

# Economic and legal aspects of the agricultural land market

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**Abstract:** Agricultural land market is usually defined as the purchase of agricultural land. In the most of the European countries, the land rental transactions have received the dominant position in the land market. Therefore, the land rental transactions are included into the agricultural land market analysis. The decision processes of market subjects are often influenced by the law. On the one hand, there is the law regulating the value of agricultural land from the various points of view. On the other hand, there are some statutes stipulating the rental legal rules. The objective of this paper is to analyse the influence of the law on the behaviour of market subjects in the agricultural land market.

**Key words:** agricultural land, land market, land transactions, land rent, land legal regulation

The unique nature of land as a natural resource has some specific market features. The demand curve is less elastic in the short term and vice versa in the longer term. This means that it can be substituted by cheaper alternatives through the development of new technologies, techniques, management practices, more resistant crops and ultimately the well-qualified labour. The supply curve is growing in a short period and it has a vertical shape in the long term, because it cannot exceed the constraint level given by the nature. In the long term change, land demand does not lead to the change of land supply. It influences only a land price (Arendas 1997). The land market differs considerably from the other kinds of market due to the unique character of real estate as a commodity. It is not uniform and is influenced by various factors, which can be divided into several categories: (1) the type of real estate – apartments, commercial real estate, agricultural real estate market, (2) criterion of area – local, regional, national, (3) criterion of the acquired rights to real estate – agricultural land rental market, an investment market, where the investors buy real estates, (4) criterion of price, (5) criterion of quality (Hopfer and Zuk 2002). The unique character of agricultural land caused that the land market and land farming faces the problems connected with the socio-economical development in the new member

states of the EU. Even if the main part of agricultural land in Slovakia belongs to the private owners, a big land fragmentation and an untransparent land ownership have built the main barrier in the land market development (Buday 2007). For all that, the agricultural land market cannot currently be understood only as a place to meet the supply and demand for the agricultural land purchase and sale. It also included the supply and demand for agricultural land rent, because farmers are mostly cultivating rented land. The total share of the rented agricultural land is almost 96% in Slovakia (Ciaian 2001; Ciaian and Kancs 2009). The close connection between the land rental market and land market is pointed also in the paper of Střeleček et al. (2010). The land price is more stable than the land rental payments. Střeleček et al. (2010) stress that the high growth rate of the land rent beside the stable land market price results in the unrealistically high interest rate. Such situation is an evident advantage for land owners and is, on the contrary, a disadvantage for the tenants of agricultural land. Currently, there is no uniform regulation of agricultural land prices in Slovakia. There are legal acts that determine the land price, depending on the purpose for which the price is stipulated (Lazíková and Bandlerová 2006). What is the effect of the legislation determining the administrative land prices on the decision making of

market players? In other words: Is the market equilibrium reached by market powers or do the market players copy the prices from the law?

## DATA AND METHODS

The main objective of the paper is to analyze the influence of the selected legal acts on the behaviour of subjects in the agricultural land market. The first partial objective is to determine the influence of administrative land prices on decision making of market subjects. There are two legal acts that stipulate the land price. The first one is the Legal Act No. 582/2004 Coll. on local taxes and local fees for municipal waste and small construction waste. The second one is the Legal Act No. 38/2005 Coll. on the determination of the value of the land and the plants growing on it for the purposes of land consolidation. This act determines the land value based on the land quality. The second partial objective is to determine the influence of the minimum amount of rental payment and the minimum rental period for agricultural land according to the Act No. 504/2003 Coll. on agricultural land rent, the lease of agricultural enterprise and the forest land rent (Land Rental Act) on the decision of the subjects in the land rental market. For this purpose, there was conducted the survey within the Vega project No. 1/0876/1 in the West (the region of Bratislava, Trnava, Trenčín and Nitra), the Central (Žilina and Banská Bystrica) and East Slovakia (Prešov and Košice). The data collection consists of 241 transactions involving the sale of land for 2005–2009 as well as the land rental transactions for 1999–2004 and 2004–2009. For the data analysis, we used the general scientific methods, the methods of descriptive statistics, statistical induction and graphical methods (Tables 1 and 2).

