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A Market for Agricultural Land in Ukraine

1 Introduction

Ukraine has impressive land resources. Indeed, agricultural land is one of the first things that springs to mind, along with the country's well-educated working force, when one thinks about Ukraine's key competitive assets. Of a total of 60.3 mill. ha of land, 41.8 mill. ha (69%) are agricultural and a further 10.4 (17%) are forested. Few countries have as much agricultural land of such quality, especially when measured on a per capita basis to provide at least a rough indication of export potential.

26.4 mill. ha of this land were handed over to the collective ownership of farm enterprises in the 1990s. For practical purposes, most of this land remained in collective ownership until Presidential Decree No. 1599 of December 3, 1999 "On immediate measures to accelerate agricultural reform" accelerated the individualisation of land ownership. As of mid-2001, 6.4 mill. Ukrainian citizens (Ukrainian sources typically refer to 'peasants') have received land share certificates from the former collective agricultural enterprises (CAEs), and 1.5 million have received deeds to individual, demarcated parcel of land. Furthermore, the land lease market has blossomed in Ukraine in the last 2 years: in 2000 roughly 22.4 mill. ha were leased, generating 1.6 billion UAH of income for their owners.

However, 49.7% of Ukraine's total area remains under state ownership. And the individualisation of land ownership - i.e. the fact that an increasing number of Ukrainians now own titled plots of land - is raising many controversial questions. What is farm land worth in Ukraine? What rights do owners of farm land enjoy, and what responsibilities must they fulfil? Can farm land be sold and, if yes, to whom and subject to what controls and proceedures? Policy makers are facing these questions as they continue the process of land reform and attempt to establish land markets in Ukraine.

A functioning land market is of vital importance to agriculture. It permits land to 'move' from less to more efficient owners/operators, it ensures that land can fulfil its role as a source of collateral for farms, and it also permits land to serve as a source of revenue for pensioners and others in rural areas who may not have many alternative sources of income.

In order to evaluate agricultural land policy and provide at least some answers to the questions listed above, it is necessary to understand how prices of farm land (both for sale and for

lease) are determined. Land price determination has important implications for the management of individual farm operations at the microeconomic level, and for the development of agriculture and the design of appropriate agricultural policies at the macroeconomic level. The fundamentals of farm land price determination are an essential part of the education that students of agricultural economics receive in Western countries. In Ukraine, these fundamentals are not widely understood and appreciated. This comes as no surprise, because Ukraine did not have a land market for many decades prior to Independence, so land price determination has not been a part of standard curricula.

In the following we outline how land markets function and how farm land values are determined in market economies. The following chapter begins with an explanation of farm land price determination. In chapter 3 we discuss the links between agricultural policy and land prices. On the basis of these chapters, we discuss government policy with respect to farm land in Ukraine in chapter 4, and derive a series of recommendations in chapter 5.

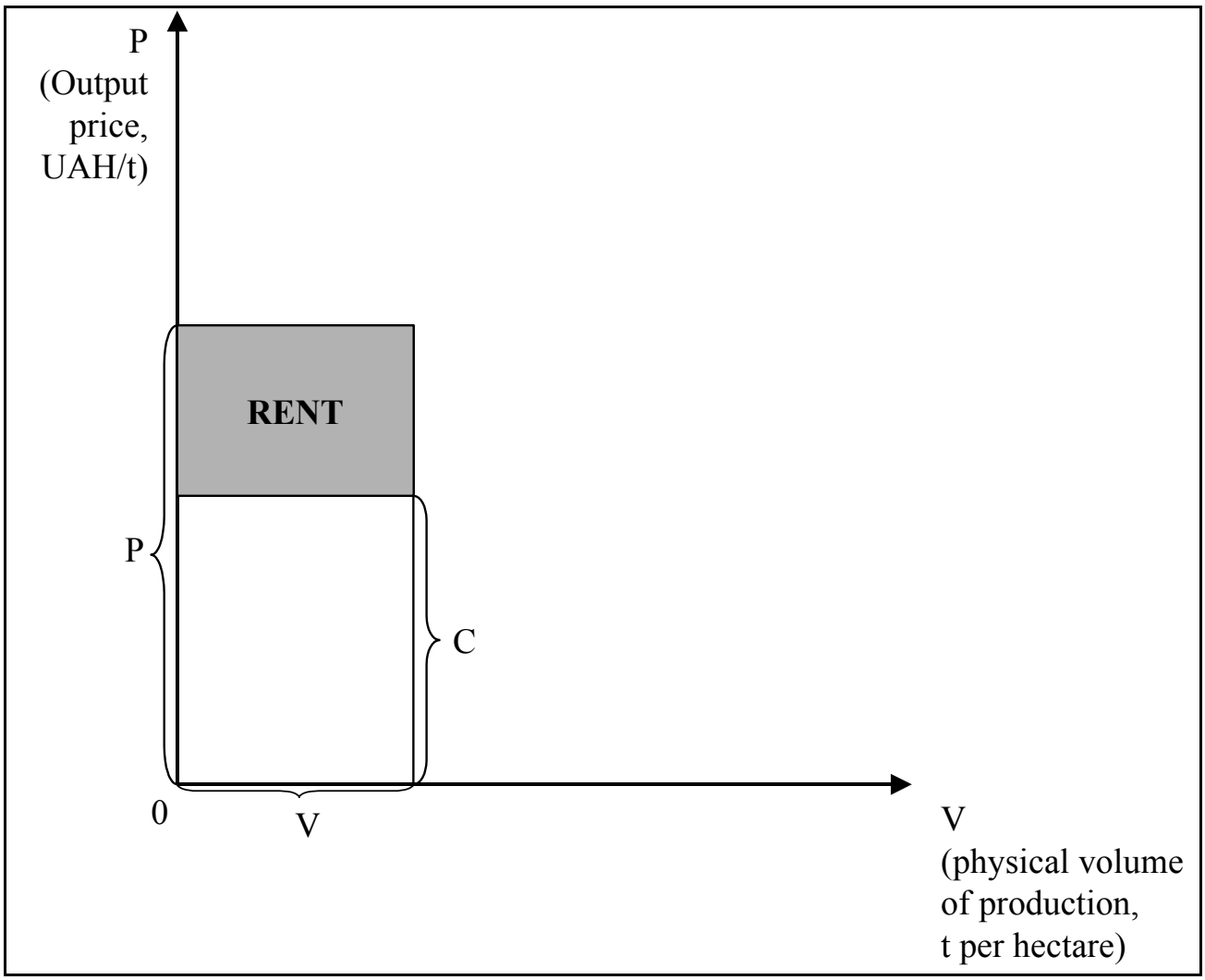
2 The determination of prices for farm land

