

**Asset Illiquidity, Exclusory Laws, and Land Reform:
The Case of Foreign Ownership of Hungarian Agricultural Land**

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1. Introduction

During the past decade economic reforms in Central and Eastern Europe (CEE) have resulted in substantial welfare declines within agriculture across the region. Generally, all agents within the agricultural food chain have faced similar problems of decreasing terms of trade, increased competition, lack of financial resources and thin markets for both the sale of their output as well as for the sale of their underlying assets if so inclined (Swinnen & Macours, 2000). As a result, farmers have found themselves under severe financial distress and forced to operate their assets at subsistence levels that are well below the optimal productive capacity levels that would be expected under normal equilibrium market conditions in the absence of these constraints (Swinnen & Gow, 1999).

The Hungarian agricultural sector has also experienced similar events as previously described. During the period 1990-1993, Hungary experienced a severe recession that resulted in 18% decline in GDP¹. The Hungarian agricultural sector was the worst affected sector declining by 31%. The recession has been attributed to several factors: the collapse of traditional markets in the former Soviet Union, unfavorable development of the terms of trade, fundamental restructuring of land ownership, reorganization of farms, and effect of abnormal droughts in 1992 and 1993. Although the sector visibly recovered during the mid 1990's, it was hit by another recession in 1997. Both of these recessionary periods can be uniquely viewed as *idiosyncratic economic shocks*. These shocks have inherently placed Hungarian agricultural

¹ Statistics in relation to the recession in Hungary during 1990-1993 are provided herein by the European Union Agriculture Rural Development Report, Hungary, June 1998.

agents under severe financial distress as well as induced the primary issue of concern within our study, *asset illiquidity*.

Shleifer & Vishny (1992) define asset illiquidity as the “difference between price and value when the asset is in best use.” They state that the principal reason for asset illiquidity is the general equilibrium aspect of asset sales. For example, if farmers have trouble meeting debt payments associated with their farm and are forced to sell his or her assets, through liquidation or otherwise², then the price they receive for these assets may be substantially lower than its economic valuation in its best use, as the potential buyers, other farmers, are likely to be similarly distressed. Hence they will only be able to afford to pay a price equal to the assets value in the distressed state of nature.³

Shleifer and Vishny (1992) show, if individuals are not financially distressed and the economy is in equilibrium then the value of an asset should equal the net present value of future earnings that accrue to that asset when operated in its best use⁴. However, if the economy is hit by an idiosyncratic shock, as observed in Hungary, and a farmer finds himself in financial distress, he will find himself facing three potential purchasers of his assets, all of whom may value the assets less than in its best value use: a similarly distressed neighbor that would farm the land themselves; an outsider who would convert the land to an “alternative” use; and a financial “deep pocket” investor, non-agricultural agent, who would hire the current or some other farmer to farm the land for him (Shleifer & Vishny, 1992).

² Liquidation is not relevant in the case of Hungary as most agricultural or non-agricultural agents owning land gained possession through compensation programs, therefore they do not owe on the land deeming liquidation irrelevant.

³ See Shleifer and Vishny (1992) for a complete explanation.

⁴ Likewise, the lease value of the land should equal the present value of the future earnings of that asset in its best use for the specified period of the lease.

In addition to the idiosyncratic shocks that have placed the Hungarian agricultural sector under financial distress, various agricultural land privatization policies introduced by successive Hungarian governments have resulted in the second area of concern within this study the incomplete transfer of property rights to individual landowners. Incomplete property rights⁵ of agricultural land have been found to have a significant adverse impact on economic growth (Torstensson, 1994, Goldsmith, 1995). Swinnen (1999) identifies three primary reasons for the incomplete transfer of property rights: the inherent incomplete transfer during particular privatization policies, imperfections and obstructions at the policy implementation level, and one of the primary focuses of this research, legal initiatives limiting the effective transfer of property rights.

Legal initiatives that limit the effective transfer of property rights are exceedingly evident in Hungary. The Land Law (Act IV of 1994) states that foreigners are prohibited from acquiring agricultural land, herein limiting owners' rights in transferring and using the assets. Due to the inability on part of landowners within Hungary to transfer land ownership to any citizen, regardless of nationality, landowners are inherently faced with incomplete property rights (Hodgson, Cullinan, & Campbell, 1999). Thus, even though the economic benefits of more efficient land markets through more complete property rights may be substantial, the Hungarian government has continued to restrict foreign ownership of agricultural land for a range of political and social reasons.

However, the situation identified in this study is that the concurrent presence of both asset illiquidity, due to idiosyncratic economic shocks, and incomplete property rights, due to the exclusion of outside agents, result in the current market price of underlying assets being reduced,

⁵ North (1990) defines property rights as, "the rights individuals appropriate over their own labor and the goods and services they possess."

often substantially. Within our analysis the financially distressed agents are Hungarian farmers and the affected assets are their agricultural land holdings. In the context of the previously identified purchasers of the financially distressed agents assets, the neighboring farmers are unable to participate in land markets due to being similarly financial distress from the sector wide idiosyncratic shock and outsiders in the form of foreign farmers are legally excluded, this means that the sole potential purchasers of the land remaining are “deep pocketed” local investors whom value the assets below their first best use. The result is a reduction in the potential debt carrying capacity of the assets, agricultural land, which impacts both the availability of external financial resources and levels and forms of investment that occur.

