



# Agricultural Land Lease in Slovakia – selected issues and economic aspects

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## Abstract

**Motivation:** Agricultural land is an important natural resource and a fundamental factor of production that Slovak farmers typically use based on numerous land lease contracts concluded with landowners, due to the high fragmentation of land ownership in Slovakia. Therefore, the legal regulation of agricultural land lease is crucial for the development of the agricultural land market, and it is essential to properly establish the legal rules that market participants should follow.

**Aim:** The main objective of our article is to determine whether the selected legal norms regulating land lease (the minimum rent and the administrative rent, and its modifications.), are appropriately adapted to the conditions of the land lease market in Slovakia.

**Results:** The results of the study indicate a need for legislative amendments if these legal rules are to fulfil the purpose intended by the legislator, rather than merely representing an unnecessary element within the already complex framework of land-related legal regulations



in Slovakia. Moreover, we formulated *de lege ferenda* recommendations based on an analysis of land rents in selected agricultural regions of Slovakia.

**Keywords:** agricultural land, land lease, land use, legal regulations, usual rent

**JEL:** K11, Q15, Q24, R14

## 1. Introduction

Agricultural land is a valuable, very limited, and slowly renewable natural resource that fulfils numerous ecological (e.g., providing living space for organisms, supporting biodiversity) and environmental functions in a country (e.g., water purification, climate regulation through carbon sequestration in the soil). As such, it directly affects quality of human life. Land also serves as a fundamental production factor for agriculture, which is essential for food security and the sustainable development of agriculture and rural areas. Therefore, appropriate attention must be paid to the legal regulation of land ownership, land use and land protection.

The fundamental problem regarding land ownership and use in Slovakia is the enormous fragmentation of land ownership (Lazíková et al., 2017). As a result, agricultural land is predominantly used by tenants (e.g., agricultural cooperatives and commercial companies), who manage hundreds to thousands of hectares of land through numerous lease contracts concluded with individual landowners or other authorized entities (such as the Slovak Land Fund)<sup>1</sup>. Consequently, the legal regulation of agricultural land lease is highly important, and special attention should be given to the proper structuring of its legal instruments, which directly affect the land lease market.

In some of our previous studies (e.g., Lazíková, Takáč, 2010; Lazíková et al., 2012; Bandlerová, Lazíková, 2016), we have already addressed certain aspects of the legal regulation of land lease. However, our efforts to apply the economic analysis of law were limited using a small and randomly selected sample of respondents of agricultural enterprises. The current legal regulation of land lease imposed an obligation on district offices to publish information on the usual rent annually from individual cadastral areas of Slovakia. This development facilitates a more accurate comparison between the actual conditions of the land lease market and the legal framework.

Legal instruments regulating land lease, such as the minimum rent and the administratively determined rent, should be based on analyses of current market conditions and regularly reviewed. We agree that farmland markets

<sup>1</sup> Slovak Land Fund is a legal entity established by law which administers state land and land with unknown owners, i.e., land whose ownership is not properly documented.



need to be closely monitored with up-to-date official statistics informing potential market participants and public policy (Loughrey, Geoghegan, 2024). However, the minimum rent established in Slovak legislation has remained unchanged since the adoption of the relevant law in 2004. The main objective of our article is to determine whether the selected legal norms regulating land lease (the minimum rent and the administrative rent, and its modifications.), are appropriately adapted to the conditions of the land lease market in Slovakia. Based on an analysis of the usual rent within the context of the current legislation, we have proposed several *de lege ferenda* solutions.

The paper is organized as follows: The second chapter discusses the legal and political conditions of the land lease market in Slovakia, based on national and foreign academic sources. The third chapter describes material and methods of the paper. The fourth chapter is divided into three subchapters. The first one examines the development and current state of the usual rent in selected agricultural regions of Slovakia. The second and third subchapters analyse selected legal instruments—particularly the minimum rent and the administratively determined rent—considering the current land lease market and formulates *de lege ferenda* recommendations. The fifth chapter presents the conclusions, including the *de lege ferenda* proposals, and outlines possibilities for further research on the land lease market.

