

# **Land Market with Fragmented Landownership Rights in Bulgaria: An Institutional Approach**

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**Land Market with Fragmented Landownership Rights in Bulgaria:  
An Institutional Approach**

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## **Abstract**

The land restitution in Bulgaria led to a severe fragmentation in land ownership. This has an impact on the agricultural development and land market. The article investigates the land transactions on the sale and rentals markets. In order to explain the processes three new institutional economic theories will be employed: property rights theory, transaction costs theory and agricultural contract theory. First, the article reviews the appropriateness of each theory, and second, results of conducted survey in two regions of Bulgaria with different degrees of land fragmentation.

**Key words:** Bulgaria, Contractual arrangements, Land fragmentation, Land market, Land transactions, Property rights

## **1. INTRODUCTION**

Bulgaria has experienced extreme changes during the last 15 years. Land reform returned the land to the people that had owned it before collectivization. The land, however, has been highly fragmented in the past and the restitution process deepened this problem further. The possibility for exchange of rights between landlords and land users has increased after restricted land market was liberalized. However, this exchange is hindered by passive landlords and heirs who have not obtained deeds of ownership. Therefore, both unwillingness of landlords to participate in land market and highly fragmented plots create difficulties for land users to contract with landlords.

The purpose of the study is to understand the economic effects of land fragmentation in agricultural development. The main objectives of the paper are: to clarify how the ‘bundles’ of rights attributed to the landownership influence the economic outcomes; to analyze land transactions for exchanging private fragmented plots; and to explain the different contract choices between landlords and buyers/renters. These objectives can be achieved by comparative analysis of land transactions at the land market in two regions with different levels of land fragmentation.

## **2. LAND FRAGMENTATION AS A PHENOMENON**

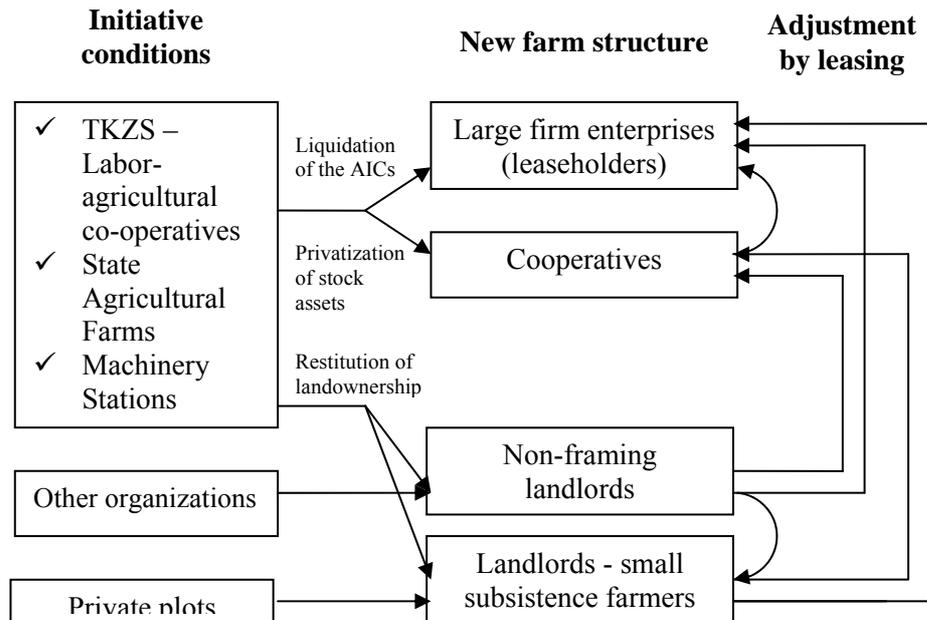
Bulgarian agricultural sector has gone through many radical changes after the collapse of communism. Such a stress in the sector was the de-collectivization process, frequently changed land law and restitution of land to the original landlords. The purpose of these changes was to establish conditions for a market-oriented and competitive agricultural sector, but the transition process created great uncertainty. The reform was carried out through the Law for Ownership and Use of Agricultural Land (LOUAL), which was amended many times.