The combination of asset illiquidity and incomplete property rights in the Hungarian agricultural sector has spawned a uniquely identifiable phenomenon, *pocket contracts*. These contracts have been described as illegal⁶ private contractual agreements between foreign agricultural land users and domestic Hungarian landowners that would allow foreigners to gain immediate effective control of the land assets and the first right to purchase the land upon European Union (EU) accession. EU accession should inherently result in the removal of the exclusory ownership laws, as EU law requires that the constituents of any member state be provided with the right to purchase land within any other member state. The pocket contracts have however thrived along the border with the European Union, where foreigners have found it beneficial to exploit potential loopholes⁶ in the laws to develop innovative but illegal organizational and contractual structures to gain control of agricultural land. It is estimated that currently over fifty-two percent of all arable land is cultivated on lease (Tanic, 1999), with up to

⁶ As previously described, these contracts are illegal by definition due to the Land Law (Act IV of 1994), which forbids foreign ownership of agricultural land.

30% of all small, individual land holdings being organized in some form of pocket contract (Horvath, 1998).

The objective of this paper is to extend Shleifer and Vishny's (1992) asset valuation model to include property rights and thereby provide a framework to understand and explain the economic impact and implications of the combination of asset illiquidity and exclusory laws on 1) the economic value of agricultural land and 2) economic welfare of current and potential landowners and users within the CEE countries. The case of Hungarian land reform provides empirical support and highlights the resulting consequences of the exclusion of foreigners in agricultural land markets. The model identifies the unique conditions necessary for the existence of pocket contracts.

The paper is structured as follows. Section two provides a brief historical background to Hungarian land reform dating back to World War II. Section three introduces the issues of idiosyncratic shocks and property rights. Section four develops a simplified asset valuation model to explain the conditions necessary in order to observe the occurrence of pocket contracts.

2. Land Reform in Hungary⁷

In order to understand how Hungary's current situation evolved it is first necessary to have a general understanding of the historical evolution of pre and post communist Hungarian land reform. The Hungarian economy prior to World War II (1939-1945) was supported by an agricultural sector dominated by large estates, leaving an abundance of the rural population without land. After World War II, while under Communist rule, land reforms laws were introduced that redistributed a large majority of Hungary's arable land into agricultural collectives. The collectivization process of the Hungarian agricultural sector occurred in three

⁷ The overview section was principally influenced by information from Mathijs, 1997.

stages beginning in 1948 and ending in 1962. During the first stage, 1948-1953, the Hungarian government, coerced or forced peasants to move to state and collective farms, enforced compulsory delivery quotas and high taxes, and set prices artificially low to gain control of agriculture. The intention was to gain control of agriculture and use it to generate the needed capital for proposed investment in the industrial sector. The peasants reacted by slowing agriculture production and departing the collective farms in great numbers (F. Nemes, personal communication, June 5, 2000). Thus, the first stage, 1948-1953, ended in only partial success.

The second stage, which occurred between 1953-1956, was characterized by extreme political and social unrest as opposition began increasing to the “new” soviet model of rapid industrialization and forced collectivization introduced shortly after Stalin’s death in March 1953. The period ended with October 1956 Revolution when Soviet tanks and troops were sent in Budapest to end demonstrations and riots that had broken out against the Communist Government.

The third stage, 1957-1961, was deemed the most successful of all three stages of collectivization, primarily due to the ongoing presence of Soviet Troops (Pryor, 1992) and the communist government adjusting their tactics to rely more on persuasion than coercion. They eliminated compulsory deliveries, increased material incentives, furnished loans, offered tax breaks and provided additional support to the agrarian sector in the form of seed, fertilizers, and farm equipment. By 1960, nearly 90 percent of Hungarian agricultural land had been collectivized.

During the mid-60’s the agricultural sector became the test platform for many new reform plans: the government eliminated obligatory plan targets; introduced the New Economic Mechanism that allowed market prices to influence production decisions (Cochrane, 1993) and

farms to plan their own production; loosened restrictions on self-financing and permitted production on private plots; forced individuals who were no longer active in the cooperative farms to sell their land to the existing cooperatives (Mathijs, 1997). After the New Economic Mechanism was instituted, a mixed farming system emerged within Hungarian agriculture that was dominated by three types of agricultural organizations: state farms, agricultural producer cooperatives and household farms (Mathijs & Mészáros, 1997).

By the 1980's Hungary's economic situation had begun to decline forcing them to turn to Western nations for trade and economic assistance. During this period the government also began to encourage the formation of private businesses and partnerships with foreign companies. By the end of the decade three types of agricultural organizations prevailed: state farms, agricultural producer cooperatives, and household farms. The large-scale farming sector consisted of approximately 120 state farms and 1,200 cooperative farms that focused primarily on grain and fodder production. A law instated in 1985 transformed state farms from state-administered organizations to self-governing enterprises. Cooperative farms were owned and managed by its members, who elected a chairman to manage the farm according to its charter. Small-scale producers, approximately 1.4 million household farms, were individuals or small groups who tilled household plots or operated small farms, often concentrating on labor-intensive output or activities (Library of Congress, 1997). During this period the government continued to fix prices for most agricultural products and provide some form of subsidies and supports to all state and cooperative farms.

Beginning of Transition

Communist rule came to an end on October 23, 1989, as the Republic of Hungary was announced. The strengths and weaknesses of the Hungarian agricultural sector in 1989 resulted

from policy decisions that had previously been made from 1950-1988 and ‘formed the initial conditions for its transition’ (Csaki & Varga, 1993). During the Communist period approximately 90 percent of all farmland had been organized into collective and state farms. In the early 1990s the post-Communist government began returning much of this farmland to private ownership. In an attempt to restructure Hungarian agriculture the newly elected government (1990) passed legislation designed to encourage privatization and transformation of the sector. The new legislation consisted of five parts:

1. Members were permitted to withdraw their land freely from the collective.
2. Former landowners who had lost their land were compensated for their losses.
3. The Transitional Cooperative and Unified Cooperative Laws dealt with the transformation of collective farms and the privatization of the non-land assets and the remaining land.
4. The privatization of state farms was part of the overall privatization legislation.
5. A land law regulates, among other thing, the exchange of property right of land (Mathijs & Mészáros, 1997).