Table 1. Number of land sale transactions in 2005–2009

County	2005–2009
Bratislava	11
Trnava	19
Nitra	30
Trencin	21
Zilina	13
Banska Bystrica	16
Kosice	21
Presov	14
Total	145

## RESULTS

### The impact of the administrative land prices on the market land prices

The lack of information on the land market makes the decision-making process of subjects more difficult because of the missing land price information system (Lazíková and Takáč 2010). The market subjects perceive the information on market land prices as a business secret (Takáč 2009). The lack of the land price information is not solved by the legal acts. It is even not clear from what basis the legislature comes out or why is the same plot according to one legal act (582/2004) in average 2.15 times more expensive than according to other one (38/2005).

According to the comparison of the individual market equilibriums with the administrative land prices under Legal Act No. 582/2004 Coll., we have found out that the market land prices are far below the administrative price of arable land in the Western Slovakia. Figure 1 documents the relationship between administrative and market prices of the same plots. We figure out that the administrative land prices are several times higher than the market prices, as the lower line presents. The upper line represents a situation when the administrative and market prices are equal. The results according to the *t*-test confirm that there is not any statistically significant dependence between administrative and market prices.

The administrative prices of arable land according to Legal Act No. 582/2004 Coll. are in average 68.8% higher than the market prices of arable land. Most of the land transactions were carried out at the market price that accounted for only 20–30% of the administrative land prices under the Act No. 582/2004 Coll. Figure 2 describes the interval frequency distribution. Each class characterizes the

Table 2. Number of land lets in 1999–2009

County	1999–2004	2005–2009
Bratislava	3	3
Trnava	6	9
Nitra	8	12
Trencin	7	8
Zilina	5	6
Banska Bystrica	4	5
Kosice	5	7
Presov	4	4
Total	42	54

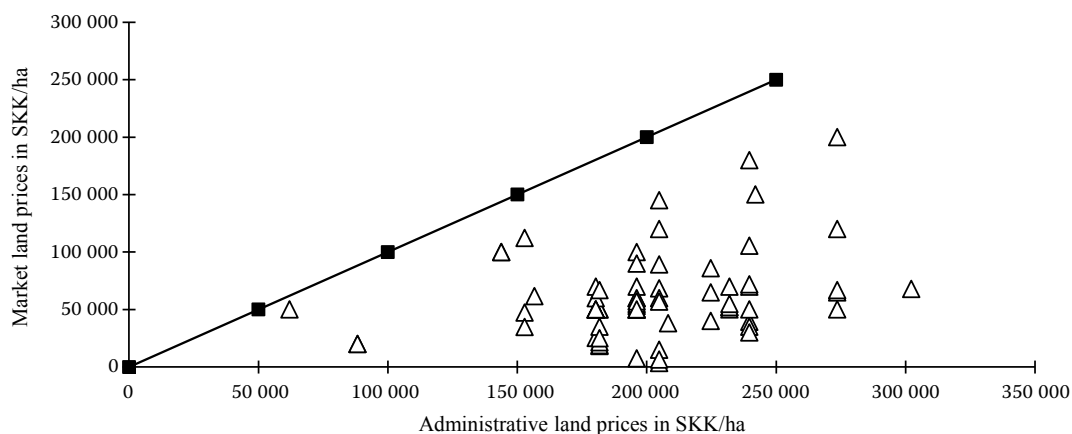


Figure 1. Comparison of the market and administrative land prices according to the Legal Act No. 582/2004 Coll.

Note: The line presents the situation that the administrative land price are prices are equal to the market land price  
Source: the authors

measured difference between the administrative and market land price.

Furthermore, the dependence of land market prices on the administrative ones by the Legal act No. 38/2005 Coll was not confirmed in the Western Slovakia. The land market prices have fluctuated mainly below the administrative price. The situation is documented by Figure 3. 56% of land market transactions in the Western Slovakia were realized at a price higher than the administrative price of arable land by the Act No. 38/2005 Coll. The differences between administrative and market prices have fluctuated between -90 to +100%.

Figure 3 characterizes a situation where the market prices are higher than the administrative ones. The largest group of land market transactions were carried out by market price about 82 to 98% higher than administrative prices determined by Act No. 38/2005 Coll. Figure 4 describes a situation where market land

prices were lower than the administrative ones most frequently by 36 to 48%.