## 2. Literature review

Agricultural land is not ordinary goods or capital but our heritage that need to be protected. Land is also one of the main factors generating various economic, environmental and social benefits in rural areas (Vranken et al., 2021). According to the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas, peasants and other people living in rural areas have the right to land, individually and/or collectively including the right to have access to, sustainably use and manage land and the water bodies, coastal seas, fisheries, pastures and forests therein, to achieve an adequate standard of living, to have a place to live in security, peace and dignity and to develop their cultures (Article 17 of UN Declaration). However, agricultural land is an essential asset for societal development in general, for food production and ensuring food security for the general population (Vranken et al., 2021). There are many scenarios of experts how the land will be used in future. All scenarios show an increase in built-up areas and forest areas, some land is expected to become protected for nature or recreation, which could limit other land use changes and bioenergy crops will increase in all scenarios (Rounsevell et al., 2006)

Land regulations need a holistic approach but there is no specific EU law of land market transactions. Land market policies are predominantly formu-

lated at the national level and vary significantly among EU Member States (Loughrey, Geoghegan, 2024). While some countries have heavily regulated markets (e.g. Croatia, Hungary, Poland and Romania), other countries have a very liberal approach to land markets (e.g. Czechia, Denmark, Ireland and Finland) (Vranken et al., 2021). There is heterogeneity between MS in the type of agricultural land market regulations in place (Vranken et al., 2021). However, the land market, including the land rental market, is part of the EU internal market and must comply with the provisions on the free movement of capital (C-213/04). It means there are forbidden any restrictions that can limit the free movement of capital. Since land is not an ordinary commodity, the Court of Justice allowed certain exceptions in the public interest, such as restrictions on the establishment of residence by foreigners in a specific geographical area in order to preserve a permanent population and autonomous activities in that region (C-213/04) or restrictions on the acquisition of real estate for the purpose of maintaining agricultural communities, promoting the rational use of available land, and preventing natural disasters (C-452/01). Finally, the Commission's interpretative guidelines allow Member States a certain degree of flexibility in regulating agricultural land markets when serving various objectives, such as keeping land in agricultural use, maintaining a rural population, addressing land fragmentation, or monitoring and possibly reducing land concentration (2017/C 350/05). Boinon (2003) concludes that land market regulation (including price regulation) appears as a tool to support the allocation of land to the relatively more productive farmers. The certain level of land market regulation is necessary due to the risk of several undesirable outcomes that can emerge from market failures including excessive speculation, the accumulation of land ownership, market power and the inequitable distribution of rents among farmers and landowners (Odening, Hüttel, 2021).

The lease of agricultural land is an important form of land use in most of the European Union states (Marks-Bielska, 2021). Leasing is a widespread and highly successful economic institution because of: (1) Leasing is an attractive method of financing the acquisition of assets; (2) Leasing is a device for minimizing the; and (3) By dividing the rights to an asset between lessor and lessee, leasing permits the parties to specialize in different functions and to solve various impediments to contracting that would be difficult to overcome among separate owners (Merrill, 2020). Land rental activity varies across Europe with relatively high rental shares (over 50 per cent) in Germany, the Czech Republic and Slovakia and relatively low rental shares (less than 35 per cent) in Poland, Portugal and Greece (Loughrey et al., 2020). Freedom of land management (the scope of decisions concerning activities carried out on own land) is the greatest when the land is owned, but land lease brings about certain limitations imposed on both the lessor and the lesser (Marks-Bielska, 2021). However, formal written land leasing contracts



offer an alternative to land purchase for those farmers wishing to expand their land area and provide greater security relative to informal short-term rental contracts and are particularly important for beginning farmers with resources insufficient to purchase land (Onofri et al., 2023). Formal land leasing contracts are more prevalent in other Western European countries including France and Belgium where long-term land leases are the dominant form of land tenure (Adenuga et al 2021). The long-term land lease contracts are often perceived as secure, resulting in equal soil conservation behaviour on rented and owned plots and personal relationships between renter and landowner support soil conservation (Leonhardt et al., 2019). On the other hand, the deregulation of the land rental market is associated with a clear decreasing trend in the length of the contracts in Italy (Guastella et al., 2018). It confirms the research of Vranken et al. (2021) in Netherlands when declining in contract duration where short-term or liberal leases are increasingly adopted. Landowners prefer lease contracts with as little regulation as possible but reducing regulation requires a shift in co-ordination mechanisms from that of the handbook to that of the 'invisible hand' (prices) and 'handshake' (e.g., mutual adjustment) where the importance of trust and reputation will increase for both tenant and landowner (Slangen et al., 2008).