1991-1992 Compensation Acts

The new laws created by the government included the prohibition of land ownership by agricultural cooperatives and corporations. The compensation⁸ acts (XXV Act of 1991, XXIV Act of 1992, XXXII Act of 1992, IL Act of 1992, II Act of 1992 Cooperative transition act) took possession of the land held by cooperatives and corporations and redistributed the land to those whose land had been confiscated under Communist regimes or had been forced to participate in collectivization (Feher, unpublished). Citizens whose land had been either confiscated or collectivized through forced participation during communist rule were provided compensation

⁸ Compensation redistributed assets to those individuals whose assets had been confiscated by Communist regimes. In the case of the agricultural sector the principal asset that had been confiscated was land, and primarily, the land had been confiscated during forced collectivization.

coupons by the new government as restitution for their lost assets. The compensation acts then allowed citizens to purchase land, which was only one of several options, with compensation coupons that had been distributed to them. The Land Compensation program created 2.1 million new parcels of land, many of which were unviable for agricultural purposes due to their minute size. It has been proposed that a land consolidation program be created for the parcels to become agriculturally viable units (The Hungarian Agency on Land Administration and Mapping, 1995).

The compensation program is said to have placed land into the hands of landowners that lacked basic knowledge of agriculture, capital and farming experience. Land was purchased mostly by elderly and affluent citizens and as a result was largely leased back to farmers, specifically large-scale farms. Finally, the Compensation Acts also placed an additional constraint on the land market; where although land that had been privately owned prior to 1990 could be bought and sold, a three-year moratorium on sale of land was placed on land received through the compensation program. (Feher, 2000)

1992 Land Auctions

Citizen's ability to purchase land with compensation coupons illustrated indirect and partial restitution of former properties. The Hungarian Parliament passed down the decision that land could be purchased with the compensation coupons in auctions, and "buyers could be those individuals possessing compensation coupons who lived in the settlement where land auctions were held or where their ancestors had a farm" (Feher, 2000).

The Land auctions began in 1992. Approximately 2.5 million hectares of collective land and 2 million hectares of state owned land were privatized through auctions. Many holders of the compensation coupons regarded the purchase of land as a safe inflation proof investment (J. Horvath, personal communication, June 7, 2000). Thus, the auctions resulted in approximately

1.5 million people receiving, on average, less than two hectares per person (European Commission Directorate General for Agriculture, Hungary). It's estimated that by the mid-90's over 7 million property records were created by the compensation acts (The Hungarian Agency on Land Administration and Mapping, 1995). However it was not until 1998 when the Ministry of Agriculture and Regional Development proposed an amendment to the 1994 Act that a formalized land registration or cadastre system was introduced in Hungary.

1994 Land Law Act and Restrictions

In 1994 the government (Coalition of Hungarian Socialist Party (HSP) and Alliance of Free Democrats (AFD)) instituted a new law coined the 'Land Law'. The 'Land Law' regulated both ownership and rental of land (Magyar Közlöny, 1995). The Land Law continued to restrict the private land ownership and tenancy to 300 hectares (Feher, 2000). The law also set land ownership restrictions prohibiting land ownership by foreigners, cooperatives, and corporations. Further restrictions were placed on cooperatives and corporations limiting the amount of land that they could lease to 2,500 hectares or less (Feher, 2000). Specific reference to the prohibition of foreigner's, the new 'Land Law' stated, "only domestic private persons can buy land while domestic legal persons (organizations) are excluded as well as foreign private or legal persons (Mathijs & Mészáros, 1997).

Under the Land Law (Act VI of 1994) foreigners may acquire non-agricultural land with the permission of the Ministry of Finance according to set criteria, though a resident foreigner with a Hungarian ID card does not require such permission. Purchase of non-agricultural land by foreigners is limited to 6,000 square meters; leases may be granted for 10 years for up 300 hectares. A Hungarian company with foreign participation can own non-agricultural land with

the prior permission of the Ministry of Finance, and generally no permission is needed for a lease.

The Land Law prohibits foreigners from purchasing agricultural land, due to concerns of foreigners taking excessive control over agriculture. Efforts to liberalize restrictions on arable land ownership were derailed – at least temporarily – in 1997. The Constitutional Court in Hungary handed down numerous decisions in 1997 concerning a proposed referendum on the sale of land to foreigners. According to Article 28 of the Constitution, Parliament may hold a referendum on the initiative of the president, the government, one-third of MPs, or on the initiative of 1000,000 citizens (East European Constitutional Review (EECR), 1998). During 1997, opposition parties and agricultural organizations proposed a referendum which would ask voters whether they approved of the sale of agricultural land to non-Hungarians. The proposed referendum was to coincide with a question concerning NATO membership.

Due to technicalities seen by opposing parties, addressing the wording of the referendum and how voters would interpret it, the government preempted the popular referendum initiative by calling its own referendum on the alienability of land. Government interests seemed to lie in the area of preparing Hungary for EU accession. They called their own referendum for fear that the opposition's choice of words for the referendum would harm their plan to remove restrictions on the sale of land (EECR, 1998).

The first phase of collective farm reorganization was completed by 1995. First phase resulted in active members receiving 41.5 percent, previous owners 38.7%, and former members 14.4% of assets (Worldbank, 1998). The adopted legal provisions coupled with the farm restructuring process created a one-sided agrarian structure in Hungary. Upon the conclusion of the compensation period large-scale farms dominated, with over 2,600 existing at an average size

of 1,800 hectares, cultivating over fifty-two percent of all viable agrarian land. The remaining forty-eight percent were an average size of one hectare and titled to over 1.8 million individual owners within the private farm sector (Tanic, 1999). Hungary now has over 6.2 million hectares of agricultural land and 1.8 million hectares of forest. Arable land accounts for 4.8 million hectares, permanent grassland 1.15 million hectares and permanent crops 260,000 hectares (Worldbank, 1998).

