Administration Guidelines 1996*) facilitates -inter alia - land tenure security, the land market, land use planning and control, land taxation and management of natural resources. This paper aims at addressing the significance of secure land ownership for society in microeconomic terms, such as regarding economic property rights and the transaction costs. The paper is to be considered as complementary to a paper at the FIG-regional conference in Marrakech (2003) that looked at macroeconomic aspects.

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1. RATIONALE FOR THIS PAPER

The benefits of good land administration are often described in qualitative terms (e.g. UN/ECE, 1998). In a paper for the 2nd FIG Regional Conference in 2003 we tried to quantify the effect of good land administration in macro economic terms (van der Molen, 2003). According to very rough calculations and many assumptions we came up with an annual effect of 8.1 % of the GDP, from which 2.2 % would be realised anyhow (also without good land administration).

In this paper we attempt to get a better view on the micro economic aspects of good land administration, to be seen as complimentary to the paper in 2003. The reason to look at these aspects lies within one of the functions of land administration, namely to facilitate the land market ('land' to be understood in a broad sense: 'real estate', 'property'), including the financing of transactions and ownership through mortgages, hypothèques, and bonds (GTZ, 1998), thus a microeconomic phenomenon.

2. DIFFERENCE BETWEEN MICRO- AND MACROECONOMICS

Much of this section is based on (Dobson & Palfreman, 1999) and (Haselbeke & de Man, 1999) as these books pretend to provide a good introduction to economics for non-specialists. First of all economists distinguish microeconomics and macroeconomics. The first concerns individual decisions and specific markets, while the second concerns the economy as a whole. Microeconomic focuses on the analysis of individual prices, markets and consumer choices, based on data and information on individual households, businesses, and markets. Macroeconomics focuses on the picture of total spending in the economy, the total output of the economy, the country's average price increases etc., based on the aggregated data and information. As micro- and macroeconomics have mutual relationship (as the macro level consists of the aggregated micro level), land administration systems by consequence impact on both micro and macro level. The access to micro credit for construction purposes based on land as collateral belongs to microeconomic considerations as it regards individual households and businesses. The value that construction companies add to the use of resources is represented in the national income or national product, so within the macroeconomic approach. The same applies to income based on mortgage interests for a financial bank. This regards the micro level. The value that is added by the banking sector to the use of resources however is a component for the national income or national product.

Households and companies might benefit much from good land administration. Secure tenure provides a stable base for individual investments, in housing, farming, small enterprises (de Soto, 2000). Access to micro-credit facilitates the capacity for income growth and enhancing living standards. Received interests form a substantial income for banks. For example the ABN/AMRO bank (based in the Netherlands) in the year 2002 had a turnover of 18280

million € of which 9845 € consists of consolidated interests (53%!)). That a commercial company finances its assets with long-term loans is microeconomics; that all companies in the Netherlands finance their assets with 30% long term loans (CBS, 2003) is part of macroeconomics.

So the main subject for the science of microeconomics is the market of supply and demand of goods and services, in our case the land market.

3. UNDERLYING THEORETICAL FRAMEWORK

To come to grips with the microeconomic importance of land administration, our aim is to execute a similar exercise as we did for the macro economic importance. There we could use the basic idea of the income approach that led us towards the macroeconomic indicators of national income and national product. In analysing the relationships between land administration and the net income of actors in the economic sectors of secure tenure, land market, land use planning, and land taxation we could quantify the income effects of good land administration and no land administration in the case of the Netherlands by using the data of the National Bureau of Statistics.

What should be the microeconomic framework in which it might be possible to quantify the effects of good land administration. As earlier stated microeconomics focuses on the mechanisms of price of goods and the economic behaviour of producers, consumers and governments. So it concerns individual decisions and specific markets (Dobson & Palfreman, 1999). In order to analyse how markets work, we used three books that guided us to the theoretical modelling. In the first place (van Dorp & van Dijk, 1999) dealing with the general aspects of microeconomics, then (Hazeu, 2000) with an introduction to institutional economics and finally (North, 1990) addressing the institutional aspects of change and economic performance. The basic line of thoughts can be as follows.

While producer's produce, and consumers consume there should be a coordination mechanism that regulates the choice between scarce resources. Adam Smith, in his 'Wealth of Nations' (1776) analysed that the best option to satisfy both individual needs and general interests was to rely on the mechanism of the free market. There the existence of competition and the process of price making gave full insight in relative scarcity, by which every economic actor could make his choice in maximizing his needs. In any case, the market would -as an 'invisible hand'- coordinate the adjustment of supply and demand. Later on, the question was raised which mechanisms exactly made a price, that represented the equilibrium between demand and supply. The school around Adam Smith is known as the 'classical economics'. In 1890 Alfred Marshall analysed in his book 'The Principles of Economics' the relation between price making and quantity of supply and demand. This resulted in the well-known diagram of the perfect market (fig. 1) and the theory of marginal costs.

