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**LAND BANKING AS A FINANCIAL AND MANAGEMENT TOOL FOR THE  
PRICE DYNAMICS DETERMINANTS IN MOLDAVIAN REAL ESTATE  
MARKET**

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This paper analyzes the land market in Republic of Moldova. Since its independence in 1991, the land market has a tendency to be used for agricultural purposes. Also, the country is described an agricultural economy, which is the main reason why the focus of this study is on land prices for agricultural purposes. Another reason is the fact that international organizations such as World Bank and EBRD, seems to show a major interest in this sector due to several reasons: high quality of land compared to global standards, very low land prices and low efficiency levels. The research is adapted to the conditions describing the economy of Republic of Moldova. There is a lot of literature which confirms that the land in the country is rich and qualitative, but used very inefficiently. Although the study investigates the price determinants of land mostly used for agricultural purposes, it elaborates completely from an investment perspective, and not from an agricultural one. This means that the study answers the question “If an investment fund wants to invest in the land market in the country, how it should price the land?”. There are several reasons why an investment firm might consider this idea: the urban spaces might absorb the land in the long-term horizon (10-20 years) and the value would surge; during this period it might lease the land to farmers; or the initial goal could be to buy the land in order to consolidate a region

and lease it to farmers, while the idea is driven by higher efficiency and decreasing the negative factors. Also, as can be observed, the variables analyzed are general from the economic activities (there are no specific agricultural details).

Generally, any market is driven by two fundamental forces: supply and demand. In a market economy, these forces establish the market price, which creates the basis for buy-and-sell transactions. These fundamentals also apply in the land market. Usually the land market can be used in the following activities:

- industrial;
- construction (residential/commercial);
- agricultural (farming).

In the market economy, land is considered an economic good which is sold and purchased on the market of production factors. The well-functioning of the land market implies that there exists a land price which indicates the monetary value necessary to transfer ownership of a piece of land from one individual/legal entity to another individual/legal entity, through the sell-purchase document. Agricultural real estate seems to draw less interest from developed economies as commercial real estate is considered more profitable. However, for country as Republic of Moldova in a transition period, the question of land market is of primordial interest[1].

Regarding the land market for agricultural purposes, the fundamentals remain the same. The demand is driven by consumers, which in this case are mainly farmers, but also potential investors such as private individuals, public institutions, joint stock companies, private-public cooperation, corporate farmers, investment funds (which are currently not present in Republic of Moldova). The investors are driven by different motives relative to farmer's production goal: urban spaces absorption from a longer-term perspective, leasing the land, speculative motives, and change in land usage (for example, from agricultural to residential). On the other side, the supply is constituted by existing landowners and in some cases state ownership.

The market price of land is the result of interaction between supply and demand for land, of the confrontation (negotiation) among sellers and buyers, each of them looking to get the most from the transaction. The factors determining the level and the evolution of land prices can be limited to:

- supply and demand of land – the natural limitation of the quantity of land available makes the supply rigid, it being not sensitive to price variation. As a consequence, land prices evolve proportionately to the demand, to the number of people willing to invest in agriculture;
- the possibility to use land alternatively: agriculture, forestry, construction, industrial;
- the interest rate – buying a piece of land is an investment. As a consequence, if the interest rate is higher than the efficiency expected from using that piece of land, the investor would rather deposit his money in a bank, thus influencing the demand for agricultural land;
- the increase in the demand for agricultural products determines an increase in the demand for agricultural land, thus increasing their prices.

Given the fundamental market model, when these forces meet, the land market price is created. In developed, well-functioning market economies, this price is also considered the optimal price, which governs an effective buy-and-sell transaction system. This allows for the market value to be usually equal to the investment value ( $MV = IV$ ) and most of the participants to be marginal. This study aims to discover this optimal land price, and the casual factors which influence this price. But, it is adapted to an economy in a transition period, such as Republic of Moldova. Since it has an under-developed economy, the market mechanism is ill-functioning. This means that the market value is almost never equal to the

investment value ( $MV \neq IV$ ), and the majority of participants are described as intra-marginal. As a consequence the system for buy-and-sell transactions is broken and ineffective. The market is also described by an imperfect competition. Many Central- and Eastern European countries went through the land privatization processes, or so called land reforms. In most of them, the land reform has created a class of individual, small landowners. Thus, from the former collective state farms were created numerous fragmented smaller scale landowners. During this period, the markets in these countries were characterized by an imperfect competition. At the same time, transaction costs were a major issue, which comprises dealing with inheritance and co-owners, acquiring information on land, bargaining costs, asymmetric information, dealing with regulations. The combination of imperfect competition and transaction costs has a strong influence on land prices. This is also characteristic for Republic of Moldova