3. Idiosyncratic shocks and Asset Liquidity

During the past decade, Hungary's economic reforms have resulted in substantial welfare declines within agriculture the agricultural sector. Generally, all agents within the agricultural food chain have faced similar problems of decreasing terms of trade, increased competition, lack of financial resources and thin markets for both the sale of their output as well as for the sale of their underlying assets if so inclined (Swinnen & Macours, 2000). As a result, farmers have found themselves under severe financial distress and forced to operate their assets at subsistence levels that are well below the optimal productive capacity levels that would be expected under normal equilibrium market conditions in the absence of these constraints (Swinnen & Gow, 1999).

For example, during the period 1990-1993, Hungary experienced a severe recession that resulted in an 18% decline in GDP⁹. Agriculture was the worst affected sector during the recession with agricultural GDP declining by 31%. The recession can be attributed to several factors: the collapse of traditional markets in the former Soviet Union, unfavorable development of the terms of trade, fundamental restructuring of land ownership, reorganization of farms,

⁹ Statistics in relation to the recession in Hungary during 1990-1993 are provided herein by the European Union Agriculture Rural Development Report, Hungary, June 1998.

disorganization of the marketing channels, and the effect of abnormal droughts in 1992 and 1993. These factors combined to place the sector agricultural firms under severe financial distress. Although the sector recovered visibly during the mid 1990's, it was hit by another similar recession in 1997. These recessions can both be viewed as *idiosyncratic shocks* that have inherently placed Hungarian agricultural agents under severe financial distress and induced *asset illiquidity*.

Idiosyncratic shock force financial distress on agents in several ways; primarily idiosyncratic shocks result in the affected agents receiving decreased returns and thus decreased profits for their assets, *ceteris paribus*. The decreased returns and profits both reduce the available cash flows to agents, as well as decrease the valuation of the underlying assets. The impact of reduced cash flow may be extreme, especially in situations where agents are wealth constrained, such as start-up businesses; here cash flow and retained earnings are the key sources of funds and determinates of immediate and future investment levels. If a firm's cash flow is restricted the agent must externally search to find an alternative source of financial resources, i.e. a loan, to replace the internal source, cash flow. Unfortunately, the decreased profitability may result in the valuation of the agents underlying assets being decreased as well. When this occurs external financial lending institutions may become hesitant or refuse absolutely to provide any funds to support loan requests, due to the lack of sufficient collateral. Hence, if all agents are similarly affected by the idiosyncratic shock, the market price of the underlying asset will decrease to present value of the assets future earnings under distress, i.e. the idiosyncratic shock, which may be substantially less than under normal equilibrium conditions. Shleifer and Vishny (1992) refer to this difference between the assets price and value in its best use as *asset illiquidity*. We argue that many assets including agricultural land are often illiquid, i.e. fetch

prices below value in best use when liquidated, and that the presence of asset illiquidity has important implications policy implications for the governments of many transition economies.

Asset illiquidity results from the general equilibrium aspect of asset sales (Shleifer and Vishny, 1992). For example, when firms have trouble meeting debt payments and are forced to sell their assets, through liquidation or otherwise, then the highest valuation potential buyers of these assets are likely to be firms in the same industry. However these firms may also be facing similar financial difficulties when the assets are put up for sale, as the sector- or economy-wide shock that placed the first firm in financial distress may be affecting them too. Thus when the first agent needs to sell his assets to raise capital, other industry agents are unlikely to be able to raise capital to purchase the assets due to their own distressed position. As a result assets would have to be sold to outsiders who do not necessarily know how to manage the assets, consequently outside agents would incur agency costs in hiring specialists to operate the assets. They may also fear overpaying for the assets, as they would have difficulties correctly valuing the underlying assets. Thus when industry buyers can not purchase the assets and industry outsiders face significant costs of acquiring and managing the assets, assets will likely fetch prices well below their value in best use, which is when these assets are managed by industry specialists (Shleifer and Vishny, 1992).

In the case of Hungary this means that if the economy or agricultural sector is hit by an idiosyncratic economic shock that affects all agents that agricultural assets potentially may be priced substantially below their long-run equilibrium economic value. Asset values would remain being priced at this level until the economy's conditions recovered enough to remove the effects of the idiosyncratic shock.

4. Property Rights

The development of a functioning land market requires several factors, but most importantly: the clear definition and sound administration of property rights and the maximum simplicity concerning transfer of property rights (World Bank Technical Paper, 465). Alessi (1983, p.66) defines private property as, “an individual’s rights to the use of the resources he owns are exclusive and voluntarily transferable.” North (1990) defines property rights as, “the rights individuals appropriate over their own labor and the goods and services they possess.”

Coase states in his theorem that if the transaction costs within the market are zero, then the property rights of the underlying asset will become defined, allocated, and enforced in their completeness, and more importantly, they will be reallocated to their highest-valued use regardless of their initial assignment. Thus Coase proposes that if it is costless to transact then it no longer matters how one allocates property rights and resources, as property owners can easily bargain between each other and transfer their individual property rights in order to achieve efficient allocation.¹⁰ There are two striking implications of this process that are true in a world of zero transaction costs. “The output mix that results when the exchange of property rights is allowed is efficient and the mix is independent of who is assigned ownership” (Demsetz, 1967, p.349).