Slovakia is among the EU countries with the highest share of rented agricultural land. While the average share of rented land in the EU-27 is 58%, in Slovakia it reaches as much as 90% (European Commission, 2022). The explanation for such variation lies in the differences in historical context between countries (Bradfield et al., 2023). According to Swinnen et al. (2016), the reason for this high percentage in Slovakia is the fact that most of the agricultural land is used by large corporate farms. Nevertheless, this is not the main reason for the high share of rented land, but rather a consequence of it. Landowners want to change the current status quo, but the problem lies in the extreme fragmentation of land ownership, which prevents them from using and managing their own land in a rational way. Therefore, most landowners ultimately decide to continue leasing their land to large agricultural enterprises. However, we can agree with Swinnen et al. (2008) that the quantity of rented land is typically higher in countries with strict market regulations. It can be confirmed that Slovakia has relatively strict regulation of lease relations, particularly in favour of the tenant, although the legal framework is gradually becoming more liberal, e.g., through the abolition of the tenant's pre-emptive right to conclude a new lease contract in relation to the private persons as landowners (Lazíková, Bandlerová, 2017).

Slovak legislation on land lease regulates the duration of the lease, the minimum amount of rent, rent modifications, methods of lease termination and notice periods, the tenant's pre-emptive right to lease land from the Slovak Land Fund, protection of the tenant's investments, the creation of a lease relationship in the event of the landlord's inactivity, sublease arrangements,

and the tenant's obligations towards the district office. Despite the relatively strict regulation of land leases, it fails to adjust the minimum rent amount to reflect current market conditions and establishes different procedures for determining the minimum rent for various types of land. The latest amendment has improved market participants' access to information on rent levels in individual cadastral territories. District offices are now obliged to calculate the average rent in each cadastral area based on information provided by tenants and to publish this data annually. In the absence of necessary data, the law provides a procedure to determine this usual rent based on existing price regulations. However, the issue lies in the fact that these price regulations reflect land prices at the time of their adoption—approximately 20 years ago. Loughrey and Geoghegan (2024) argue that there is a need for this information on the distribution of both land rental and land sale prices and possibly on a quarterly rather than annual basis in the case of land sales. Finally, due to the lack of transparency regarding land prices—including rent—it is difficult to verify whether the property rights of landowners are fully respected in accordance with the case law of the European Court of Human Rights. This court has recognized and effectively protected the landlord's property rights against rent controls that were disproportionate and could not ensure a reasonable return on investment, and has contributed to reshaping the distribution of power between tenants and landlords (Sardo et al., 2024; cases of ECHR such as *Bittó and others v. Slovakia*, *Hutten-Czapska v. Poland*; *Statileo v. Croatia*; *Vassallo v. Malta*).

### 3. Methods

The main objective of our article is to determine whether the selected legal norms regulating land lease (the minimum rent and the administrative rent, and its modifications.), are appropriately adapted to the conditions of the land lease market in Slovakia. To achieve the main objective, the following partial goals were established: (1) Market rent is represented by the usual rent, which is published annually as of June 30 for the previous year by the district offices for each cadastral area on the website of Ministry of Agriculture and Rural Development of Slovak Republic. This data is based on records of agreed and paid rent between the contracting parties, therefore, it represents the average market value of rent in the cadastral territory of the municipality (smaller municipalities generally have one cadastral territory, while larger municipalities usually consist of several cadastral territories). The usual rents have been published since 2018, so we only have data for a six-year period up to 2023. We presume that if the rent amount did not change significantly over the six-year period, it suggests that lease contracts—typically concluded for a ten-year term—include a flat-rate rent that remains unchanged throughout the duration of the lease, and that the rent modification option provided by Act No. 504/2003