It is important to realise that in a market economy farm land does not have a fixed absolute value but rather a price that varies according to a number of factors. These factors include not only the physical production potential of the land in question but also its location in relation to agricultural markets, the nature of agricultural policy and the managerial ability of the individuals farming the land.

Economists refer to the income that accrues to farm land as a residual income. Residual, because in a functioning market economy, the income that accrues to farm land (in other words, the amount of rent that a farmer will be willing to pay for the use of an additional hectare of land) is the margin that is left over when all relevant costs of farming this additional hectare have been subtracted from the additional revenue that is generated from the sale of the crops produced on it.

In figure 1, the revenue that can be generated on an **additional** hectare of land is represented as the product of the physical amount of agricultural produce that can be produced on this land (V for volume, for example in tons) and the price per unit of this physical output (P for price, for example in UAH/t). To determine the amount of rent that a farmer is willing to pay for the use of an additional hectare of land, he or she will deduct the costs (for example seed, fertilizer, fuel, labour, and machinery costs) that are required to produce a crop on this hectare. In figure 1, these costs (**per hectare**) are equal to the product of V and C (C = costs, for example in UAH/t of output).

Figure 1: The rental income of farm land as a residual income



The remaining (shaded) area in figure 1 is the residual income that represents the maximum amount that a farmer will be willing to pay for the use of an additional hectare of land. If **she** pays more than this amount of rent, then total expenditures for land rental and other costs will exceed her total revenues, resulting in a loss. If she pays less rent than this amount, she will realise an **excess** profit.[1] This simple mechanism of land rent determination can be used to illustrate a number of important relationships in agriculture. These include:

1. The derivation of the price of land (see chapter 2.1);
2. How the market mechanism ensures that agricultural land will tend to 'move' from less to more efficient farm managers thus increasing the overall efficiency of farming and its contribution to national income (see chapter 2.2); and
3. How the market mechanism will ensure that land owners will receive a 'fair' rental pay-ment or purchase price for their land, provided that there is sufficient competition on the land market (see chapter 2.3).

Finally, this mechanism can also be used to illustrate the impact of agricultural policy – for example in the form of production quotas systems or price support for farm products – on land prices (see chapter 3). In the following, each of these issues will be discussed in turn.

[1] It is assumed that a normal profit, i.e. a return on the farmer's managerial ability, is already included in the costs labelled *C* above.

2.1 The purchase price of farm land

The mechanism described above explains how much a farmer will be willing to pay for the right to produce one crop on an additional hectare of land, i.e. for one year's use of that land. Clearly, there will be a relationship between this rental price of land and the purchase price that a farmer will be willing to pay for the right to use this hectare of land in perpetuity. Specifically, a rational farmer will be willing to pay no more than the sum of all the expected residual incomes that can be derived from a hectare of land in this and all future years. Of course, expected income in future years must be discounted to derive its present value, because of one Hryvnia of income in the future is worth less than one Hryvnia today.[2] In mathematical terms, therefore, the following expression can be used to derive the purchase price of a hectare of land (P_p) from the rental price of land (P_r):

$$P_p = \sum_{t=1}^{\infty}\left[\frac{P_r}{(1+i)^t}\right] \qquad (1)$$

where i is the **interest rate** that is used to **discount** future streams of income to derive their present value.

While equation (1) provides for an infinite planning horizon ($t = 1,2,\ldots,\infty$), it is obvious that most individuals have a finite planning horizon that extends over several decades at most. At any reasonable discount rate (in a western market economy one might calculate with a value somewhere between 5 and 10%), the present value of income streams in the distant future is effectively 0, so that makes little difference whether the summation in equation (1) runs from 1 to infinity or from 1 to, for example, 30.

Equation (1) can be used to derive two important **policy conclusions. First**, inspection of equation (1) reveals that high discount rates effectively tax owners of farm land. The discount rate is composed of two major components. The first of these is the interest rate on capital. High interest rates (such as those prevailing in Ukraine) **tax** land owners because high interest rates increase the costs of agricultural production (C in figure 1), thus reducing the residual income that accrues to land. Furthermore, the higher the interest rate, the more future income is discounted when calculating the present value of the right to farm a hectare of land in at some future date.[3] Hence, high interest rates reduce both the rental price of land and the purchase price that corresponds to any given rental price. For this reason, high interest rates in Ukraine represent a tax on land owners. Since land owners in Ukraine (in other words, employees and members of the former collective agricultural enterprises) tend to be among the poorest members of the Ukrainian population, this tax has a regressive impact on the distribution of wealth and income in Ukraine, i.e. it takes money away from people who should, according to broadly accepted ethical standards, be recipients.