The land reform in Bulgaria started with liquidation of the old type of cooperatives, which were main regulator of the economic and social life in the villages (figure 1). Then, it was privatization of the agricultural assets and distribution of these assets to the landlords. The new farm structure, which emerged after the reform, comprised of large firm enterprises, new cooperatives and small subsistence farmers. They tried to adjust to the new agricultural conditions in the country. Parallel to this process, restitution of agricultural farmland was carried out. Most of the land, before collectivization, was cultivated by small family farmers - and the farmland has been restituted to the landlords prior to 1948. It is important to point out that the farmland in Bulgaria was never nationalized. Therefore, from a legal point of view this land reform was an act of restitution (Swinnen 1997). Most of the individuals, who have obtained their land property, were too old to farm. Therefore, some of them preferred to transfer their land rights to their heirs. However, the heirs also have no working association with the land. Consequently, this has contributed to the current situation of fragmented plots of land.

Landownership has very important political motivations and it was not so simple to complete quickly this process (Swinnen 1997). The changes in the political power and

respectively the LOUAL and also political debate about this issues influence the whole agricultural policy of the country. The reform create over 2 million landlords with many plots, where each owning on average 3.8 plots with size of 0.53 hectares ((Kopeva 2002)). The high uncertainty in agriculture put all agricultural producers in an unfavorable situation and difficulties to plan their future farm activities. In addition, the restitution process has led to a decrease in the yields of over 50% for the main agricultural crops because, the level of fertilizer and pesticide applied to the land. The result of the reform is land fragmentation, land abandonment and low land productivity.

**FIGURE 1 Farm structure transformation in post-socialist Bulgaria**



Source: adapted by (Lernaman, Csaki et al. 2004)

Now, it is important to define, land fragmentation: whether or not it is a problem; for whom; and why. Who suffers from land fragmentation and what kind of institutional options can fit to the problem? And, further how can we study the behavior of individuals in the process of exchanging their rights on land. The ability to exchange land rights affects the efficiency of the land market.

According to several authors (Binns 1950, Swinnen 2000, Cheng 2001, Dijk 2002, Kopeva and Noev 2002, etc), land fragmentation is a common phenomenon in the less developed agricultural systems and can impact agricultural development. According to (Dijk 2002), land fragmentation is an effect of transformation from one system into another, i.e. from central-planning economy into a market economy or breaking the collective structures into private farms or new type of cooperatives. He argues that the privatization of the collective assets combined with land restitution lead to this phenomenon. He distinguishes between two types of land fragmentation: land fragmentation in terms of ownership and land fragmentation in terms of land use. The land fragmentation can be more problematic in terms of ownership than in terms of use since the agricultural producers can rent several plots and operate them as one farm unit. All these producers might play a consolidation role in this process.

(Cheng and Wan 2001) quoted from Binns (1950) that land fragmentation can be defined as spatial dispersions of fields into separate and distant parcels. He also gives a clear definition of land fragmentation i.e. fragmentation exists when a household operates more than one separate plot of land. Land fragmentation may arise involuntarily, and it maybe a result of land scarcity and inheritance. Furthermore, he describes the land fragmentation in

China as a result of the way in which land was allocated to each household upon the implementation of the current family farming or production structure. While elsewhere land fragmentation occurs mainly as a result of inheritance customs when farmland is more or less equally divided among heirs.

Going back to the Bulgarian case, land fragmentation is a traditional problem for the country. The problem existed before the collectivization process between 1897 and 1947 but has worsened after restitution process in 1991 (Table 1). According to study undertaken (Kopeva, Noev et al. 2002), the reform “end up with more than 2.6 million private farmland titles with average holdings of two hectares” and after subdividing the plots among 2-6 heirs, the plots number may rise to over 12 million with an average size of 0.3-0.5 hectares. The LOUAL and the liberal Inheritance Law, which provide equal share rights to heirs, are the main driving forces behind the current process of land fragmentation in terms of ownership. Taking in mind that the land has different quality and is subdivided in different soil categories, there is a physical split of each plot into a number of plots corresponding to the number of heirs. This is in contrast to the allocation of whole plots to one heir. The heirs obtain land with equal share of land and subdivide between them the land with different soil quality and size. In this situation, land users have more disadvantages than the owners, because of high transaction and financial costs with fragmented plots and uncertainty in agricultural sector.