Deininger and Feder (in press) define transaction costs as the costs associated with the process of exchange and can be incurred by identifying potential partners, arranging a contract, once contract has been executed—monitoring and enforcing associated thereof, formal legal action when dispute arises, and costs of dealing with adverse manipulation of contract provisions. Transaction costs are primarily the costs associated with the processes of exchange

¹⁰ It should be noted that Coase was primarily concerned with the allocation of resources, and not with the distribution of wealth.

between two or more agents. The extent to which transaction costs exist depends primarily upon institutional influence. “The costliness of information is the key to the costs of transacting, which consist of the costs of measuring the valuable attributes of what is being exchanged and the costs of protecting rights and policing and enforcing agreements” (North, 1990, 62).

Within neoclassical theory it is often assumed that there is a frictionless exchange process in which property rights are costless and perfectly specified and information is costless to acquire (North 1990). In the situation where buyers and sellers are able to ascertain the value of all the attributes with no uncertainty or insecurity and property rights exist, then the standard supply and demand models with zero transaction costs define the value of an asset. However, when the perfect markets cease to exist and specific institutions, such as laws, exist that restrict entry, require useless inspections, raise information costs, or make property rights less secure, then transaction costs are created.

Actually, positive transaction costs are usually associated with any property rights structure, which means that property rights are never perfectly specified or enforced (North, 1990), and in the worst case, if the restrictions lead to the prohibition of voluntary negotiations between economic agents within a lawful society then the cost of transacting may become infinite (Demsetz, 1967, p.348). Consequently, if it is costly to transact, then the initial allocation of property rights becomes an increasingly important factor (Coase, 1960).

The attempts made by the Hungarian government to introduce privatization policies have resulted in an incomplete transfer of effective property rights to individuals. Legal initiatives that limit the effective transfer of property rights are exceedingly evident in Hungary. The Land Law (Act IV of 1994) states that foreigners are prohibited from acquiring agricultural land, herein limiting owners’ rights in transferring and using the assets. Exclusionary laws such as

these can impose substantial transaction costs on to a system: Due to the inability on part of landowners within Hungary to transfer land ownership to any citizen, regardless of nationality, landowners are inherently faced with incomplete property rights. (Hodgson et al., 1999). As a result the initial allocation of property rights may have substantial welfare implications as well as providing important evidence for understand the current situation being observed in Hungary.

5. Asset Valuation Model and the Existence of Pocket Contracts

The combination of the occurrence of idiosyncratic shocks and thus asset illiquidity coupled with the presence of incomplete property rights have created the necessary conditions in Hungary for the existence a uniquely identifiable phenomenon *pocket contracts*. These contract have been described as illegal private contractual arrangements between foreign agricultural land users and domestic Hungarian land owners, which provide the foreign users with effective control of the assets and the first right or option to purchase the land upon EU accession.¹¹ The pocket contracts have thrived along the border with the EU, where foreigners have found it beneficial to exploit potential loopholes in the laws to develop innovative but illegal contractual and organizational structures to gain control of agricultural land. It is estimated that currently over fifty-two percent of all arable land in Hungary is cultivated under lease (Tanic, 1999), with up to 30% of all small, individual land holdings being organized in some from of pocket contract (Horvath, 1998).

To explain the necessary conditions for the existence of pocket contracts in Hungary we have adapted a conceptual asset valuation model based upon Sheilfer and Vishny (1992) model. In the following section we present the four different case that may occur under different

¹¹ EU accession should inherently result in the removal of the exclusory ownership laws, due to EU law requiring that constituents of any member state be provided with the right to purchase land within any other member state.

combinations of whether or not an idiosyncratic shock is presence and whether or not exclusory laws prohibiting foreign ownership of agricultural land are present and discuss the resulting valuation and market conditions. The conditions for case four are then further relaxed to better understand the relationship between these two factors. First however it is necessary to define the variables and state the assumptions that will be used.

Within this model the value of an asset equals the net present value of future earnings that accrue to that asset when operated in its best use under the prevailing state of nature.

$$V = \Pi/\rho$$

Where V is the economic value of the underlying asset, Π is the economic profit or earnings per period that equals revenue minus cost, and ρ is the required discount rate. However, if the economy is hit by an idiosyncratic shock, as Hungary has regularly observed over the past decade, then farmers may find themselves under increased financial distress. If the idiosyncratic shock becomes large enough, profitability may be reduced to the point where the resulting level of financial distress may force the agent to have to consider liquidating his land assets. If this is the situation then the farmer will find himself facing three potential buyers, all of whom may price the assets less than its value in best use. These agents are: a similarly financial distressed neighboring farmer who could farm the land themselves, represented by the subscript AG ; an knowledgeable outsider, in this case a foreign farmer who would continue farming the land but would be unaffected by the shock, represented by the subscript FOR ; and a financial “deep pocket” investor, non-agricultural agent, who could hire the current or some other farmer to farm the land for him, represented by the subscript NON . The superscript E will denote variables not

affected by the idiosyncratic shock and the superscript ^S will denote variables affected by the idiosyncratic shock.¹²

The following assumptions are made, by definition, throughout all cases:

A1: Assets, i.e. land, are available in limited quantity and cannot be physically transferred in accordance to location.

A2: The variable ‘land’ referenced pertains to land only used for agricultural purposes.

A3: All land that is made reference to throughout the cases is agricultural land within the domestic country.

A4: With respect to variable definition, non-agricultural agents will value agricultural land equal to the value of agricultural land for non-agricultural agents less the transaction costs involved in hiring an agricultural agent to manage the farm. ($V_{\text{Non}} = V_{\text{AG}} - \text{TC}$)

A5: All domestic agents, agricultural and non-agricultural, addressed within the cases own agricultural land.

A6: Foreign non-agricultural agents and foreign agricultural agents are not affected by the idiosyncratic shock; and provided A4, foreign agricultural agents will value domestic agricultural land seemingly higher than foreign non-agricultural agents.

A7: Provided A6, without loss of generality we need only to consider foreign agricultural agents throughout the models.

A8: For simplicity purposes, the idiosyncratic shock affects all economic agents within the domestic economy.