The second policy conclusion that can be derived from equation (1) has to do with the impact of uncertainty and the second component of the discount rate. The more uncertain a farmer is about the income that she will derive from a given hectare of land in the future, the more she will discount this future income when calculating its present value. In other words, the discount rate i in equation (1) not only reflects the objectively measurable market interest rate on capital, it also

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[2] This is because one must set aside only $\frac{1}{(1+i)}$ Hryvnia today, where i is the annual rate of interest, to receive exactly one Hryvnia of income in return in one year.

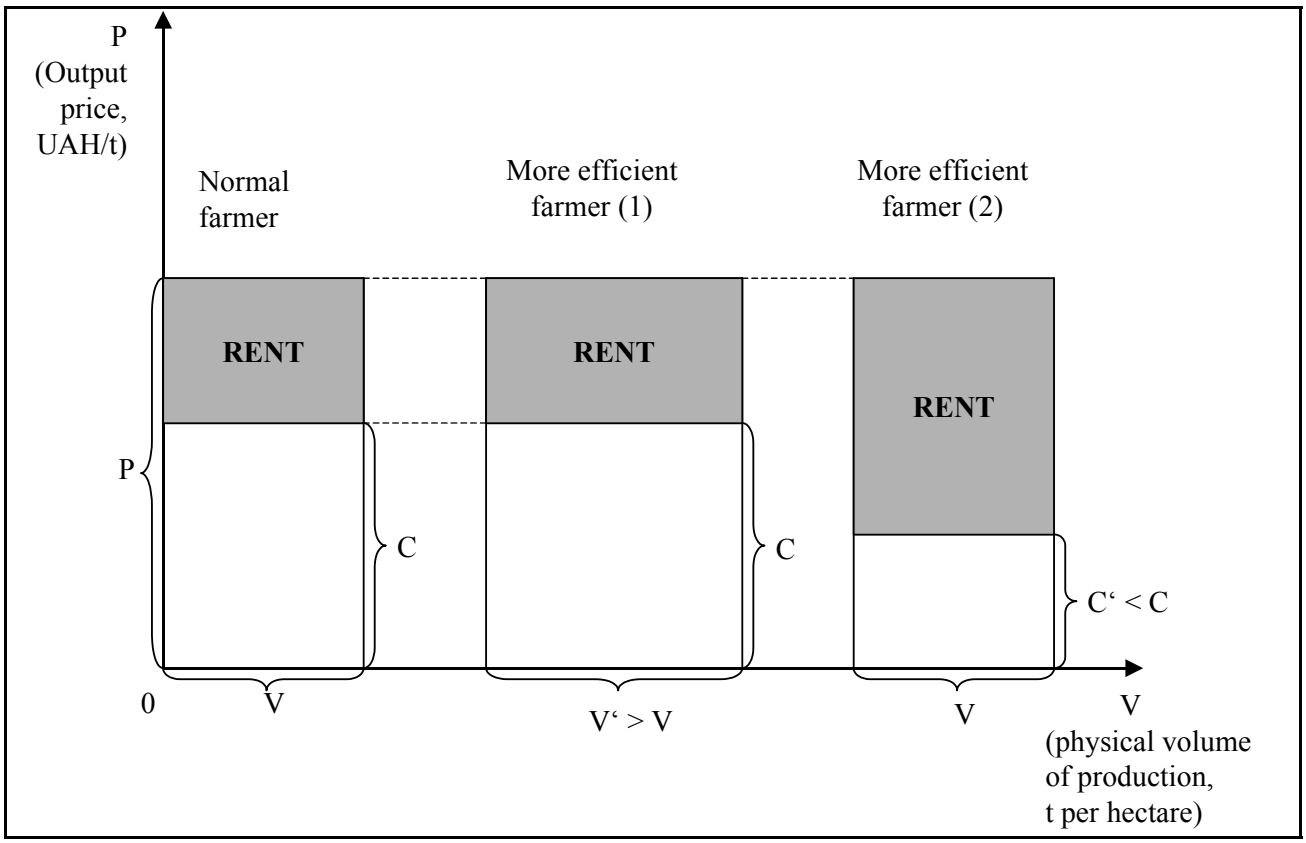
[3] Mathematically, in equation (1), $\partial P_p / \partial i = -\sum_{t=1}^{\infty}\left[\frac{P_r}{(1+i)^{t+1}}\right] < 0$.

contains a component that reflects an individual's subjective expectations regarding the stability and profitability of farming in the future. When policy makers fail to broadcast credible signals about the future profitability of agriculture and, even worse, when they sporadically intervene on agricultural markets (for example in the form of regional export bans, etc.), they effectively increase this uncertainty component of the discount rate *i*. As a result, farmers' willingness to pay today for the right to generate income on a given plot of land in the future will fall. High interest rates and unstable agricultural policies increase the discount rate and, thus, reduce the purchase price of land. The result is identical to a tax on land owners.

2.2 Land markets and the efficiency of agriculture

Using figure 1, it is possible to explain how a free land market 'guides' the movement of land from less to more efficient farmers, thus increasing the overall efficiency of agriculture. Compared with her less efficient competitor, a more efficient farmer will be able to produce the same amount of output at lower cost or, for a given level of costs she will be able to produce more output. These possibilities are depicted in figure 2. The first column of figure 2 is identical to figure 1. The second and third columns depict situations in which a farmer is able to produce more output for a given level of costs, and a farmer is able to produce a given level of output at lower cost, respectively. In both of the latter two cases, it is easy to see that the amount of rent that a more efficient farmer will be able to pay for the use of a given hectare of land is higher than the corresponding amount for a less efficient farmer. Combining this results with equation (1), this implies that more efficient farmers will also be able to pay higher purchase prices for land. Hence, more efficient farmers will be able to bid more for a given plot of land that becomes available on the market, whether for rent or for sale. As a result, more efficient farmers will farm progressively more and more of the available land as times goes by, provided, of course, the land market is free and competitive.