**TABLE 1 Land fragmentation process in Bulgaria (1897 - 2001)**

<b>Indicators</b>		<b>1897</b>	<b>1908</b>	<b>1934</b>	<b>1946</b>	<b>2001</b>
Agricultural land	ha	3 977 557	4 625 787	4 368 429	4 317 696	4 182 000
Farms	number	546 084	640 511	884 869	1 103 900	1 777 200
Plots	number	7 980 000	9 880 000	11862 158	12200 000	8 007 000
Average farm size	ha	7,30	6,30	4,90	3,90	2,40
Number of plots	number	9,98	10,58	13,40	11,00	4,50
Average plot size	ha	0,49	0,47	0,37	0,35	0,52

Source: Statistical offices of Bulgaria (1908-2001)

In conclusion, land fragmentation in a country can be a barrier for sustainable development of agriculture, farm efficiency and land use and also land transactions can be more complicated and more expensive. The land fragmentation in ownership can be defined by average plot size, number of plots and total quantity of the owned land. This type of fragmentation can contribute to economic development and contractual choice between the landlords and land users. On the other side, land fragmentation in term of use can be defined by number of cultivated plots and number of agricultural producers.

### **3. THEORETICAL APPROACH**

In the world of costly transactions, a market without any cooperation between individuals is impossible. This cooperation can be under different arrangements. The task of individuals with bounded rational behavior in the real world with positive transaction costs is to find suitable partners for exchange of their rights. The suitable place is a market. The neoclassical economic view of the market considers only the price mechanism under zero transaction cost. The New Institutional Economics (NIE) can be useful with its understanding of market organization. The market as an organization has the purpose to organize exchange efficiently, in other words, to facilitate market transactions (Furubotn and Richter 1997). Several theories of the NIE can be useful for the analysis of land fragmentation in Bulgaria: the transaction costs theory, theory of property rights and theory of agricultural contracting.

#### **2.1 The concept of transaction costs theory**

Transaction cost economics concentrates on the exchange process between economic agents. While conducting transactions, the agents endure not only financial cost, but also transaction cost. Depending on the contract forms and contracting agents, there are different level and types of transaction costs. The main types are the cost of searching, information

costs, bargaining and decision costs, and also policing and enforcement costs. Transaction costs can also be defined as *ex ante* (i.e. drafting, negotiation) and *ex post* (after the contracts are signed i.e. safeguarding the agreement). Hence, the *ex ante* costs are the cost associated with the bargaining actions and *ex post* costs are the cost for maintaining the contracts. It is impossible to do all bargaining action in *ex ante* contracting stage. The reasons for this are the bounded rationality and opportunistic behavior of the individuals combined with the attributes of transactions (i.e. assets specificity). The bargaining action depends on the behavior assumptions. There are two behavior assumptions bounded rationality, where the behavior is rational but limited by the person knowledge (Simon, 1961) and opportunistic, which is condition for 'self-interests seeking with guile' (Williamson 1996). When bounded rationality, opportunism and assets specificity are included then the world of governance becomes important. The transactions should be organized in such a way that the influence of the above three factors can be minimized (Williamson 1985). Therefore, the transactions need to be identified and then the incentive and adaptive means of alternative governance structures need to be used to economize transaction costs.

The transaction costs approach can explain the contract choice. Each contract type has different transaction costs. The information costs can hinder certain transaction among landlords and land users and also can create incentive for opportunistic behaviour and mistrust between them. Also, the negotiation costs are high when land is fragmented in term of ownership. The land tenants and land buyers can have problems to find and negotiate with all landowners and especially with absentee landlords. Most of landlords live in different places and this creates problems for the land users to go through the negotiating process with all of the landlords. On the other side, the landlords have problems to provide accurate information about their plots. The opportunity costs, which the landlords and land users face, in term of money costs and time costs may actually prevent the transactions.