In 1998, the National Land Program (NLP) in Republic of Moldova initiated the privatization of “old” collective state ownership of land holdings. As a result, the share of state ownership has decreased from 100% in 1990, to less than 15% in 2015. Each landowner received (due to the NLP program) an average of 1.3 – 1.4 hectares of land. Adding the average household area of 0.3 – 0.4 hectares, the distribution produced fragmented individual landowners of less than 2 hectares. Thus, land fragmentation in Moldova has two specifics: small size of each owner and land ownership of multiple parcels due to the equity-driven process of land privatization. Like for other Eastern European countries, the whole process of LLP in Moldova has created a class of small and fragmented landowners. Less than 50% of them used the land independently, while the other leased it to cooperatives, LLPs and Joint Stock companies. According to World Bank Study, half of land in Moldova is in parcels smaller than 10 hectares. The corporate farms have as average of 500 – 800 hectares. Almost one million hectares of land was distributed to 600,000 people. Given a population of approximately 3 million, the large number of landowners combined with the small average size proves the extent of fragmentation as a result of the land reform [2].

Generally, there are several specific features attributable to a country, or a group of similar countries. It is worth mentioning at least several for Republic of Moldova, which might assist with results interpretation:

- according to local experts, the “real” transaction prices are not declared, especially when the transacted area is of significant size. This fact is related to the whole ill-functioning system of public administration, cultural values, corruption and other factors. This effect spreads in all sectors of real estate. As a result, the official records of transaction at the Cadastral Agency in Moldova do not reflect the real market prices mainly due to evasion of taxes, low level of trust in associations, decrease the transaction commissions;
- although the holding of landowners comprise on average several parcels of land, they prefer to view them as a single one. This signifies that transactions regard not a single parcel, but all of them. The landowners would prefer to sell all of their parcels. This can also be concluded from the answers of interviewed respondents: they mentioned investments, number of employees as a total number;
- the land reform created a lot of independent, small landowners (as previously explained). But the reform lacked a proper mechanism for land usage. According to the Academy of Science survey, the primary reasons for not developing the land are: insufficient labor, lack of finance, non-profitable activity and lack of machinery;
- while the legislation provides opportunities for foreign investors in land for residential or commercial use, the law on land for agricultural use has several drawbacks. Currently, the investors can be only residents of Republic of Moldova, with no partnerships with foreign institutions or foreign capital. This creates considerable obstacles for land development. Combined with an inefficient and ineffective land usage, the whole land

market system has remained at an early development phase for many years, or to be more precise for 14 years. The developed countries can afford this strategic reasoning, while an economy in a transition period has nothing but to gain from opening more its land market [3].

Generally, the investment cycle of the land real estate market has four phases. Each stage could be analyzed as a separate investment described by its specific timeframe, risks/return and costs. Although the phases might overlap, the value might be added at each of them. The stages are the following:

1. Land in its raw form – the investment opportunity is based on purchasing land which is not designated for any development and holding it until demand creates a development opportunity. The usual holding period is from four to six years. The risks are related to public policy, significant economic disturbances, and demographic shifts. The return is mostly based on land appreciation.

2. Pre-development and approval – represents purchasing land and entitle it through necessary legislative procedures for a specific project/use. Respectively, the land might be sold or developed after entitlement. The costs for this stage could be high. Most of the expenses concerns obtaining approvals, attorney fees, engineering. The timeline for this phase depends on each country, and varies from six months to several years. The return, or the value added, should include not only the original cost of land, but also the costs associated with approval and a profit for taking the risks.

3. Development – this stage usually involves purchasing the land (with already obtained permits) and start development/construction. It also includes obtaining pre-lease agreements or pre-sales. The period is shorter than other phases, from 6 months up to 2-3 years. However, there are a lot of required expenses, such as: marketing campaign, expertise fees, environmental and architectural studies, human resources and overhead expenses. An important step is to manage well the risks, which comprise market downturns, public policy changes, and tenant/lessee risks. The return varies mostly on market conditions and country's specifics.

4. Income Generation – represents purchasing the land from previous phase (development), an asset which generates stable cash-flow. The maintenance costs are the main expenses. The risks are related to market conditions, and general factors which influence the real estate market. The return depends on the sector of the real estate.