Coll. on the Lease of Agricultural Land, Agricultural Enterprise and Forest Land and on the Amendment of Certain Acts (hereinafter referred to as Act No. 504/2003 Coll. or the Lease Act) is not being utilized. If the rent were determined solely by market conditions, we would expect the usual rent to increase more rapidly during the observed period in areas with more fertile soil. (2) The minimum rent is intended to ensure adequate compensation for the landowner (lessor) for the willingness to make the land available for use by another person (lessee), a principle also affirmed by the case law of the European Court of Human Rights. We assume that if no statistically significant differences are found between the usual rent and the minimum rent, which is set at 1% of the land's value as determined under a specific regulation, the legal provision on the minimum rent amount is justified. Otherwise, it should be considered for amendment or repeal. According to the economic analysis of law, legal rules should be shaped by market principles, supporting the free forces of the market rather than hindering them (Posner, 2014). (3) When the usual rent cannot be determined due to a lack of data from tenants in the relevant cadastral area, it is replaced by administrative rent. The administrative rent is established pursuant to Decree No. 172/2018 Coll. of the Ministry of Agriculture and Rural Development of the Slovak Republic, which sets out the details on the method and scope of maintaining and providing records and determining the usual rent. This administrative rent is set at 2% of the value of arable land in the given cadastral area, as defined by a specific regulation. If statistically significant differences are not found between the usual rent and the administrative rent, it can be concluded that the administrative rent is appropriately set and can substitute the usual rent. Otherwise, its setting should be reconsidered and appropriately amended.

The subject of the study is the usual rent in two regions of Slovakia (NUTS 3), namely the Trenčín and Nitra regions. Both regions are in western Slovakia. The Nitra Region is particularly known as the agricultural heartland of Slovakia, with the most fertile soils in the country. Its southern border forms the boundary with Hungary. To the north, it borders the Trenčín region. The southern areas of the Trenčín region represent a continuous extension of agricultural production, gradually changing from plains and hills with agricultural land to a mountainous and forested area as one moves north. The northern border of the Trenčín region also marks the state border of Slovakia with Poland. Therefore, the studied area represents a continuous territory across the country from south to north. Both regions represent a representative sample of areas in Slovakia. They include all soil types (from the highest to the lowest quality) and a diverse range of landscape structures, from lowlands to hills and mountains. At the same time, the results are sufficient to enable the legislator to decide whether it is more appropriate to set legal rent limits at the national level or whether separate limits should be established for each region. Both regions are divided into 16 districts (LAU

2) and 829 cadastral areas. The Trenčín Region is divided into 9 districts with a total of 378 cadastral territories, and the Nitra Region into 7 districts with 451 cadastral territories.

The Nitra Region covers an area of 6,343.8 km<sup>2</sup> and lies within the Danubian Lowland. Of it, there are 464 thousand hectares (73% of the total area) of agricultural land, which is the largest area among all Slovak regions. Because of the soil quality, the land is primarily used for agricultural purposes. Arable land represents 87.23% of agricultural land; permanent grasslands account for 6.2%, vineyards make up 2.45% and gardens account for 3.02% of agricultural land. The remaining agricultural land consists of orchards. Hop fields are found only in the Trenčín Region. The Trenčín Region is one of the smallest regions of Slovakia (4,501.8 km<sup>2</sup>). Of it, the agricultural land covers 181,435 ha (40% of the total area), with arable land making up the largest portion at 53.13%. Permanent grassland occupies 40.88% of the agricultural land. Vineyards and hop fields together make up less than 1%.

We applied a legal analysis to the selected legal norms with the aim of identifying their application issues in relation to the current state of land lease relations and with the goal of proposing possible amendments.

For the data analysis, we use descriptive statistics indicators and statistical inference tests, such as the parametric paired t-test, non-parametric Kruskal – Wallis test and contrast tests performed using StatgraphicsPlus.

Descriptive analysis is used to compare the development of land rent among the districts in the selected regions.

To find out the statistically significant differences among the districts of both regions the Kruskal-Wallis test and contrast tests are used. While the Kruskal-Wallis test confirms or refutes differences between the evaluated districts, contrast tests identify the pairs between which these differences occur.

Moreover, to compare the development of the usual rent between the districts (LAU 1) of both regions, we applied sigma and beta convergence. We measured sigma convergence by taking the logarithms of the values of the average usual rent in the districts for the years 2018-2023. The standard deviation from the logarithmic values of the usual rent for the districts in the relevant years was plotted graphically to identify whether the trend indicates a convergent or divergent development of the usual rent. Beta convergence was calculated as the regression coefficient of the linear function of the logarithm of the average growth rate of UR and the logarithm of the UR values in the base period (more detailed in Minařík et al., 2013).

## 4. Results

The legal regulation of land lease is contained in several legal acts, the most important of which is Act No. 504/2003 Coll. It represents a special legal regulation in relation to the provisions on lease contracts in the Civil Code.