The mechanism for governing the high transaction costs for exchanging land plots among the landlords and land users includes market and hierarchy forms and many other intermediaries. The market refers to land market or when a transaction can be accomplished by selling or buying land or rent in or rent out land. The hierarchy is a government agency who will be involved in transaction process, by providing information about the land, land conversion, controlling the use of the land, environmental protection of the land, or participating in the land market.

## **2.2 The concept of property rights theory**

The land resource has major impact on economic development in the agrarian societies because land provides livelihood to many poor and rural households (Swinnen 1999). Also possession of land is a way to accumulate wealth and allows for a transfer of this wealth between generations. The opportunities to exchange land rights affects the efficiency of the land market. The property rights literature suggests that private property rights are necessary and provides possibility for investments in the land and also reduces the risk to income and consumption. The changes of the land institutions affect the redistribution of wealth and rents and often the economic and political power.

The property rights approach is used to illustrate the allocation of resources. The property rights of a physical asset give the landlords opportunity to use this asset, to extract income and to have power over its management. The ownership gives individuals discretionary power over the resource and provides a basis for a competitive market. When there are conditions of full private ownership, the holder of property rights has the choice of utilizing the asset himself, leasing the asset, or selling it to someone else. In case of a sale the holder, transfers the 'bundle' of property rights to another person. However, when there is action of government or others, the property rights on an asset is changed and also the value of the asset is changes as well (Furubotn and Richter 1997) Therefore, the ownership over the scarce resources and the bundle of rights attributed to the ownership influence the economic outcome. The privately owned resources will be transferred from one owner to other by a bidding process and hence to the highest-valued use (Pejovich 1972).

### **2.3 The concept of agricultural contracting theory**

The theory of agricultural contracting tries to explain the different contract choices between agents (owner of the land) and principals (user of the land), endowed with different human capital, in the same institutional and technological environment (Hayami and Otsuka 1993). The analysis of the contracts is based on the principal-agent model<sup>2</sup>. The optimum contract seeks a balance between providing work-incentives for the landlord and the land user's exposure to risk (1993: 176). In agriculture, different factors such as the weather conditions, pests etc have strong influence on production and this complicates the contract choice. The transaction costs are higher for choosing the right contract between the both partners. Uncertainty for making decision could be reduced by providing access to the right information.

A land transaction occurs when the landlord, who has a bundle of rights<sup>3</sup> to the land, exchanges their land or certain rights to use the land, to a land user/tenant. When the transaction is a 'sale', the transfer of private property rights are defined by government regulations and laws governing how property rights are to be transferred within the sale contract. The landlord has to transfer fully his bundle of property rights to the new individual under the sale contract. However, when the property rights from one landlord are not fully transferred, but only partially to another individual, in that case, the transaction of the land between both parties can be described under as a tenancy contract. A tenancy contract establishes a transfer of money in exchange for rights to use the land. The rental contract specifies the rules to which both parties must adhere. For example, it can be specified whether land can be transferred to a third party, what happens if there is abuse to the land, whether yield will be shared between both parties, how decisions are made to cultivate the land etc. Within the literature on land transactions, it is the issue of agricultural land tenancy which is most frequently explored. The contracts relating to the sale of land is largely neglected, due to the complexity of institutions surrounding it.

The main difficulty in the agricultural tenancy contract literature is to define the correct contract form. The combination of the three components: land, landlord and labour need to be specified appropriately within the contract. There are three main types of contracts under agricultural tenancy contract: fixed wage contracts; crop-share tenancy and fixed rent contracts. In the fixed wage contract, the labourers are employed to work for a fixed time period and under supervision of the farmer. The supervision is costly, where is difficult for the supervisors to monitor all activity (Williamson 1985). The crop-share tenancy contract occurs when the landlord lets a tenant work the land, while the output is shared between the two parties. Under this type of contract both parties can gain by organizing their transactions in the best way to lower transaction costs. Finally, the rental contract is established when the tenants, who collaborate with landlords by renting their land, pay a fixed amount for its use over a discrete time period (Barzel 1989).

## **4. METHODOLOGY**

To understand how the phenomenon land fragmentation impacts on the land market development, I will use comparative design, which is most efficient and corresponding with the research problem. This method is a comparison of two contrasting cases. Also, the *comparative analysis* gives possibility to understand the social problem of different prospective views. Therefore, by competitive situation, it will enable the establishment of relations among the cases and link them to the theory.