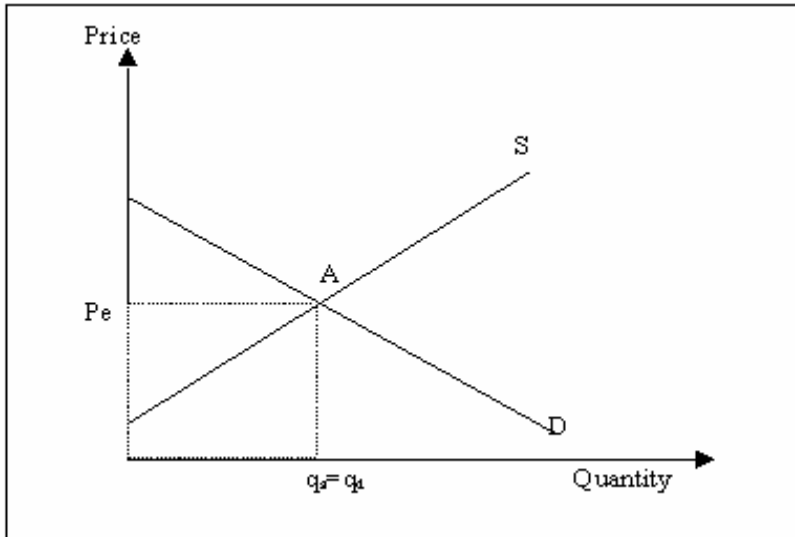


Fig.1. Price based on equilibrium demand (D) and supply (S).

The concept here is that the lower a price of a good, the more demand will develop, and the lower the price, the fewer actors are interested in producing the good. Price and quantity will find their nominal value where demand and supply are in balance.

A more precise analysis says that production and consumption will continue as long as the average marginal costs for the case of the supplier and consumer do not exceed the marginal profit of a good. This addition to the classical economics is known under the name 'neo classical economics'. In fact it concerns a mathematical modelling of Smith' theory. Based on the neo classical approach, two schools developed: one school elaborating the equilibrium model of the perfect market (like Pareto), and another school elaborating the idea that perfect markets do not exist. In this school scholars assumed that the market could not be perfect because of for example structural unbalance of powers of actors in the market, irrational behaviour of actors. Scholars like Keynes and Marx believed that government interventions should improve a fair market. In general, one was aware of the difference between models and reality, and that too much disparity made the model less plausible.

Which imperfections were distinguished in the market model? All consumers were supposed to be homogeneous as well as the suppliers. Secondly the assumption was that all actors have the similar drivers for their economic behaviour, namely to maximise their profits and preferences. Thirdly the market was supposed to be fully transparent; information about goods, alternatives, external effects ('social costs') was 100% available for genuine consideration of consumers and producers to determine their economic behaviour. A fourth assumption concerned the homogeneous nature of the commodities; they were supposed to be all the same. Fifthly the economic transactions were without costs, which eliminated transaction costs as consideration for determining a choice. Sixthly the 'social costs' were supposed not to exist, by which positive or negative effects of economic transactions on third parties were neglected. Also the existence of so-called 'public goods' was not taken into account, goods for which a society decided that they should be available on a non-exclusivity and non-rivalry bases.

In the 19th century there were already some economists who believed that the disparity between the market model and reality was too great to be plausible without any further insights in the market mechanisms. Oliver Williamson, in 1975, published a book on 'Markets and hierarchies', Ronald Coase in 1937 published 'The Theory of Firms' and in 1960 'The Problem of Social Costs' and Douglas North, in 1990, 'Institutions, Institutional Change and Economic Performance', developed the theory of 'institutional economics'. This theory aimed at analysing the causes of the imperfect market and at an amendment of the neo classical market model.