Over 20 years existence, the Act no. 504/2003 Coll. was amended many times, but there are still provisions that have not been amended during this entire period, such as the minimum rent. From a holistic approach and the theory of law and economics, it is essential that legal norms fulfill their roles in the land market and strive to create a balanced relationship between lessors and lessees. If the legal norms fail to fulfill this function, they should be amended or repealed so as not to unnecessarily burden market participants.

#### **4.1. Development of the usual rent in selected NUTS III regions**

Since typical rent data has only been published since 2018, we have six years of data up to 2023. If rent remained relatively stable during this period, it suggests that lease contracts include fixed rents with no adjustments, and the rent adjustment option under Act No. 504/2003 Coll. is likely not being exercised.

##### **4.1.1. Usual rent among the districts of the selected regions**

Charts 1 and 2 show that during the observed six-year period, the usual rent (UR) increased on average in every monitored district, though with varying intensity. In the districts of the Trenčín Region, the increase in UR was generally no more than €10 per hectare per observed period, except for the Bánovce nad Bebravou district, which borders the Nitra Region, and the situation here better corresponds to the conditions of the Nitra Region. Moreover, usual rent in the Ilava district in 2023 is distorted due to the use of administratively calculated UR instead of market-based values in six cadastral territories. While the measured UR ranged from €20 to €30 per hectare per year, the administratively calculated UR ranged from €90 to €100, which explains the extreme rise in average UR in the final observed year in the Ilava district. In the Nitra Region, the average UR per district increased over the observed period by approximately €19 per hectare. The overall increase in average UR across both regions over the period (3.97%) does not even correspond to the average inflation rate for the period 2019–2023 (6.20%). From this, we cannot conclude without further analysis that there are statistically significant differences among the monitored districts of both regions. Therefore, we conducted Kruskal – Wallis test for the districts of both regions in the first and last years of the observed period to confirm or refuse statistically significant differences between the districts of the two regions. There were not enough observations in each group (minimum 30) to use the parametric test.

The results of the Kruskal-Wallis test ( $p\text{-value} = 0.0 < 0.05$ ) confirmed the existence of statistically significant differences among the districts. Subsequently, we used contrast tests available in StatgraphicsPlus to determine

which specific districts showed statistically significant differences. The districts of the Nitra and Trenčín regions were divided into six groups from the highest to the lowest average usual rent (Chart 3): Group I: Komárno (KN), Nové Zámky (NZ); Group II: Levice (LV), Šaľa (SA), Nitra (NR); Group III: Topoľčany (TO), Zlaté Moravce (ZM); Group IV: Partizánske (PE), Bánovce nad Bebravou (BN); Group V: Nové Mesto nad Váhom (NM), Púchov (PU), Trenčín (TN); Group VI: Ilava (IL), Myjava (MY), Prievidza (PD), Považská Bystrica (PB).

We then examined whether there was a change in the grouping of districts in 2023. The existence of statistically significant differences in the average usual rents across districts was confirmed ( $p\text{-value} = 0.0 < 0.05$ ). Using contrast tests, we divided the districts into six groups again in 2023 as follows (Chart 3): Group I: Komárno, Nové Zámky, and Šaľa; Group II: Levice and Nitra; Group III: Topoľčany and Zlaté Moravce; Group IV: Bánovce nad Bebravou and Partizánske; Group V: Nové Mesto nad Váhom; and Group VI: Púchov, Trenčín, Ilava, Myjava, Prievidza, and Považská Bystrica. Changes in group assignments occurred in the district of Šaľa (shift from the second group to the first) and in the districts of Trenčín and Púchov (shift from the fifth group to the sixth). It can be concluded that the districts have formed groups in which the average usual rent gradually decreases from south to north, as the southern part of the observed area contains the most fertile soils and still the most favorable conditions for agricultural production. However, this fact may be significantly affected soon by climate change, particularly due to decreasing precipitation and an increasing number of tropical days.