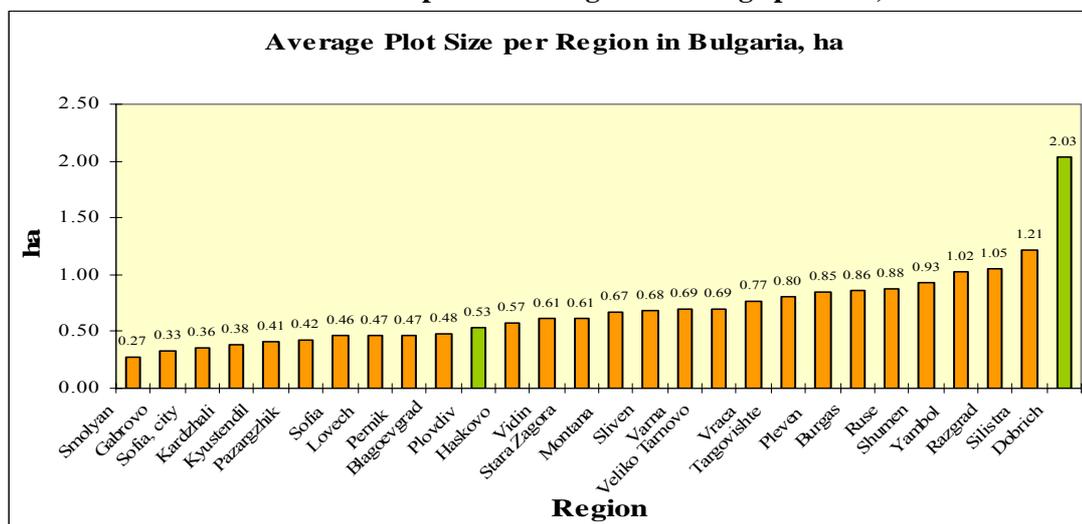
In the research, I used quantitative statistical data regarding landownership to select the regions in the national level with low and high level of land fragmentation. The data is obtained from the interviews with agricultural offices "Agriculture and Forest" in these two regions.

The interviews were conducted with representatives from agricultural offices "Agriculture and Forest" and village mayors. The questions that I posted were related to the their activities and functions, historical information about the land reform in the investigated regions, information about the landownership data, land market, land fragmentation and its

impact to land market. The main task of these questionnaires is to evaluate historical process of reform and land fragmentation and to understand how land sales and rental markets work within regions with different levels of land fragmentation. The interview was conducted with open-ended questions.

Using landownership data two regions were selected. In order to facilitate the choice I set up a few constraints. These constraints are: background history of regions, different location of these regions in Bulgaria and possibility to find similar crop pattern.

**FIGURE 2 Landownership data in Bulgaria: average plot size, ha**



Source: (MAF, 2004)

According to figure 2, the region with low level of land fragmentation is Dobrich with average plot size 2.03 ha. This region is located in North-West of Bulgaria. With high level of land fragmentation, the chosen region is Plovdiv region - average plot size 0.53 ha. The region is located in Central-South of Bulgaria. In the region, high-value crops such as vegetables and fruits, are grown with low level of land fragmentation while in the region with high level of land fragmentation low-value crops dominate. The main crops grown in the Dobrich region are the cereals, which accounts to 90% of the cultivated land. In Plovdiv region main crops are vegetables and perennial plants, while the share of the cereal crops is about 42% of the cultivated land.

## 5. OUTCOMES OF THE CONDUCTED RESEARCH

In this part, I will analyze both regions with high and low level of land fragmentation and compare the land market in these regions.

### 5.1 Overview of Dobrich region with low level of land fragmentation

The land reform in the Dobrich region was completed earlier (1995) compared with the Plovdiv region, Bulgaria. The cooperatives were liquidated and the land was restituted to their original owners. After the reform, the land market was not well developed. Dobrich region is an extreme case and the land is not so fragmented, compared with rest of the country. There are several reasons for this: first, the owners had more land before the collectivization process in 1956; Second, the homogeneity of the soil quality provided an opportunity to consolidate the plots which belong to one owner in one location without major conflicts; And third, the existence of large areas of state owned land gave the chance of the owners (or and users) to exchange their land with state consolidated land.