The theory explains that there are –basically- three aspects of economic transactions that were wrongly not taken into account. First of all, the market model supposed the existence of so-called complete contracts between economic actors, by including all positive and negative externalities. This led to the theory of 'property rights', the concept that 'ownership' of all aspects of an economic transaction is (or: should be) properly allocated. This regards especially to the third parties that are touched by the transaction one way or another. (Hazeu, 2000) describes the case of a transaction causing air pollution: if the property right to have fresh air, or -the way around- to be allowed to pollute are not known, they will not be taken into account in the transaction, which will then be incomplete as such. It is said –similar to what we know as the definition of land tenure being a bundle of rights- that all economic transactions represent a bundle of property rights which -by consequence- are to be involved in the negotiations. The institutional economics comprises -secondly- the theory of transaction costs, addressing the understanding that the realisation of an economic transaction is or might be a costly matter. Actors aiming at a transaction have to acquire information about the good, possible alternatives, economic property rights, enforcement of the transaction, insurance, relevant public administration, investment for the future, and then there are even the 'normal costs' of the negotiations itself. North (North, 1990) talks about the 'costliness of information', which is the key to the costs of transacting. Institutional economics comprises thirdly the theory of the firms. This theory states that when transaction costs are too high, organisation might evolve which attempt to organise the resources labour and capital in such a way that the system of coordination of transactions in the perfect market is replaced by coordination within the company (or government structures).

Focusing on the transaction costs, the effect on the traditional market model is that the costs of production should be added by the costs of the transaction, which might substantially impact on the choices of consumers in determining their preferences. It might even be the case that the transaction costs are that high, that consumers refrain from transacting. As a consequence a general rule is assumed that a society tend to diminish transaction costs. Governments make laws and regulations on trade, property rights, enforcement, consumer protection, quality marks etc. Also societies develop their set of norms and values how to behave in the economic activity. Organisations offer warranty certificates, product specifications, instructions, price guarantees, time for reflection, etc. Apart from that, societies develop their own social conventions on how to behave in social sense, for example that it is 'not done' to solve conflict by force. In such a way lower transaction costs are realised by constraints in human behaviour. These constraints are called 'institutions', as the humanly devised constraints that shape human interactions (North, 1990). Furthermore is the

idea that low transaction costs encourage economic transactions, which impact of economic growth. Transaction costs are therefore a critical key of economic success, and an indicator for economic performance.

4. LIMITS OF THIS PAPER

A first step in this paper is the identification of these micro economic relationships as such; the second step will be the attempt to quantify the relationships in terms of money. Without statistics this will not be possible. Therefore we have to investigate the availability of relevant data. Normally the source for statistical data is the national bureau of statistics or similar ('Central Statistical Office' in the US, 'Central Bureau of Statistics' in the Netherlands). This appears useful for macro economic purposes: the paper in 2003. For micro economic purposes the demanded data has a more specific nature and is difficult to find. Therefore we used the case of the Netherlands as an exercise, using data from the Netherlands Cadastre, Land Registry and Mapping Agency and the Central Bureau of Statistics.

5. RELEVANT ASPECTS OF MICROECONOMICS

From section 3 we derive that regarding the micro economic role of land ownership three aspects are relevant, in casu:

- how complete are the property rights of the economic transaction in the market for land ('real estate market', 'property market') ?
- what is the level of transaction costs connected to these economic transactions?
- to which extent is the economic coordination of the free market replaced by economic coordination of organisations (inclusive of the government).

5.1 Property Rights

The way the property rights to land are regulated is one aspect, the way third party interests are involved in the economic transaction is another. If third party interests are not included in the transaction, positive or negative externalities are not taken into account, which might lead to social costs. The third party interest might stem from both public and private background.

First of all the security of the property right of land as such. Crux is the concept of 'ownership'. The Netherlands Civil Code (article 5:20 and 5:21) defines ownership of land as ownership of the ground including 'ownership of all space above surface, all earth layers below, all groundwater, and all fixtures'. The same e.g. in Germany in the Bürgerliches Gesetzbuch (§ 905), in the UK, in France, and in Belgium. 'Ownership' therefore is the most comprehensive right that a person might have to a thing, with the following characteristics:

- the owner is free to use the thing, while observing the rights of other persons and the restrictions on the basis of the law or rules of unwritten law,
- ownership is an exclusive right, i.e. no other person may exercise any right over the thing, unless he has legal or contractual ground,
- in principle the owner is entitled to all of his property.

So the current concept of 'ownership' is related to a three-dimensional volume based on the ownership of a ground level land parcel. It is however possible that a part of the 3D volume is separated and owned by a third party. In civil and common law jurisdictions these 3D properties owned by other persons are to be considered as rights which are separated from the 'ownership' of land: e.g. rights of superficies, accession, mineral rights, rights of apartment, and condominium. These rights affect the traditional concept of 'ownership'. The right of superficies means that the ownership of a building is separated from the ownership of the ground below, by means of a separate title. This right breaks the rule in many jurisdictions that buildings and other structures become the property of the owner of the land on which they have been built or erected.