A9: Provided A1, agricultural land in the foreign country has been exhausted and hence foreign agricultural agents are looking to bordering countries to expand farm size.

A10: If an unrestricted land market exists, i.e. no agents are excluded, complete property rights exist.

A11: If economic equilibrium exists, i.e. no idiosyncratic shocks have occurred, agents will not experience any form of financial distress.

A12: $V_{\text{AG}}^{\text{N}} = V_{\text{FOR}} = V_{\text{L}} = \text{Value of land equilibrium or pareto optimal value}$

¹² Note: these superscripts will only be used in cases where it is necessary to differentiate between the two different states of nature: shock and no shock.

The following section presents the key results that can be derived from the model for each of the cases.¹³

Case 1: Economic equilibrium and Unrestricted Land Markets

When the economy is in equilibrium and land markets are unrestricted, then the resulting conditions are trivial as land will always be priced equivalent to its value in best use by definition.

$$P = V_{AG} = V_{FOR} > V_{NON}$$

Case 2: Economic equilibrium and Restricted Market Conditions

Even when foreign agents are restricted from the market, the resulting conditions are trivial as the economy remains in equilibrium, hence domestic agricultural agents continue to price land equal to its value in best use.

$$P = V_{AG} > V_{FOR}$$

$$P = V_{AG} > V_{NON}$$

$$V_{FOR} < V_{NON}$$

Case 3: Idiosyncratic Shock and Unrestricted Land Markets

When the economy is hit by an economy wide idiosyncratic shock that places all agents under financial distress but land markets remain unrestricted the resulting conditions are once again trivial as by assumption foreign agents will enter the market and bidding the lands price up to its economic value in best use.

$$P = V_{FOR}^E > V_{AG}^S$$

$$P = V_{FOR}^E > V_{NON}^S$$

Where $V_{FOR} = V_{AG}^E$ by definition

¹³ See Coakley 2001 for a complete explanation of the model and case proofs.

Case 4: Idiosyncratic Shock and Restricted Land Markets

When the economy is hit by an economy wide idiosyncratic shock that only places all domestic agents under financial distress and land markets are restricted so that foreigners legally excluded from participating in the markets, then the different agents value the land as follows:

$$V_{FOR}^E > V_{AG}^S \geq V_{NON}^S$$

$$\text{Where } V_{NON}^S = V_{AG}^S - TC$$

Foreign agricultural producers or farmers value the land higher than either domestic farmers or outside investors, thus there is the opportunity for foreigners to develop pocket contracts with land owners as long as the illegality transaction costs IC involved in entering the market through illegal pocket contracts are less than the difference in valuation between domestic and foreign farmers. That is pocket contracts will exist if and only if

$$IC < V_{FOR}^E - V_{AG}^S$$

Consequently the price of land will equal

$$P = V_{FOR}^E - IC \text{ iff } IC < V_{FOR}^E - V_{AG}^S \text{ holds, else } P = V_{AG}^S$$

This implies that the level of pocket contacts will be determined by two factors: the impact of the idiosyncratic shock on domestic farmers profitability and the size of the transaction costs that foreigners confront in developing pocket contacts.

Relaxation Case 4 Assumptions:

We now relax the assumption that the idiosyncratic shock affects all domestic agents equally, instead it now only affects domestic agricultural agents, but does not affect domestic non-agricultural agents, i.e. deep pocket investors. If foreigners are restricted from participating in the land market and non-agricultural agents are not affected by the idiosyncratic shock, and

are willing to engage in the act of purchasing agricultural land, then it is assumed that the agricultural land possessed by agricultural agents may be sold to non-agricultural agents and that non-agricultural agents will value the land equal to the value of the land to agricultural agents when not affected by the idiosyncratic shock less the transaction costs involved in hiring them.

$$V_{NON}^E = V_{AG}^E - TC$$

Since foreigners are not affected by the idiosyncratic shock, they will continue to value domestic agricultural land equal to the value of land for domestic agricultural agents when not affected by the idiosyncratic shock less the transaction costs involved in overcoming the illegality costs of entering a prohibited the market.

$$V_{FOR} = V_{AG}^E - IC$$

Thus pocket contacts will occur if both of the following conditions hold

$$V_{FOR} = V_{AG}^E - IC > V_{AG}^E - TC = V_{NON}$$

And

$$V_{FOR} > V_{AG}^S$$

That is the value that is both the transaction costs that foreign farmers incur is less than the transaction costs that domestic non-farmers incur and that the value of the land to foreigners is greater than the value of the land to domestic farmers under distress. If both of these conditions hold then pocket contracts will exist.

6. Discussion and Policy Implications

The previous model has shown that in the presence of asset illiquidity and incomplete property rights the necessary conditions exist for the presence of pocket contacts. But the question remains as to whether these contacts are having a positive or negative welfare impact on

society and what actions government should undertake to deal with the pocket contracts and increase the underlying assets valuation. When discussing this it is important to recognize that there are numerous people impacted by the results including: current landowners who want to use the land assets to provide collateral support for future investments, current landowners who are using the land assets as a hedge against inflation and as a long term store of wealth, current land owners who are speculating on being able to arbitrage the assets value, future landowners who wish to purchase the land for farming, among others. Each group has different incentives that need to be taken into consideration when discussing the results of this model. The government needs to balance these differing incentives when making decisions on how to act.

There are two possible options that the government may choose, (1) take no action and wait for the effects of the idiosyncratic shock and exclusory laws to be naturally self-corrected, or (2) take action and address the effects of the idiosyncratic shock, exclusory laws or both, in an attempt to correct the overall situation.