The main crops grown in Dobrich region are low-value crops such as wheat, maize and sunflower. The soil is fertile but not irrigated. The quality of the farmland is similar in the region. The total agricultural land is about 376770 ha and non-cultivated land is 797 ha (NSI 2003)

The land restitution process in the region faced several problems. Many of the original documents were missing. Since, it was allowed the landlords to use different type of documents some of them took advantages of this situation. They claimed the same land two or three times. Hence, the Land Commissions (LC) was forced to give back land from the State Land Fund. This problem was also reinforced by the many amendments of the LOUAL and lack of clear evidence for landownership.

During the restitution process, there were conflicts between landlords and also between landlords and the LC members. The conflict among the landlords was based on the land identification while the conflict between landlords and the LC was related to location or quantity of restituted land. At this time, the LC had decision power and they controlled the whole restitution process.

The leaseholders, cooperatives and mayors are among the main designers of the farm models in the region. The typical model in the region for solving the land fragmentation in ownership is to divide the land of villages between all producers each year. This informal process is widespread and practiced for a long time. Since the quality of land is uniform in the region this practice seems to be successful. This process is known as informal land consolidation in practice.

## **5.2 Overview of Plovdiv region with high level of land fragmentation**

The restitution process in the Plovdiv region was completed between 1998 and 2000. Two different approaches of land restitution were used: restitution farmland in old (before collectivization) real boundaries and restitution land in new real boundaries. They were determined by soil quality and crop structure. The first approach was mainly applied in areas with heterogeneous soil and crop structure while in the opposite case the land was restituted in new boundaries.

The main documents, which were used, are available deeds, information from the tax register before collectivization and entry register for cooperatives. These documents are demanded to prove land ownership, the size and location of the plots. If the documents were not available, the claimed property can also be proved by witnesses. These witnesses were old people in the settlement. Although, the process of land restitution is over in the region there are still many landlords, who had not claimed their land. The LOUAL allows them to do so within ten years, through the court system.

The reasons for comparatively high level of land fragmentation in the Plovdiv case are: most of the land is restituted in old real boundaries; no subdivided property rights between heirs; many absentee landowners; the instability of the agricultural product price (price of vegetables); low land price, according to landlords but high according to land users.

The soil in the Plovdiv region is fertile and irrigated. The relief is flat in the centre and hilly in north and south ends. The main crops grown in the region are high-value crops: vegetables and fruits. The cultivated agricultural land is 346980 ha and non-cultivated land is 12904 ha (NSI 2003).

The main designers of the farm structure in the region are small subsistence farmers and a few large producers. There is no typical informal mechanism for solving the problem with land fragmentation in the region, but there are some cases, similar to the Dobrich region, where the producers of low-value crops, have exchanged their land plots and have reached some level in consolidation in land use.

## **5.3 Comparative analyses of land sales and rental market in both regions**

The land market in both regions does not function properly. The main constraints for the land market in both regions is unclear property rights, low value of farmland, landlords' sentimental value to their family land and the expectation of increasing the price after the EU accession (speculation). The main land transactions are between relatives and friends, when the heirs subdivided and exchange the farmland between them and at the rental market. Therefore, it makes the situation for land users complicated. The subdivision of land among the inheritors will further deepen land fragmentation in ownership and constrain future land

market transaction and economic development of the county. Therefore, the land users should find the appropriate mechanism to solve the problem with land fragmentation in ownership. The observed process of exchanging land plots between land users, in both cases shows that the local actors are searching and may have found a way to manage the exchange of land.

The similarity in both regions is that all land transactions are concentrated at the rental land market. In the region with low level of land fragmentation, where the crop structure is mainly low-value crops, the size of cultivated plots should be over 3 ha, otherwise, the production costs would be not justified. The opposite case is the region with high level of land fragmentation and high-value crop structure. The small size of the plots does not seem to be a huge problem. The local landlords and/or small farmers mainly cultivate their backyards or plots close to villages. The large land users cultivate the fields further from the village.