Figure 2: How more efficient farmers can pay more for land



2.3 The importance of competition

Competition, just mentioned, is very important in this regard. The mechanism described above will only function if many farmers competitively bid for the right to use or purchase a plot of land. If competition is lacking, then a less efficient user will not have to fear that more efficient users might bid more for the land that she is currently using. Hence, she will continue to farm this land. For the economy as a whole, this means that a given amount of output will be produced at higher costs than necessary, or that for a given level of costs less output will be produced than would otherwise be possible. We see, therefore, that a lack of competition on land markets has negative effects not only on the owner of the land, who receives less rent, but also on the economy as a whole, as the productive potential of agriculture is not realised.

Lack of competition on land markets can also lead to some farmers paying less for the use of a hectare of land than the difference between total revenue and total costs. In this case, the farmer in question receives an excess profit, as was referred to above. The danger that this might occur is especially large if land markets are regionally fragmented so that only a few or perhaps only one person or enterprise bids for the use of land. There is reason to fear that this could be the case in some region of Ukraine, where owners of land parcels who wish to lease their land have no choice but to lease to one specific individual or enterprise. This individual or enterprise will be able to exercise monopsony power on the local market for land and therefore pay less rent than would be the case under competitive conditions. There are many reports of local 'land barons' using political connections, bribery, the threat of exclusion from the social sphere,[4] and even the threat of physical violence to eliminate potential competitors and/or to discourage owners of land from renting to such

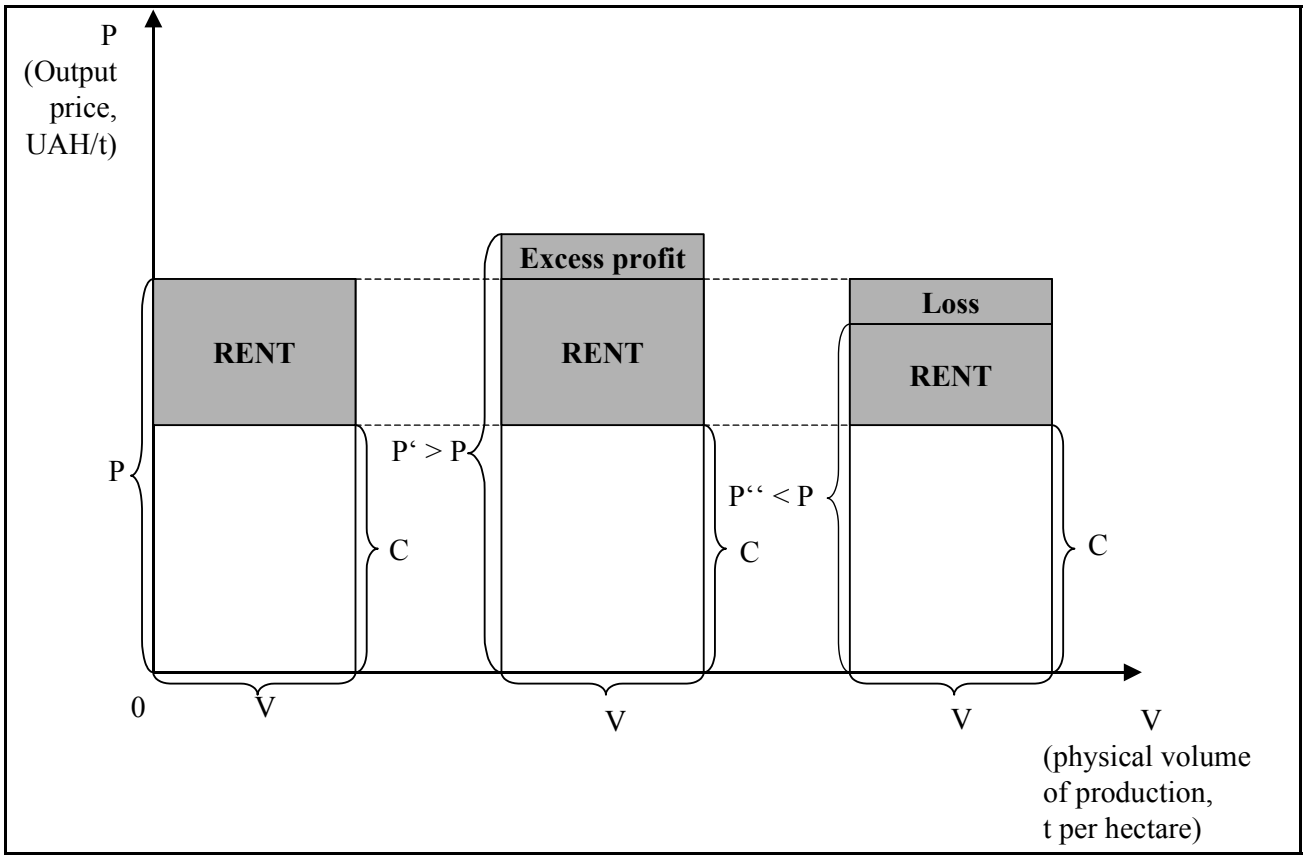
[4] Indeed, this is allegedly one of the reasons why some farm managers are reluctant to transfer the social sphere away from their farms to local authorities; although it burdens the farm financially, the social sphere can provide managers with a convenient lever.

potential competitors. Competition is the most important means of ensuring that land owners' rights, including the right to earn a fair return on their land holdings, are respected.