No Action

By taking no action the government takes a wait and see stance, allowing the idiosyncratic shock to self-correct itself thereby removing the asset illiquidity problem. There are positive and negative impacts associated with this option. On the positive side the government would not be required to (1) spend time or money addressing the issue, and (2) make political decisions that may adversely affect future electoral success. The negative impact associated with allowing for the idiosyncratic shock to naturally correct itself is that the shock may not be corrected in a timely manner, which may result in substantial welfare losses. If the shock is not naturally corrected in a timely manner farmers will be continue to live in poverty, retarding future investment and growth opportunities. This will likely negatively impact not only

the general welfare of the agriculture sector but also the restructuring of the rural sector, as well as possibly future accession negotiations as the rural sector will be less developed.

The second option the government may take is to wait and allow for exclusory laws to be self-corrected when accession to the European Union occurs: potentially this may occur as early as 2004. Hungary will be forced to change the laws to abide by established EU law and regulations that do not allow the exclusion of citizens of member states from land markets. The Treaty of Rome establishes the European Economic Community and was amended by the Single European Act 1987, the Treaty of European Union 1992, and the Treaty of Amsterdam 1997. None of the amendments directly address the issue of foreign land ownership, whether the foreigners are or are not nationals of other Member States. The treaty amendments do however address the prohibiting of discrimination, “on the grounds of nationality, guaranteeing the free movement of goods, persons, services and capital, and freedom of establishment within the European Union, combine to restrict the competence of Member states to limit land acquisition by nationals of other Member States.” (Hodgson, 1999)¹⁴ Relevant treaty provisions are as follows:

Article 7

Within the scope of application of this Treaty, and without prejudice to any conditions contained therein, any discrimination on the grounds of nationality shall be prohibited ...

Article 8a

The Community shall adopt measures with the aim of progressively establishing the internal market ... the internal market shall comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of the Treaty.

¹⁴ Foreigners who are not nationals of EU Member States are still subject to the laws of the individual Member States (Hodgson, et al., 1999).

Article 54

(1) ... the Council shall ... draw up a general program for the abolition of existing restrictions on freedom of establishment within the Community ...

(2)(e) The Council and the Commission shall carry out the duties devolving upon them under the preceding provisions, in particular: ...

(e) ... by enabling the national of one Member State to acquire and use land and buildings situated in the territory of another Member States ...

Also relevant, Regulation 1612/68/EEC granting nationals of Member States equal employment rights and rights of accommodation in connection with their employment (Article 9).¹⁵

Therefore, the issue of allowing foreigners to participate with Hungarian agricultural land market will become increasingly relevant the closer Hungary comes to European Union accession.

On the negative side, if the government waits for accession to force exclusory laws to change constituents may be unhappy as no public preparation was conducted. It is acknowledged that issues regarding cultural heritage leave the idea of removing exclusory laws to be the option less desired by many Hungarian citizens. However, the institution of this policy does not require domestic landowners to sell their land to foreigners, but rather only allows for the possibility of occurrence. It is more often than not inherently assumed that if foreigners were allowed to participate in the domestic land market, they would suddenly purchase thousands of hectares of domestic agricultural land. However, foreigners can only purchase land if domestic landowners are willing to sell land.

Another potential negative impact is that the Hungarian agriculture sector may be forced to join the EU in an underdeveloped condition, resulting from under-investment due to wealth and collateral constraints. Also, if the EU support payments remain output based, the poor

¹⁵ Treaty provisions provided by: FAO Legal Paper: *Land Ownership and Foreigners—A Comparative Analysis of Regulatory Approaches*, (Hodgson, et al., 1999).

general economic and financial condition of the Hungarian agricultural sector may result inefficiently structure sector.

The longer the government waits for either the idiosyncratic shock or the exclusory laws to be self-corrected, the longer Hungarian agricultural agents are left under financial distress, hence the more likely they are to sell their assets in an attempt to improve their financial positions. It seems reasonable to assume that the average Hungarian landowner has little debt secured against his land as he received the land through the restitution process. As a result, the option value for waiting to until the assets value returns to the equilibrium level before selling is likely to be substantial. This holds for non-agricultural landowners too.

Finally, speculators are in a similar situation as the non-agricultural agents, as they too will wait until land value increase and then sell to the highest bidder. The only land that will be sold comes from those agents whose financial distress has increased to a level in which they need cash flow, no matter how minute. This inherently means less investment in the agricultural sector and land sales are forced to purchasing agents: speculators, non-agricultural agents, and through pocket contracts.

Domestic agricultural agents are effectively excluded from purchasing additional agricultural land, as they cannot use their current holdings as collateral. Non-agricultural agents traditionally are not interested in land for agricultural purposes, so they should exhibit no interest in purchasing additional agricultural land. However, if non-agricultural agents do purchase additional agricultural land, for purposes of receiving future profits from the increase in land valuation, they inherently become classified as speculators. The individual identity of speculators is indifferent, however speculators will likely benefit the most land being valued substantially below equilibrium level. As long as the value of land remains below the

equilibrium level, speculators will continue to purchase additional agricultural land. Finally, foreign agricultural agents are excluded by law from purchasing agricultural land, therefore are not applicable.

The government may also face issues regarding speculators attempting to increase transaction costs for outsiders prior to allowing them to enter the land market, so that they will have first opportunity at purchasing available agricultural land. Also, domestic agricultural agents may place the government under pressure as they are financially distressed and worry about non-agricultural agents or speculators purchasing their land at less than equilibrium values.

Borrows are also adversely affected by the conditions of asset illiquidity and exclusory laws. Any agent possessing agricultural land, in essence, possesses an asset of no market value. Therefore, since agricultural land has such a low value, banks will not be willing to provide collateralized loans supported by that asset. Hence, the financial situation of the distressed agricultural agents cannot be improved, as they cannot use land as collateral to secure loans for use in making productive investments.