We found the similar results by comparison of the land transactions in Central and Eastern Slovakia. We did not confirm a statistically significant relationship between market and administrative land prices. In the Central Slovakia, the administrative land price level of 1660 EUR/ha stipulated by the Act No. 582/2004 Coll. met the land market prices. But the administrative prices above 1660 EUR/ha according to the Act No. 582/2004 Coll. were much higher than the market land prices.

We did not confirm a statistically significant relationship between the land market prices and administrative land prices stipulated by the Act No. 38/2005 Coll. We observed a similar situation in the Western Slovakia. The land market prices were higher than the administrative ones only in lower administrative price ranges. Increasing the administrative land

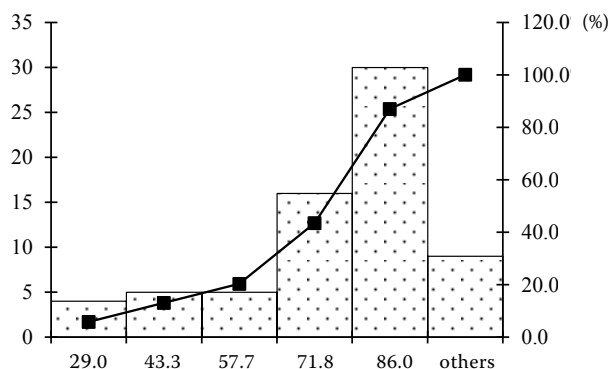


Figure 2. Interval frequency distribution describing the differences between the market and administrative land price according to the Act No. 582/2004 Coll.

axis  $x$  – bin, axis  $y$  – frequency  
Source: the authors

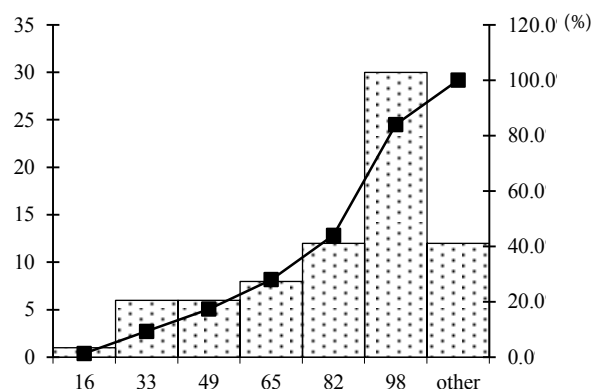


Figure 3. Interval frequency distribution describing the differences between the market and administrative land price according to the Act No. 38/2005 Coll.

axis  $x$  – bin, axis  $y$  – frequency  
Source: the authors

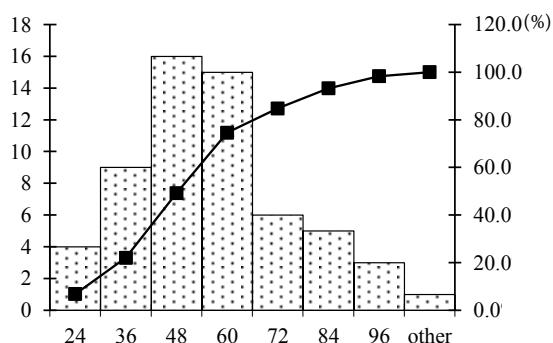


Figure 4. Interval frequency distribution describing the differences between the market and administrative land price according to the Act No. 38/2005 Coll.

axis  $x$  – bin, axis  $y$  – frequency)  
 Source: the authors self-contained

prices, the land market prices were getting below the administrative ones. In Eastern Slovakia, a statistically significant relationship between the administrative and land market prices was not confirmed.

In conclusion, we can argue that the majority of land transactions performed at higher price than the administrative one (by the Act No. 38/2005 Coll.) is characterized by a lower land quality. On the other hand, the best quality land was performed at lower price than its administrative one (by the Act No. 38/2005 Coll.). The administrative land prices stipulated by the Act No. 582/2004 Coll. are usually several times higher than the market ones. The exceptions are land transactions for the purpose of non-agricultural land use.