3 Land prices and agricultural policy

Agricultural policy can have many different impacts on the price determination mechanism for farm land. In most developed economies, agricultural policy is aimed at increasing agricultural incomes via price support for agricultural products. This is also the main thrust of many agricultural policy measures pursued by the Ukrainian government. Figure 3 illustrates the impact of price support, for example by means of a pledge price system, on the price of farm land. All other things being equal, an increase in agricultural prices will increase the revenue that can be produced on a given hectare of land. The first column of figure 3 duplicates figure 1, and the second column depicts a situation in which the volume of agricultural production (V) has not changed, but government policy has led to an increase in the price per unit of this production ($P'>P$). As a result, it is clear that total revenue per hectare increases, and if costs remain the same then the amount of rent that a farmer will be willing to pay for the use of a hectare of land will increase.[5]

Figure 3: The impact of price-changes on land rents



3.1 Who benefits from price support for farm products?

One important implication of the mechanism just described is that the benefits of agricultural price support do not necessarily accrue to farmers but rather to land owners. If agricultural prices increase due to policy measures, farmers who rent land under competitive conditions will find that they must pay more to rent a hectare of land. Farming itself, therefore, does not become more

[5] Increased agricultural prices can be expected to increase the intensity of production (for example fertilizer and pesticide use per hectare), thus increasing both costs (C) and physical output (V). It can nevertheless be demonstrated that under normal conditions an increase in the price of agricultural output will necessarily lead to an increase in the price of agricultural land

profitable. It is the ownership of land that becomes more profitable as a result of agricultural price support.

Of course, lease agreements are often signed for periods of several years. If an owner of land and a farmer have signed a lease with a duration of several years, and agricultural price support increases during this period, then the farmer will benefit from the price support (in the form of excess profits, see figure 3) at least until the lease expires and she is forced to renegotiate with the land owner. In the interim, the land owner will presumably have noticed that farming has become more profitable. She will therefore demand higher rent payments when she renegotiates the rental agreement with the farmer. Of course, the opposite is also possible. A farmer who has agreed to pay a certain rent per year for the use of agricultural land over a number of years could be confronted by reductions in agricultural price support during the duration of the rental agreement. As depicted in the third column in figure 3 ($P''<P$), the total sum of production cost plus land rent payments will now exceed total revenue, so that the farmer in question will realise a loss.

3.2 The Experience in the new Länder

Experience in the new ‚Länder' in Eastern Germany is instructive in this respect. In the years immediately following reunification, many owners of farm land (former employees of CAEs in East Germany as well as citizens of both East and West Germany whose received land restitution) rented their land to farmers and farm enterprises for very low rental payments. In part, they agreed to these low payments because they were under pressure or felt obliged to support the farms they were renting to (for example, because they or their family members were employed by these farms). As can be seen in figure 3, if farms have to pay less than the residual income associated with farming a plot of land, they realise an excess profit at the expense of the land owner. Hence by volontarily agreeing to a low rent, a land owner can 'subsidise' the farm of her choice.

However, low rental payments were also the rule due to the great uncertainty that confronted farmers in the period immediately following reunification. Farmers in the Eastern Länder were only willing to agree to low rents because they were very uncertain about the future profitability of farming. This uncertainty was partly caused by the completely new market environment within which these farmers had to operate (farms had to restructure and adapt within months, not years, in the Eastern Länder!), but also by political uncertainty. In 1990-91, the EU was debating the most far-reaching agricultural policy reform in its history, and it was far from certain what course this reform would take. Farmers were understandably wary of locking themselves into expensive rent contracts when the future of price support in the EU was uncertain.

In the end, the so-called MacSharry reform package agreed to in 1992 lowered grain support prices by 30% over three years and compensated farmers via direct payments per hectare that average roughly 600 DM/ha in Germany.[6] So many farms in the Eastern Länder found themselves in an advantageous position in the mid- to late-1990s. They were paying perhaps 200 or 300 DM/ha of rented land based on long term (often ten year) rental agreements that had been signed in the early 1990s, and receiving perhaps 600 DM/ha of land in direct payments for producing grain on this land. As long as the grain production itself was at least a break-even proposition, a pure profit of 300-400 DM/ha of land was guaranteed. And for most competent farm managers, grain production in the EU is much more than a break-even proposition. Of course, today, ten years later, as the rent agreements signed in the early 1990s are expiring and being renegotiated, land owners are insisting on a much larger share of these profits, and some less efficient farm enterprises that have survived the last ten years at the expense of land owners will come under considerable pressure.

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[6] This payment varies from region to region and member state to member state within the EU based on historical yields and other factors.

To deal with the risk of price fluctuations, land lease contracts in some countries tie the rental payment per hectare of land by some formula to the price of an important crop (such as wheat) or some basket of crops (for example, a grain price index). Generally speaking, under unstable conditions land owners are well advised to avoid long-term lease contracts. Table 1, based on the results of a survey of leasing carried out in 1998/1999 in Ukraine, illustrates that the average duration of land rent agreements on the surveyed restructured farms is 5.2 years and often exceeds 6 years. Under the very turbulent conditions prevailing in Ukrainian agriculture today, it is very difficult to predict profitability of farming next year or the year after, let alone in five or six years. There is grounds for concern that in many cases land owners are renting out their land under value and locking themselves into long-term contracts that will not permit them to participate in any improvements in the profitability of agriculture that may occur in the interim (for example in the last year 2000). If a land owner does this volontarily and based on full information - for example because she wishes to 'subsidise' her local farm –there is nothing objectionable about such an agreement. Often, however, this is probably not the case.