Any investment can be evaluated using the fundamental net present value model, which also applies in the land market. However, the period between pre-developed and growing phases of land dynamics is considered long-term. Also, it is very difficult to estimate the future income and discount rates associated with a particular parcel of land. Too many uncertainties make any model unreliable as the expectations are completely subjective. The land market in Moldova could be considered in undeveloped phase. Thus, the investment opportunities are great. Several statistics about comparable countries demonstrate this fact: the average price for 1 hectare of land was 10.3 thousand MDL (in 2017) in Moldova representing almost 675 EURO (at average exchange rate for 2017), which is much lower than the average price of a hectare of land in many other European countries. For example, average price of land for 1 hectare (in Euro): Netherlands – 14.800 France – 8300 Belgium – 8500 Slovakia – 6000 Russia – 2000 Moldova – 675 However, the 675 Euro for one hectare are the average price for the whole Republic. The situation is completely different when looking at prices close to urban areas, especially the capital of the country.

The state policy regarding land development, which currently functions only through re-parceling projects, has proven to be inefficient. After the re-parceling pilot project, which was implemented with the help of the World Bank in 6 rural communities from the Republic of Moldova, the number of land parcels has been reduced from 7200 to only 5500 at the cost

of approximately 1 million dollars. The sum of money spent is excessive when comparing to the modest results that have been achieved. Also, the high transaction costs and non-economic motives can reduce the dynamic of the land market. This is why it is necessary to examine other, more efficient ways of land development, which have been successfully employed in more developed international countries [4].

In order to accelerate the development of land market, an important financial and management tool is proposed, by introducing a new player on the land market in Republic of Moldova (which is currently not present). The land banking (or land bank) is apparently an important mechanism present in many European countries for improving the whole system of land markets. This player has a significant contribution in several aspects of the land market: improving the planning and development, a more reliable transaction system, higher liquidity and financial resources, more available information. There are 3 main categories of land banking:

I. Land banking as a developer. This category is mainly used by private investors, when it is necessary to change the land usage of an area. Thus, the main goal is to offer an efficient transition mechanism. It is possible for the new activities to be related to commercial real estate (from agricultural to urban), town expansion, nature, recreation, etc. This land banking system can also be used in reconstructed areas. The rotation of the used land takes place more in the suburbs of the big cities. This category is also linked to the practices called speculations. Someone buys land with the goal that the planned areas of the municipalities will allow changing the destination of the land after a period of time. Usually, the land value surges when the main activity changes from agricultural to commercial (construction). As a result, it is considered one of the most profitable investments in the world. When someone sells the land at the right time (after a long-term period), he gains a profit. Thus, in this case, the land banking is an opportunistic investment. The state can also use this instrument to make sure that its goals will be attained.

II. Financial Instrument. The land bank offers the possibility to lease land for a long period of time to farmers or other organizations for preserving the landscape. It is long-term mechanism to finance the land. The land bank functions as a financial instrument due to insurance of different payments for a long period of time. Up to the end of the '80s this category existed for a short period of time, especially for regulating the land banking activity. The land was bought by the state and leased for long periods of time (usually 26 years).

III. Exchange land banks. The land bank represents a mechanism through which land is bought to be temporarily kept for the subsequent exchange of land. This form of land bank has already been practiced for a long time. The bank owns land which is then exchanged with land in proximity to that of other land owners, in order to be used more efficiently. Traditionally, this kind of banks operates only in areas of agricultural land consolidation. Also, these institutions operate in rural areas and in areas concerned with green spaces. For this kind of land bank, the exchange of land is quick, diminishing the need for the financial aspect.

From an investment perspective, the first two categories seem more appropriate. A mixed category between the first two should be considered as a new financial and management tool. This mechanism is proposed to be considered by local administration and interested future studies.

**Conclusions:** This research briefly introduces the fundamentals of the land real estate market, briefly describing the main characteristics in Republic of Moldova. The most developed sector is the land for construction purposes in the biggest cities, especially in the capital of the country. Although many international studies show that the land is rich and qualitative relative to global standards, the price is non-comparable. This means that the development and income generation phases are not appropriately implemented. Several

major reasons are suggested: an ill-functioning transaction system, weak state support, low efficiency and lack of finance. In order to enhance the land market dynamic, a financial and management instrument is proposed – land banking. This tool is widely used by developed countries, with positive results.

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