The market subjects do not apply the administrative land prices in their decision making in spite of the lack of the land market price information. There

are other factors influencing the land market prices. The average price of the sold estates is influenced to a large extent by their size, location and the purpose of further utilisation (Buday 2011). The official statistics or information systems providing information on the land market prices are still missing in Slovakia. The information is available only for the Cadastral Offices, because they perform the inscription of ownership rights. However, they do not keep the statistical overview of land transactions.

### The impact of the land rental legal regulation in the market rental payments

According to the rental legal regulation, the contracting parties have free hands to negotiate the rental payments within the contract. If the parties fail to do so but the contract implies at least the obligation of the tenant to pay the rent (although the precise amount or the means of its determination is absent), the contract is still valid. However, there is an exception to this rule stated by the law: in the case of entrepreneur rent (the rent of the land for agricultural purposes in the course of the enterprise), the law requires an agreement on the rent or agreement on the means of its determination. The minimum rental payment is 1% of the land value determined according to the Act No. 38/2005 Coll.

Determination of the minimum rental payments may regulate the situation in the land rental market only if the rental payment agreed between the contracting parties is lower than that stipulated by the law.

The situation in the land rental market is described by Figure 4. The  $x$ -axis represents the minimum rental payments stipulated by the law (independent variable)

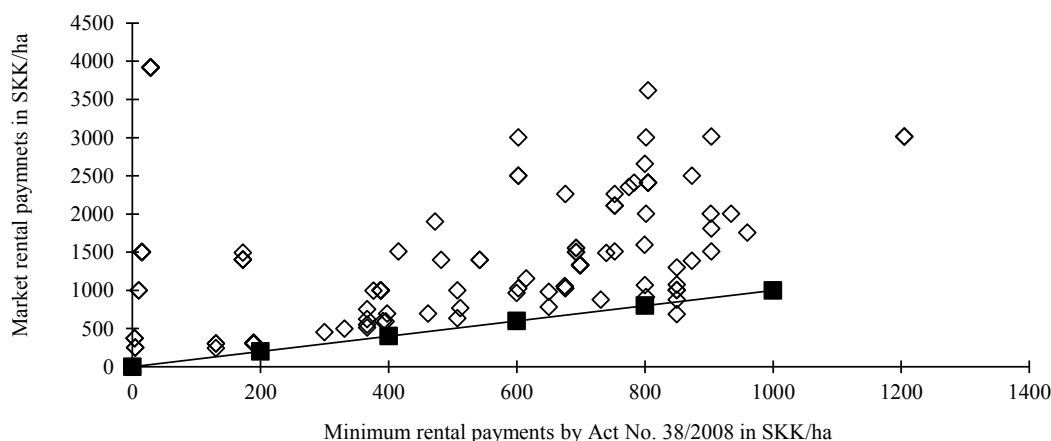


Figure 5. Rent prices after 2004

Note: The line presents the situation that the minimum rental payments stipulated by the law after 2004 are equal to the market rental payments.

Source: the authors



Figure 6. Rent prices before 2004

Note: The line presents the situation that the minimum rental payments stipulated by the law after 2004 are equal to the market rental payments

Source: the authors

and the  $y$ -axis represents the market rental payments (dependent variable). The market rental payments are situated over the line of the rental equilibrium. Therefore, we can state that the market equilibriums are above the minimum rental payments required by the law (Act No. 504/2003 Coll. on the rent of agricultural land plots). It means that the present legal regulation of the minimum rental payments is useless (Figure 5). We put the question if the legal regulation was reasonable at the time of its creation, in 2004. However, the Figure 6 proves that the market rental payments were higher than the minimum stipulated by the law before 2004. This means that the legal regulation on the minimum rental prices has been obsolete from its adoption.

Figure 7 proves that not only the minimum rental payments stipulated by law but also the market rental payments are depended on the land quality. The  $x$ -

axis characterizes the administrative land process stipulated by the Act No. 38/2005 Coll., which depends on the land quality. The higher minimum rental payments correspond to the higher land quality. The  $y$ -axis characterizes the market rental payments per hectare (EUR/ha).