Lenders or financial institutions that provide loans to individuals will not be directly affected by the inherently low valuation of domestic agricultural land. Lenders will not be willing to use land as collateral as land is extremely undervalued compared to equilibrium level. They also do not wish to provide loans to any agents, using land as collateral, as if the agents should default on the loan the land currently does not hold a substantial resale value in order for the financial institution to recover. However, should the land be valued at the equilibrium level, it is assumed that they would be willing to lend with land as collateral, as a lucrative market of buyers would exist.

Take Action

Policy #1: Foreign exclusion remains and government implements policies to aid in the rejuvenation of cash flows within the domestic land market.

This policy will effectively improve the financial position of all domestic landowning agents, however, foreign agents will continue to be excluded from the market. The policy, however, would cost the government a substantial amount of time and money. The government would have to determine an efficient policy that would create addition cash flow within the agricultural sector, without hurting other sectors of the economy. However, this policy would potentially suppress the issue of pocket contracts, but would not eliminate the issue entirely. If cash flows were increased substantially, it could potentially reverse the effects of the idiosyncratic shock, hereby removing financial distress. However, it is impossible to determine how long it will take for the instituted policy to reverse the effects of the idiosyncratic shock.

The problems associated with incomplete property rights would continue to exist, even if there occurs a significant rejuvenation of cash flow within the agricultural sector market. Although policy one may substantially increase the valuation of the domestic agricultural land, foreigners will still value land higher than the domestic non-agricultural agents, as illustrated in case one. Also, if the policy does not increase the valuation of agricultural land by the domestic agricultural agents to its full potential creating, $V_{AFG} = V_{AG}$, to occur, then foreigners will continue to value land higher than the domestic agricultural agents. Therefore, in order for this policy to be effective, cash flows must be rejuvenated to the point where domestic agricultural and non-agricultural valuations are restored to their potential, otherwise, the possibility for the occurrence of pocket contracts still exists.

Policy #2: Removal of exclusory laws

It is predicted that merely upon the announcement that the land market were to be opened to foreigners land valuation, as recognized by financial institutions, would increase. This is a common occurrence observed throughout many markets when there is an announcement that is believed to increase the value in the future; mere speculation or contestability causes valuations to increase. If land were to have an inherently high value, it would become a liquid asset, causing the creation of collateral value. Banks would then lend with land as collateral, and hence the overall economic situation of agricultural agents would improve. As borrowing capacity increases, an increase in investment within the agricultural sector should be observed, as well as, an increase in agricultural welfare. Inherently an increase in agricultural welfare will lead to an overall increase in economic welfare.

There are positive and negative impacts associated with the removal of the exclusory laws. Speculators and non-agricultural agents will realize the value of their land holding increasing to equilibrium levels and will therefore begin to sell their land off to the highest bidder, regardless of nationality. This can be viewed as positive and negative outcome resulting from the removal of the exclusory laws. Positively speaking, the selling of land will create a capital inflow into the Hungarian economy, therefore increasing individual equity and wealth. The increase in overall individual equity and wealth will result in an increase in the countries overall economic welfare (Deininger & Olinto, in press). Not only will the selling of land occur, but now that land is realized at the equilibrium value or higher, lenders should now allow for land to be used as collateral, allowing for all landowning agents to be able to borrow. As we have previously shown, the increase in borrowing capacity will increase investment and inherently lead to improved economic welfare.

Unfortunately, there are also negative impacts associated with the removal of the exclusory laws. The social impact is negative as it is well-known that many citizens do not want foreigners to have access to the domestic land market. Although it is known that there are citizens who do not wish for foreigners to have access to the domestic land market, it has never been identified whether these constituents are landowners or non-landowners. As mentioned previously, the institution of this policy does not require domestic landowners to sell their land to foreigners, but rather only allows for the possibility of occurrence. It is more often than not inherently assumed that if foreigners were allowed to participate in the domestic land market, the foreigners would suddenly purchase thousands of hectares of domestic agricultural land. However, this situation would only occur if landowners were in a financial position where they needed to sell the land due to financial distress, or even more so, altogether were willing to sell their land.

7. Conclusions

There are likely to be numerous distressed landowners who maybe willing to sell their land to escape financial distress, however, many have no debt associated with the land, hence they are unlikely to exercise their option to sell, instead wanting for land values to increase. All landowning agents do, however, have incentives to enter into the pocket contracts, as no one can effectively use the land as collateral for loan purposes and land valuations are too low to sell. It is speculated that exclusion is broadcasted through the press and media, as having been put into action to protect both agricultural and non-agricultural landowners from a massive overtaking of their land by their foreign counterparts, is for the mere benefit of the speculators.

In conclusion, does exclusion protect landowning agents or worsen their financial positions? As we have shown, by allowing for the removal of exclusory laws landowners will benefit, as land values will return to equilibrium levels. As we have shown above, while asset illiquidity reduces the value of their assets, exclusion effectively restricts the financial options available to landowning agents. The factors work together to benefit speculators, not domestic agricultural and non-agricultural agents. All the while, exclusion has been sold to the citizens of Hungary as a solution to their fears of a immense overtaking of their agricultural land by their foreign counterparts, while we have show the opposite to be true, all landowning agents, except speculators, are adversely affected by this law.

So we must ask ourselves, who are the constituents that are against allowing foreign participation in the Hungarian land market? Are they the speculators, who wait for more land to be sold by severely financially distressed farmers, who are purchasing land at below equilibrium levels in order to turn a profit when land value return to normal? Are they the government officials who do not wish to spend time and money addressing the issues and problems associated thereof? Or are they constituents that have been mislead by speculators? Or are they just constituents that do not realize the positive potential of open markets? These are just a few of the questions that must be addressed in future research. They are interesting questions that when answered will help us to develop better policy initiatives that will better the Hungarian economy efficiently.

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