Table 1: Results of survey of leasing on ALSP restructured farms in 1998/99

Oblast	Number of lessees	Average size of leased land per lessee (ha)	Average number of lessors per lessee	Average size of land parcel per lessor (ha)	Average rent per hectare per year (UAH)	Average rent per lessor per year (UAH)	Average duration of lease (years)
Vinnitsa	4	1211	504	2.43	17	41	6
Kirovograd	17	1969	317	5.96	34.5	225	5.6
Lugansk	18	3949	449	9.3	36	304	6.7
Lviv	69	1617	685	2.56	18.3	40	5
Mykolaiv	20	2469	293	8.7	35.1	288	5.7
Odessa	4	686	120	5.72	43	345	1
Poltava	10	1291	396	3.5	55.4	186	4.5
Rivne	9	1736	667	3.26	41.3	111	15.9
Sumy	49	2172	560	3.88	16	62	2.2
Ternopil	48	1310	550	2.59	46.6	119	5
Kharkiv	8	2538	285	8.11	30.8	259	6.3
Kherson	37	4261	583	7.43	20.1	142	7.5
Khmelnitsky	25	1323	485	2.94	27.2	75	5.1
Cherkassy	13	1945	637	3.2	29.1	93	6.9
Average per farm		2120	530	4.46	28	124	5.2

Source: Starikov, O (2000, p. 1).

3.3 Attempts to determine 'objective' land prices

The above discussion has demonstrated that land prices depend on many factors beside the simple physical quality of land itself. For this reason, attempts to prescribe a price of land based on soil quality and similar considerations make little sense. Unfortunately, such attempts are common in Ukraine. For example, one often hears comparisons made between farm land in the black soil belt of Ukraine and parts of the United States, for example in Iowa. Based on these comparisons some so-called experts conclude that if land in Iowa is worth 4 000 US$/ha, then similar land in Ukraine must also be worth so much. The value of land is not a constant function of its agronomic quality alone, however, but rather a highly complex function of agronomic, economic and farm managerial factors. Farm land in Ukraine will, regardless of its agronomic quality, only be worth as much as farm land in Iowa when it is possible to generate the same rent on this land as it is in Iowa. As long as farming and the marketing of farm products remain much less efficient in Ukraine than in Iowa, this will not be the case.

3.4 Why are farm land prices so high in Germany?

Ukrainian farmers and policy makers who visit Germany are often astonished by the land prices that prevail there. Land prices upwards of 15,000 and 20,000 DM/ha and land rents of 800 DM/ha/year and more are not uncommon in Germany. Why is farm land so expensive in Germany and what are the advantages and disadvantages of these land prices for German agriculture? One of the main reason that farm land prices are so high in Germany has already been outlined above. Agricultural policy, by supporting farm prices, inflates profits per hectare and, thus, increases farmers' willingness to rent or purchase land. In recent years, EU agricultural policy has added a number of new measures that increase farm land prices. First, as discussed above in relation to the situation in Germany's Eastern Länder, EU support prices for grain were reduced in the mid-1990s and farmers were provided with fixed payments per hectare of land in return. Any land owner who is considering renting land to a farmer knows that this farmer will receive a payment of (on average in Germany) 600 DM/ha above and beyond any revenue he generates from producing crops on this land. Obviously, under competitive conditions, farmers will factor this fixed payment per hectare into their calculations when determining how much they are willing to pay to rent a hectare of land. As a result, under competitive conditions these fixed payments have the same effects as price support; it is not farmers who benefit but rather land owners.

Second, in some regions of Germany (and other EU member states) highly concentrated animal production (especially pig production) has led to a situation in which large amounts of manure must be disposed of. Strict environmental regulations limit the amount of manure that can be spread per hectare of land and the times of the year during which it is permissible to do so. Farmers with large numbers of animals must prove that they have sufficient area (either owned or rented) on which to dispose of the manure produced on their farms in accordance with environmental regulations. As a result, in regions such as the Weser-Ems-region of North-Western Germany, pig producers are willing to pay exorbitant amounts of money (sometimes well over 1,000 DM/ha) to rent relatively poor farm land, simply so that they can dispose of manure on it. As environmental regulations are progressively tightened, the amount of manure that can be spread on a given area of land is reduced and farmers are continuously on the look-out for more land if they wish to maintain or expand their animal herds.

A further reason why farm land prices are so high in Germany is population density. The demand for land for building houses and for infrastructure such as roads and airports etc. is high in Germany. Even if a given piece of land is zoned for agricultural use only, it is often possible to predict with the reasonable certainty that within a certain amount of time the demand for this land for non-agricultural purposes will become very strong, and that this land will be re-zoned for such purposes. Hence, farm land prices in Germany and other densely populated EU member states often include a large speculative component, especially in areas close to major growing urban centres such as Frankfurt, Munich, Stuttgart or Hamburg. For many small and less efficient farmers, periodically selling small parcels of land for construction purposes represents a survival strategy that makes it possible to continue farming with a reasonable total income despite low or even negative profits.

In summary, therefore, farm land prices in Germany are high for a number of man-made reasons. These include agricultural policy (price support, direct payments and environmental regulations) and Germany's high population density and the resulting demand for land for non-agricultural purposes. For these reasons, a hectare of German land that is of relatively low agronomic value can have a much higher price than a hectare of land in Ukraine with considerably more agronomic value. As Ukraine is much less densely populated than Germany, and since Ukraine cannot afford the sort of exorbitant agricultural policy spending that the EU and the German government provide to farmers, it is not reasonable to expect that farm land prices in Ukraine will reach levels that are comparable to farm land prices in Germany in the foreseeable future.

4 Land market reform in Ukraine

As in most post-Soviet economies, the topic of land reform is especially controversial in Ukraine. It is controversial for ideological reasons because many, especially older, more conservative citizens are convinced that land is not a normal factor of production that can be subjected to market forces, but rather a national inheritance that must be owned and managed by the state for the benefit of all. While the principle that land should not be state or collectively but rather individually owned seems to be becoming increasingly accepted in Ukraine in recent years, the question of what rights individual owners of land should have (the rights to rent, to sell and mortgage land) remains highly controversial. A land-code that will define and delineate such rights has been in preparation for several years. In the following section we first address some fundamental issues surrounding the rights to rent and to sell land in the specific Ukrainian context. We then make a number of additional comments about the proposed land code in particular.