In spite of the fact that the rental payments are usually determined by the rental market competition and they are not influenced by the legal restrictions, they are not able to eliminate the market deficit of the land amount. By the farms survey, we found out that the farms, regardless of the legal form, are interested in renting an additional agricultural land units. Up to 55% of the respondents consider that the first problem of the land rental market is the lack of land for rent in and the unwillingness of owners to rent out their land. The geographic area or the legal form of farms do not play any role to

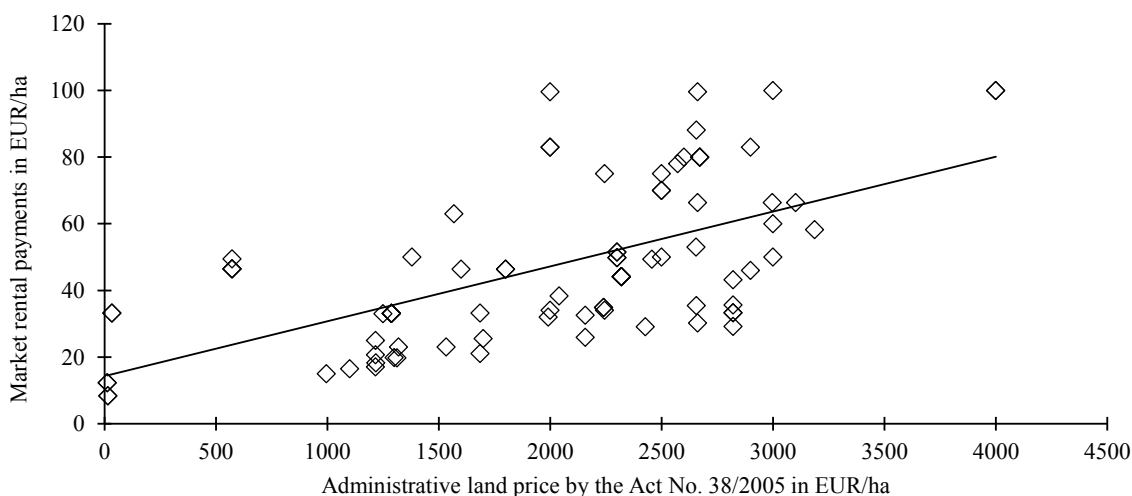


Figure 7. Relation between the land quality and land rental payments

Source: the authors

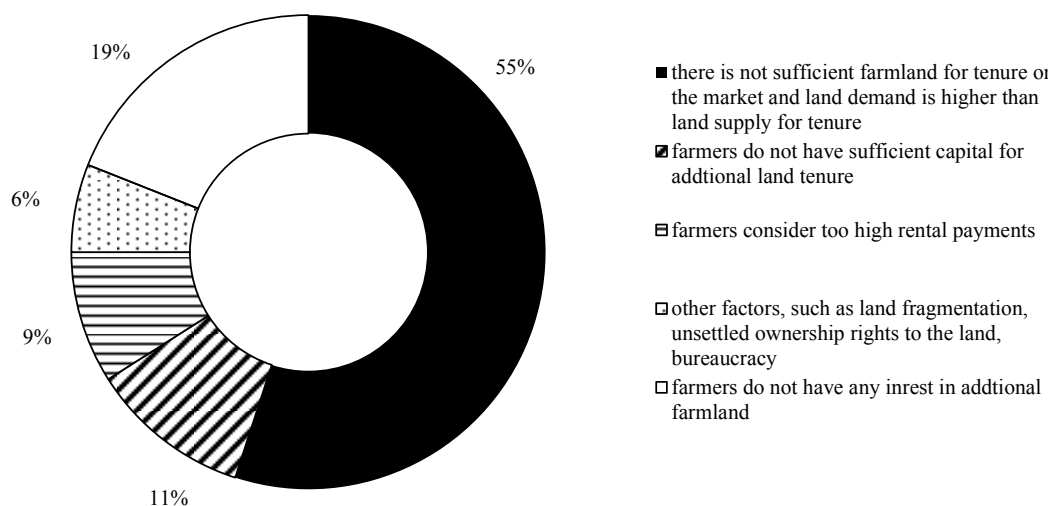


Figure 8. The land rent market problems

Source: the authors

make differences in their answers. The results are presented in Figure 8.