In both regions, most of the landlords have informal arrangements with land users (oral contracts). However, in order to claim subsidies from the state, the land users sign formal contracts for a part of the land they cultivate. The rest of the land is used with informal contractual arrangements between both parties. The land users prefer to be under these informal arrangements with landlords because of high transaction costs and opportunity costs. Furthermore, the procedure of formalizing contractual arrangements between landlords and land users is complicated and expensive.

The State does not have a clear policy on how to handle the process with subdivision between the heirs and to facilitate contractual process. Still, there are many heirs with unclear property rights because the legislation process for obtaining title is costly and most of them are living far away from their land.

In Dobrich region, there are large leaseholders, who cultivate over 3000 ha. They play a significant role on the land market. In case, a landlord does not sign a contract and rent out his land to one of the leaseholders and/or decides to cultivate alone, he has two options: to get instead of his land a plot located at the end of the big tract or to negotiate for rent, and to obtain nothing from influential user. The large leaseholders are strong and they have own machinery and access to information. Using their relations they can obtain information such as landlord names, size of plots, location, and quality. Most of landlords are banded with long term contracts with leaseholders. The formal contracts are signed for long term period between 5 to 10 years. The rent is in kind with 30-35 % of production or in cash 50-75 EUR/ha. The local landlords received both type of rent, while the landlords who live in the cities received the rent in cash in their bank accounts. The rent is the same for all landlords, because large farmers work together and negotiate with each other and offer the same rent to all landlords. During the last years the competition between the leaseholders has increased.

In Plovdiv region, the agricultural producers have only few contracts for long-term period and most are for short-term period. Most of the contracts are informal. The main problems for formalization of land transaction on the rental land market are the large number of landlords/heirs; non-subdivided formally ownership rights between heirs and difficulties to find all landlords and to contract with them. It creates a problem for both, landlords and land users. The land users have problems to sign formal contracts and to obtain the state subsidies. On the other side, landlords often do not receive the rent for their land. In the region, the share of rented land is 4.95% and number of land transactions is over 20 000 with 149 land users. The rent is mainly in kind with 12-20 % of production.

By compassing both regions, which are almost the same size in terms of cultivated land, the frequencies (numbers) of land transactions within region with high level of land fragmentation is relatively higher than region with low level of land fragmentation. The land rental transactions in both regions are mainly informal for short-time period while the long-term contracts are formal. The rent can be "in kind", in cash or both. Most of the large leaseholders and cooperatives use the support and services of the local agricultural offices and administrative offices (mayor) for their land transactions (sales and rentals), while the small subsistence farms rely on relatives, friends, and lawyers (in the case of buying/selling land). Land transactions have increased through the time.

The situation in the selling of land is comparatively different between both regions. In Dobrich region, the leaseholders wants to buy land, but there are not many land transactions.

During the last years, the landlords have stopped selling their land because of expectation for the land price to increase after the EU accession. Now, average land price is 670 EUR/ha. The land market in the Plovdiv region is also weak. The land price is higher compared with Dobrich. The land market differs substantially among the municipalities of the region. The average land price varies between 1500 – 1700 EUR/ha in the region for the last year. Important factors for the land price are the quality of the land, access to irrigation systems and location of the plots. The preferred location is near to populated places or routes but this land is purchased for non agricultural use.

Land abandonment is an important issue for the State. In the country, abandoned land is around 16 %. The region with low level of land fragmentation nearly all of the land is cultivated while in the region with high level of land fragmentation, the abandoned land is over 4-5 %. The reasons for this are no defined property rights between landlords/inheritors; lack of credits to small producers; lack of machinery and lack of possibility to buy agricultural machinery; thefts of agricultural production; low price of agricultural production, many fragmented plots and lack of trust between unknown outsider land users.

Five years after the land restitution process was completed, the land users are still searching but may have found a way to consolidate fragmented plots and to manage with unclear property rights. The comparison between the regions with high and low level of land fragmentation show that Dobrich region had already found mechanisms for solving the problem with land fragmentation in ownership by dividing the land between land users while in Plovdiv region this process just started. The established informal rule of land use can be useful practice for land consolidation.