4.1 Land owners' rights in the Ukrainian context

Many politicians in Ukraine who are fundamentally convinced that Ukraine needs a land market, in which not only rental but also sale is permitted, nevertheless advocate that such a land market be established cautiously, step by step. For example, leading politicians have suggested while the right to sell and purchase land should exist in Ukraine, a temporary moratorium (periods of for example three years have been suggested) should be used to suspend this right until land markets have had a chance to develop. Furthermore, there is very broad support for the idea that foreigners should not be allowed to purchase Ukrainian farm land.

Based on the fundamentals of land price determination that have been discussed in the previous sections, what can be said about these issues from an economic perspective? To begin with, we should note that we are fully aware that the issue of land ownership and sale is very controversial and emotional. As foreigners, we can make suggestions and point out the strengths and weaknesses of various actions. At the end of the day, however, Ukrainian society and the Ukrainian political system will have to find solutions that are acceptable to a majority of the population. In the search for such solutions, economic analysis must be tempered by political and social considerations. Nevertheless, it is important to be aware of the economic costs of pursuing certain political and social goals. As we will argue below, for example, forbidding the foreign purchase and ownership of Ukrainian farm land would impose direct and very substantial costs on Ukrainian land owners and the Ukrainian economy. This is not to say that it is wrong to forbid the foreign purchase and ownership of Ukrainian farm land. But it is wrong to pretend that this measure is only good for all Ukrainians.

If farm land in Ukraine could be bought and sold today, it would probably sell at very low prices, and this for two reasons. First, because farming is not very profitable in Ukraine. While it is true that profitability increased significantly in 2000, there is still a great deal of uncertainty regarding the long run profitability of farming in Ukraine, and this uncertainty will be reflected in low land prices (see section 2). Second, because even if land purchase and sale were legal in Ukraine, the Ukrainian land market is not competitive:

- If foreign subjects are not permitted to own farm land in Ukraine, the demand side of the land market will be limited to a relatively small number of wealthy Ukrainians. These individuals are generally well connected and have access to a variety of benefits and privileges that these connections confer.
- On the supply side, most land owners in Ukraine are poor. They are also poorly informed about their rights and responsibilities as land owners. Often, these owners depend entirely on farm managers as a source of information about these rights and responsibilities. Farm managers are not only able to 'filter' the information that reaches land owners, they are often

able to subject land owners, as members of a former collective farm, to considerable explicit coercion.[7]

Hence, a land market in Ukraine would, at this time, be characterised by grave asymmetry. On the one hand, a relatively small group of wealthy, well connected and well informed buyers; on the other a large group of peasants, poorly informed and often in a position of dependence. Under these conditions there is a real danger that a free land market lead to a rapid concentration of vast tracts of land, purchased by a small group at low prices. This is not to say that a certain concentration of farm land ownership in Ukraine is not inevitable or even undesirable. The average land share in Ukraine amounts to 4.1 hectares and it is clear that efficient grain farms in Ukraine will be considerably larger than this. This is, however, not a convincing argument in favour of land concentration. The fact that land is owned predominantly in small parcels in Ukraine would not hinder the emergence of efficiently sized farm units as long as the land rental market functions efficiently (in Germany's new Länder, for example, over 90% of all farm land is rented and not farmed by its owner).

A more convincing argument in favour of increasing concentration of land ownership in Ukraine is the fact that a significant number of land owners in Ukraine, perhaps the majority, are not interested in farming themselves and would rather sell their land and use the proceeds for other purposes (for example, renovating the house they will soon retire to) rather than continue to own it. Hence, there is reason to expect that land ownership in Ukraine will become increasingly concentrated with time, when the sale and purchase of land is permitted. However, the degree to and conditions under which this concentration takes place would, under the asymmetric conditions currently prevailing in Ukraine, lead to an outcome which is very unbalanced and, threatens to undermine the credibility of market oriented reforms.

In Russia, where basic conditions (the structure of farming, the status of reforms) are similar, there is already evidence of such dangerous tendencies. There are of reports of large energy firms such as Lukoil and Gasprom and others with wealth and connections purchasing as much as 50.000 and 100.000 ha of land in certain regions.[8] According to some evidence, land is being purchased for as little as 50 US$/ha! Land owners who refuse to 'co-operate' are subjected to threats and blackmail. The spectre of neo-feudal conditions is emerging. This poses a danger for the social acceptance of reforms. Citizens throughout the CIS are already heavily disillusioned about the first wave of privatisation that lead to a highly skewed distribution of assets in many industrial sectors. Even if it can be argued that this was an unforeseeable result of privatisation in the 'uncharted waters' of early transition, today, ten years later, it is no longer possible to claim ignorance.

4.2 Why invest in Ukrainian farm land today?

If farming is currently not profitable in Ukraine, why would wealthy individuals be interested in buying farm land in the first place? There are many possible motives (of course, in most cases some combination of these motives will be relevant):

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[7] For example, the pensioner who refuses to sell her land at a low price to the local 'oligarch' may be confronted with the threat that her son, who works in the local flour mill, will lose his job. Or she may be threatened with exclusion from the social sphere, as discussed above. This sort of coercion was not uncommon in Germany's new Länder as farms restructured there, so there is no reason to expect that it would be uncommon in Ukraine.

[8] In Russia this is taking place in certain oblasts that have forged ahead with their own land codes in the absence of corresponding federal legislation. The situation in Ukraine is different. However, a German farmer known to us was recently contacted by a farm manager from the Odessa region who was looking to rent some combines, and who claimed to be farming over20,000 hectares. Similar cases are not rare in Ukraine. How much rent are the owners of this land receiving, and do they have any real alternative to renting their land to the farm enterprise in question?