According to the problems documented in Figure 8, we could expect increasing market rental payments. In praxis, it is not easy, because the market requirements are slowed down by the legal regulation. The Act No. 504/2003 Coll. allows concluding a land rental contract for a period of at least five years, if the land is used for agricultural business. There are usually negotiated fixed rental payments during the rental period.

This is an advantage for the land tenants, because they are not pressed to pay higher rental payments. The law gives them the certainty of an uninterrupted use of agricultural land for the given statutory period as well. The land rental legal regulation protects the

land tenants due to the lack of interest of the land owners to cultivate their own land.

Therefore, our further considerations were oriented to the hypothesis if the tenant's protection given by the law, such as the longer period of land rent during which the land owner cannot dispose with his/her land, is compensated in the form of higher rental payments to the land owners. In this case, we examined by the analysis of variance, if there are any significant differences in the amount of rental payments in respect with the land rental period. The results are in Table 3.

According to the Anova test, the variances of the data file for the monitored period were as not equal ( $F = 4.206 > F_{krit} = 2.703$ ). Therefore, the Anova test was used to confirm or refuse the hypothesis  $H_0$ : there are is no significant differences between

Table 3. Analysis of the variance of rent price in relation to the rent period of time

Anova: Single Factor						
Factor						
Group	Count	Sum	Average	Variance		
(1) land rent for a period of 5 years	13	28 707.45	2 208.265	417 014.6		
(2) land rent for a period of 10 years	48	68 522.81	1 427.558	795 977.5		
(3) land rent for a period of 15 years	14	18 818.93	1 344.21	200 224.9		
(4) land rent for an indefinite period of time	21	28 347.32	1 349.873	513 704		
Anova						
Source of variation	SS	df	MS	F	P-value	F-crit
Between groups	7 584 659	3	2 528 220	4.206679	0.007771	2.703594
Within groups	55 292 121	92	60 1001.3			
Total	62 876 780	95				

Source: the authors

the rent prices in relation to the rent period of time. According to this test, the  $H_0$  hypothesis should not be adopted. There were statistical significant differences between the rent price and the rent period of time.

The statistically significant dependence was confirmed in the opposite premise in comparison with our hypothesis. The maximum rental payment was granted at the shortest period of the land rent (five years). This is preferred by the Limited Liability Companies and individual farmers. An agricultural cooperative prefers to rent for 10 to 15 years or concludes the rental contracts for an indefinite period of time.

We expect that the companies and individual farmers would conclude their rental contracts for a shorter period than 5 years by the elimination of the minimum rental period and rental payments would increase. However, it should be considered what is the purpose of the minimum rental period stipulated by law, because this regulation protects mainly the tenants of agricultural land instead of its owners.

## CONCLUSION

At the beginning of this paper, we put up a question which can be answered negatively according to our findings. The administrative land prices stipulated by the law serve only for the purpose, which was defined by the legislator. They do not have any significant impact on the decision making of the market subjects in their land transactions in the agricultural land market. According to our findings, the land of a lower quality was purchased more at a higher price in comparison to its administrative price given by the Act No. 38/2005 Coll. On the other hand, a land of a higher quality was sold at a price lower than its administrative price stipulated by this act. The administrative land prices set in the Act No. 582/2004 Coll. on the local taxes and local fees for the municipal waste and construction waste are several times higher than the administrative land prices according to the Act No. 38/2005 Coll. on the determination of the value of the land and the plants growing on it for the purposes of land adjustments as amended by later regulations. The legislator did not explain the reason in the explanatory report to this act. These administrative land prices excess in most cases the market land prices. The exceptions are only the land market transactions, where land is used for non-agricultural purposes. The legislation does not interfere with the process of rental payments on the land rental market by fixing the minimum amount of rental payments. These rental payments are several times higher than the minimum rental

payments required by the Act No. 504/2003 Coll. on the agricultural land rent. The legal regulation related to the rental payments is obsolete, because the market rental payments were higher already at the time of the adoption of this act. On the other hand, the minimum land rental period of five years has affected the freedom of the contracting parties in the land rental market. Most of the individual farmers and agricultural companies prefer the rental contracts for a minimum rental period given by the law. We expect that the elimination of this legal regulation could ensure the rental contracts concluded for a shorter period of time than 5 years due to the uncertain conditions of agricultural business.

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Arrived on 10<sup>th</sup> February 2011

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