Accession in the context of the law means an increase of or addition to a thing, denoting a method of acquiring ownership by which a thing becomes another's because it accedes to a more principal thing of that other. There might be horizontal and vertical accession. This right, applied to e.g. tunnels, affects the same rule as above.

Mineral rights exist when ownership of minerals is separated from the ownership of land in that sense that these mineral rights may be held by a separate title. These rights affect the rule that earth layers below the surface are owned by the owner of the ground.

The right of apartment is defined in some civil law jurisdiction as a restricted right of use, giving the holder a share in a joint right of ownership with exclusive use of certain parts of the building, this is different from the right of condominium which is defined in some common law jurisdictions constituting a special form of ownership giving the holder a 'fee simple' title to individual units within a building together with an undivided interest in common areas.

The Netherlands jurisdiction recognises a so-called closed system of real rights (according to the French-Roman traditions) in which exist:

- Full ownership
- Sort of co-ownership
- Long Lease
- Servitudes
- Superficies
- Apartment
- Some secondary rights like pledge, mortgage and use.

Regarding scientifically accepted criteria for the security of lands tenure, robustness, duration, and assurance (Bruce & Migot Adholla, 1993), the rights to land meet the standards for secure property, because:

- ownership is defined in the law as the most complete right one might have on a good
- there are clear rules for establishing, transferring and abolishing real rights
- rules for inheritance are clear
- rights of women are fully respected
- banks accept ownership of land as collateral for loans
- rights of third parties are well defined

- conflicts are resolved under civil law court
- a fair compensation should be paid in case of compulsory sale to the government

Ownership may however be subject to the following restrictions:

- rights of other persons to the thing, both in real rights and personal rights,
- restrictions arising out of legislation in force,
- restrictions based on unwritten law.
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These restrictions aim at protecting rights of third parties including the government as representative for the general interest.

Talking about the completeness of economic transactions, the implication is that every single transaction in land should be as complete as possible. For the purpose of this paper we consider however the completeness in a general approach, to see to which extent in the Netherlands rights of others who are the 'proprietor' of some aspect as part of the transaction are well regulated and sufficiently transparent. General principle is that ownership is an exclusive right. By means of certain real rights third parties might be entitled to the good, like through the earlier mentioned rights of superficies, servitude, mortgage right as a security for a loan.

Secondly many public laws attempt to protect third parties plus the general interest regarding the effects land ownership might have. The amount of public rights to land might easily approach 100; some appealing public rights are:

- pre-emptive rights
- expropriation
- land use regulation orders
- land development regulation orders
- housing regulation orders
- nature protection orders
- noise hindrance orders
- soil sanitation orders
- historical monument orders
- telecom orders

which all have so-called power against third parties including buyers of a property. These form of rights follow the property, not the owner (similar to a real right to the good according to private law). A conclusion might be that in the case the Netherlands the social costs are visible to a major extent. The next question of course if these third party interests are protected during the economic transaction. As the transaction takes place through the compulsory involvement of a notary public, the law states that the role of the notary public is to establish a legally valid transaction, and to take into account the third party interests. For example the law prescribed that at the foot of the notarial deed of transfer, the notary explicitly should declare if any pre-emptive right was valid for this particular lot of land, and whether it was met. The notary should also make clear to the parties which third party rights are exercised on the property. Furthermore the law says that sellers have a duty to inform a buyer as complete as possible about all aspects of the good; if afterwards it appears that

information was kept secret, it might lead to hold the seller liable and perhaps to a court case.

A conclusion is that from an institutional point of view the 'property rights' involved in an economic transaction regarding land, are as complete as possible.

5.2 Transaction Costs

Institutional economics speaks about 'transaction costs' as the costs to establish and implement an economic transaction. Regarding the land market this pertains to aspects like:

- what are the costs to acquire information about the property to be sold, the owner/seller, and all involved 'property rights' of third parties?
- what are the costs involved in establishing the transaction as such?
- what are the costs of enforcement of the contract in case of default?
- what are the costs for insurance of the property?

In case of the Netherlands, for an average priced house the purchase price is 209,500. - euros. The costs of the transfer and hypotheque are:

- transfer tax 12,570 euros = 6% of the purchase price
- notary fee for transfer deed 500 euros= 0.23 % of the purchase price
- real estate agent fee 3875 euros= 1.4 % of the purchase price
- registration Kadaster transfer deed 75 euros= 0.035 % of the purchase price
- mortgage handling bank 2000 euros= 0.95 % of the purchase price
- notary fee for mortgage deed 500 euros= 0.23% of the purchase price
- registration Kadaster mortgage deed 75 euros= 0.035% of the purchase price

In total this amounts to 19,595 euros, which is 9.3 % of the purchase prices. The fee for the real estate agent and the notary comprise all costs of acquisition of information about the property, third party rights, drawing up the legal documents, submission for registration, and taking care of all financial arrangements (system of the third party accounts).