## **6. CONCLUSIONS**

The land fragmentation has an impact on market development. The level of land fragmentation cannot be easily defined. In these two cases, the farmland plot size can be only a relative number. There are some additional factors such as quality of the land and crop structure, which can be important for explaining the different levels of land fragmentation. The number of farmland plots is a factor, which refer to exchange process and transaction costs and also restrict the future activities of the agricultural producers. Therefore, the land fragmentation can be a function of all those factors such as average farmland size, number of farmland plots, quality of farmland, and crop structure.

Land fragmentation is a problem for the farming system and contractual choice of each farm. The main types of contracts for both regions are share and cash rent contracts. Share contract is preferred mainly by landlords who live in the rural area, while the absentee landlords prefer cash rent contacts with out the risk for getting less or nothing from their property. Most of the contracts are informal and oral because of unclear property rights and high transactions cost to formalize them. In practice, the land is managed or even cultivated by a member of the family who lives in the rural area close to the property. However, in most cases they own only part of the family land. For the agricultural producers situation is unfavorable to contract in formal and written formal because they have to negotiate not only with owners who live in the village but with many owners who often live out of the villages.

The restitution process and land market development in both regions are similar but there is some difference. First, the region with high level of land fragmentation, the land market is less developed compared with the other region. Second, both regions have different crop structures, with low and high-value crops, which require different plot size

Therefore, when we think about the effects and future development of land fragmentation in term of ownership we need to take into consideration the transaction cost and the state of land market. While, when we try to evaluate the negative impact of fragmentation in land use we need to consider the crop structure and established and future development of the farming system.

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NOTES:

1. Violeta Dirimanova is a PhD student, Chair of Resource Economics, Humboldt University Berlin, Germany. The paper presented at EAAE Seminar on Institutional Units in Agriculture, held in Wye, UK, April 9-10, 2005
2. The agency theory is concerned with designing an optimum contract between a principal and an agent. The problems here are: (1) the principal can not observe directly the agent's action and (2) the outcome is influenced not only by the agent's action but also by uncertain factors outside his control. Therefore, uncertainty and risk characterize the transaction exchange between both actors.
3. The bundle of property rights are those rights which give to the landowner rights to use, to sell, to rent, to inherit, to alter and modify and to transfer.

**REFERENCES**

- Barzel, Y. (1989). *Economic analysis of property rights*. Cambridge, Cambridge University Press.
- Cheng, E. and G. H. Wan (2001). "Effects of land fragmentation and returns to scale in the Chinese farming sector." *Applied Economics* 33: 183-194.
- Dijk, T. v. (2002). "Scenarios of Central European land fragmentation." *Land Use Policy* 20(2003): 149-158.
- Furubotn, E. and R. Richter (1997). *Institutions and Economic Theory. The Contribution of the New Institutional Economics*, Ann Arbor: The University of Michigan Press.
- Hayami, Y. and K. Otsuka (1993). *The Economics of Contract Choice*. Oxford, Clarendon Press.
- Kopeva, D., N. Noev, et al. (2002). Land Fragmentation and Land Consolidation in Agricultural Sector. Munich: 91.
- Lernaman, Z., C. Csaki, et al. (2004). *Agriculture in Transition: Land Policies and Evolving Farm Structures in Post-Soviet Countries*, Lexington.
- NSI (2003). *Annual Statistical Yearbook*. Sofia, National Statistical Institute.
- Pejovich, E. G. F. S. (1972). "Property Rights and Economic Theory: A Survey of Recent Literature." *Journal of Economic Literature* 10(4): 1137-1162.
- Swinnen, J. (1999). "Political economy of land reform choices in Central and Eastern Europe." *The Economics of Transition* 7: 673-664.
- Swinnen, J. F. M. (1997). An explanation of land reform choices in Central and Eastern Europe: 1-32.
- Williamson, O. E. (1985). *Economic organization: firms, markets and policy control*, Wheatsheaf Books.
- Williamson, O. E. (1996). *The mechanisms of governance*, Oxford University Press.