- First, some investors may simply be convinced that they will be more successful farmers than most of those who have gone before them, i.e. that they will be able to make profits where others have failed to.
- Second, opportunities to avoid taxes in agriculture may make farming appear more profitable than it really is to entrepreneurs who are making profits elsewhere.
- Third, some entrepreneurs with interests in the food processing industry may see vertical integration into farming as a way of ensuring dependable supplies of raw products.
- Fourth, the year 2000 was profitable for many farms. Perhaps this is leading some potential investors to conclude that farm land represents a good investment. If this is so, their expectations may be disappointed in the coming years as there is reason to believe that 2000 was a unique year in many respects.

Finally, some investors may be guided by purely speculative motives. From an economic point of view, speculation is not an intrinsically 'bad' activity. On the contrary, speculation is a vital element of many markets because it allows risk to be transferred from individuals who are very risk averse to others who are less so. However, speculation is problematic if it does not occur under competitive conditions. If speculators can exercise market power, then what appears to be speculation is actually a 'sure bet'. For example, if one is able to buy land today at depressed prices (due to an information advantage *vis-à-vis* peasant owners of land on the supply side and a lack of competition on the demand side), then one's chances of selling later at a profit will be artificially high.

Some may even be speculating that farm land that can be bought cheaply today will increase in price as a result of agricultural protection in the future. The impact that agricultural protection has on farm land prices was outlined in section 3. From a political economic perspective, Ukrainian farm land may be a very attractive investment. It is well known that a small group of wealthy and well connected businessmen and investors exercise considerable influence on Ukrainian economic policy in general and agricultural policy in particular (as evidenced, for example, by the export tax on oilseeds). For such individuals it could be a highly profitable strategy to invest in farm land today and then use political influence to increase agricultural protection (for example in the form of pledge prices and import quotas) and, with it, the future value of this investment in farm land. Since it is reasonable to expect there will be strong grass-roots political support for agricultural protection in Ukraine in the coming decades (due among other things to the high share of Ukraine's population that works in or depends on agriculture) this strategy would appear to have a good chance of success.

In this connection is might be appropriate to draw a parallel to agricultural policy developments in many industrialised countries. In the EU and other western countries agricultural protection is justified as a means of supporting the incomes of many small farmers. In reality, a fairly small group of larger farmers and, in particular, land owners reaps most of the benefits. In the EU, for example, it is a stylised fact that roughly 80% of the benefits of agricultural protection accrue to only 20% of those engaged in farming. Ukraine is going to have a very difficult time in the coming years avoiding the exceedingly costly pit-falls of agricultural protection. This would likely prove even more difficult if protection were being lobbied for and advocated behind the scenes by a small influential group of new 'feudal' lords who own vast tracts of farm land.

5 Conclusions

- There are good arguments for imposing a moratorium on the purchase and sale of farm land. However, this moratorium should be for as short a period as possible, and it is imperative that its duration be limited from the outset by a sunset clause. In other words, the moratorium should expire automatically after a predetermined number of years (perhaps 2 or 3), and not run on indefinitely until it is repealed.

- The moratorium must be applied strictly and without exception.
- For the duration of the moratorium, an fully independent study group (not a ministry or a state committee) should be charged with making regular public reports on the status of the market for farm land in Ukraine. This group must have complete access to all information on land transactions (which is why it must be independent); its publications must, however, ensure that individual transactions remain anonymous.
- An aggressive information campaign, amply funded and targeted by directly at land owners, must be implemented. The sooner land owners are put on an equal footing with potential buyers, the sooner land purchase and sale can be legalised and the full benefits of a complete land market realised.
- Coupled with the moratorium, legislation should make it illegal to include clauses in land lease contracts that give those who rent land any form of binding purchase option. Otherwise, it is likely that some will attempt to circumvent the moratorium on land purchase and sale by means of lease contracts that bind the lessor to sell to the lessee once the moratorium has been lifted (for example, by giving the lessee first right of refusal). By no means should it be permitted to fix a later purchase price for land in a lease contract.
- When the market is opened, open it to foreigners as well. This will help create competitive conditions. Why should one prefer a Ukrainian buyer with monopolistic power to a foreign competitor who pays a fair price? In what sense is one protecting Ukrainian interests by allowing wealthy, well-connected Ukrainians with off-shore bank accounts to buy land from their countrymen and –women at depressed prices?
- Over an initial period it could be advisable to legislate minimum land prices and limits on the amount of land that an individual is permitted to own. Without entering into a futile debate on optimal farm sizes,[9] it appears to be the case that most economies of scale in crop production are exhausted by perhaps 2.000-3.000. Hence, a limit of 5.000 ha on land ownership by individuals would curb excessive concentration without having any significant impact on the efficiency of farming in Ukraine.
- In economic dealings, individuals are often tempted to 'bend' the rules or breach contracts. Furthermore, it is essentially impossible to draw up contracts that contain clauses for every foreseeable eventuality in an economic environment that is changing as rapidly as is the case in Ukraine. Hence, it is very important that lessors and lessees as well as sellers and buyers of farm land have access to low-cost impartial legal recourse. To ensure that land reform generates economic benefits and is perceived as being fair, it must be possible for the most humble land owner to receive objective advice and contest any contract, regardless of who is on the other end.

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[9] Experience in market economies has demonstrated very clearly that while it is possible to calculate optimal farm sizes based on technical or engineering considerations, i) these considerations are in a constant state of flux due to technical change, and ii) the human factor (management ability, know-how and motivational skills) is the most important single factor determining farm success. Managers should be permitted to chose the farm sizes that suit them best individually, and the market should be permitted to determine what combinations of manager and farm size are fit to survive. Decades of central planning in agriculture based on 'objective' optimal farm design failed to produce internationally competitive agriculture.