The fee for the Kadaster (which is the name in brief for the Cadastre, Land Registry and Mapping Agency) includes registration and cadastral boundary surveying (additional fee of about 300 euro) .

Transfer tax is a fixed rate of 6% tax based on the purchase price

Compared with the USA: the transfer of a property of 200,000 \$ (which equals 160,000 euro) is 6,546 \$, so 3.2 % (Kjellson, 2002) Difference is transfer tax of 6% not in USA.

Costs for enforcement depend on the involvement of commercial lawyers. The fees for courts are up to a few hundreds euros, costs for lawyers depend on the complexity of the case: fees per hour tend to be 300 euros.

Costs for insurance amount normally to a few hundreds euros annually.

5.3 Economic Coordination Mechanisms Through Hierarchies (Organizations)

In which cases one could say that the free market mechanisms of the land market (incl. buildings) is replaced by the internal coordination mechanisms within hierarchies, either private organizations or the government. This does not relate to the activities of hierarchies in

the market as an actor, in those cases these hierarchies act like any other individual actor.

Replacements is likely to be manifest in cases where:

- the government (or companies) replaces the ownership and use by non-market mechanisms, in casu social housing
- idem exploitation of state land.

Regarding social housing, housing stock in the Netherlands is 6,810,472 in 2004. while 2,356,836 are owned by social housing corporations. So in about 33% of residential houses the free market mechanism of buying and selling is replaced by the allocation rules of the housing corporations.

From the area of 4,152,800 ha of the Netherlands, 2,350,800 ha is agricultural land, 321,000 ha is built area, and the rest is water, forest and nature. From the agricultural area 96,016 concerns land in long lease. Long lease (duration 30 years) is the favorite way of exploitation of state owned lands. A careful assumption might be that 4% is owned by the State, and in those areas the free market is replaced by the lease allocation and lease-conditions of the State.

6. INSTITUTIONS THAT CONSTRAIN HUMAN BEHAVIOUR IN THE LAND MARKET

The institutions that form the constraints in human behaviour, aim at lowering the transaction costs (North, 1990). Regarding the situation described in section 5 one might understand that the three aspects (property rights, transaction costs, and coordination) in the domain of the land market are for example:

- a land registry and cadastre, to provide guarantee of title and easy access to land information
- a system of access to restrictions imposed by the government (all levels) on private land, justified by the general interest. This is getting in place in the Netherlands quite soon, as a law is pending in the Parliament regarding the access to all public restrictions that have third party effects.
- professionals in the market (real estate agents, notary public), which guarantee (or at least encourage) more security and confidence for the actors.
- A mechanism of public acquisition of land, against fair compensation, to exert 'property rights' of third parties.
- a conflict resolution mechanism in the form of the judiciary.
- housing corporations
- In the framework of this paper, the relation between land registry and cadastre with the transaction costs, and by consequence with the principles of institutional economics can be clearly seen.

However it is impossible -without any international comparison- to identify the efficiency of the institutions, and their relation with the performance of an economy. This should be subject to further research. From that point of view it cannot be argued whether the Netherlands performs well with a final contribution of 8.1% of the GDP.

7. CONCLUSIONS

The principles of institutional economics, elaborated in the theory of property rights transaction costs and coordination through hierarchies, gives a good framework for analysing the microeconomic importance of land ownership and related organisations like the land registry and cadastre. The problem remains the reliability of statistical material, and the interpretation of the figures in international respect. That makes it difficult to evaluate the efficiency of the institutions, and the appropriate contribution to economic growth. So further research is needed.

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BIOGRAPHICAL NOTES

Paul van der Molen (54) holds a degree in geodesy of the University of Delft (NL). He is currently corporate director of the Netherlands Public Registers and Cadastre Agency, responsible for international affairs. He is a professor at the International Institute for Geo information Science and Earth Observation ITC in Enschede (NL). He acts as a chair of FIG Commission 7 and as a director of the FIG International Bureau of Land Records and Cadastre OICRF.

CONTACTS

Paul van der Molen
Cadastre, Land Registry and Mapping Agency
P.O. Box 9046
7300 GH Apeldoorn
THE NETHERLANDS
Tel.+ 31 55 5285695
Fax + 31 55 3557362
E-mail: paul.vandermolen@kadaster.nl
Web site: www.kadaster.nl