#### 4.1.2. Usual rent development in the districts of the selected regions

The results of the analysis show that during the observed period, there were no significant changes either in the high of usual rents or in the ranking of the districts. We were interested in whether UR increased more rapidly in districts with more fertile soil. If so, we would expect a divergent trend in the development of UR among the districts. If no, or only negligible, changes are observed, it can be concluded that this is due to long-term lease contracts that fix a flat rent throughout the lease duration, and therefore UR increases only slightly when some lease contracts expire, and new ones are signed at higher rents. We used sigma and beta convergence to prove it. According to Chart 4, a very weak divergent trend can be observed. A similar trend was recorded also among the districts of the Trenčín Region. In the Nitra Region, we observed a weak convergent trend, but the development in the final years of the observed period rather suggests stagnation. We try to confirm the results also by the beta convergence. In the calculation of beta convergence, we rely on the logarithmic growth coefficient and the logarithmic values of UR in the initial period (2018). However, the regression function shows that the

regression coefficient representing beta convergence is nearly zero (0.0075), and the model is not statistically significant. This implies that the calculations of both beta and sigma convergence indicate stagnation in the development of usual rents across regions. Rent is not increasing more rapidly in regions with fertile soil. This suggests that the flat rents agreed upon in lease contracts, which are typically concluded for a 10-year period, do not reflect the rate of inflation during that time or any other changes on the agricultural markets in the world or at least in the EU, nor does it make use of the options for rent modification allowed by law (e.g. natural events, economic events, land use restrictions, or prices changes of agricultural products).

## 4.2. The Minimum Rent

### 4.2.1. Short legal analysis of the minimum rent

The legal regulation of agricultural land lease was first codified in 2004. Even then, the provision of § 10 para. 1 stipulated that *for the conclusion of a lease contract for land used for agricultural purposes, a contract on the rent or on the method of its determination was required, whereby the rent was set at a minimum of 1% of the value of the agricultural land determined according to the evaluated soil-ecological unit*. However, the very first amendment modified the wording to *1% of the value of agricultural land determined according to a special regulation*. A footnote referred to this special regulation, specifically to § 43 para. 2 of the Act of the Slovak National Council No. 330/1991 Coll., according to which *the details regarding the determination of the value of land (...) shall be laid down in a generally binding legal regulation issued by the Ministry*. It is the Decree of the Ministry of Agriculture of the Slovak Republic No. 38/2005 Coll. on the determination of the value of land and vegetation on it for the purposes of land consolidation. It sets the value of land based on evaluated soil-ecological units, with the relevant rates listed in Annex No. 1 in Slovak crowns (SKK). It is one of the few regulations that has never been amended, meaning the rates established in 2005 have been applied unchanged for 20 years. The value of land ranges from 5,000 SKK to 120,000 SKK per hectare, which is app. €166 - €3,983 per hectare. The minimum rent is set at 1% of these values, meaning the minimum annual rent ranges from €1.66 to €39.83 per hectare. It is evident that the current market rent is significantly higher than the required minimum rent. The purpose of minimum prices is to ensure an adequate reward or compensation for a market participant. If the market price is several times higher than the minimum price, the given provision fails to fulfill its function. Before proceeding with statistical evidence, it is also necessary for completeness to mention that the stated minimum rent applies to land classified as agricultural land or other land used for agricultural purposes (e.g., land registered as a water surface

may in fact be arable land). Land registered as a built-up area, farmyard used for agricultural purposes, or land occupied by a building for agricultural purposes has a minimum rent determined based on the usual rent. According to § 10 para. 2 of Act No. 504/2003 Coll., *if the contracting parties do not agree otherwise, this value is determined as at least twice the usual rent in the given cadastral area*. There is missing the reason why the legislator did not similarly amend the minimum rent for agricultural land. According to the explanatory report to Act No. 291/2017 Coll., which amended the Lease Act, the amendment aimed to address the absence of rent calculation mechanisms for land not registered in the cadaster as agricultural or other land.

#### 4.2.2. Statistical analysis of the minimum rent

To compare the usual and minimum rent and test for significant differences, we used a paired t-test. Usual rent data per cadastral area came from the Ministry's database. To avoid yearly outliers, we used the average value from 2018–2023. Minimum rent was set at 1% of land value, calculated per Decree No. 38/2005 Coll.

The paired t-test (Table 1) revealed a statistically significant difference between the usual and minimum rent in the Trenčín Region ( $p\text{-value} = 9.96 \times 10^{-84} < 0.05$ ). The average usual rent in the Trenčín Region is €38.20 per 1ha per year. The average minimum rent in the region is €9.84 per 1ha per year. This clearly shows that the usual rent is several times higher than the minimum value prescribed by law. Thus, the legal provision no longer fulfills its intended function in the Trenčín Region, as it fails to protect landowners' right to fair rent given the significantly higher usual rent. To reflect market conditions, the 1% rate should be raised to at least 3.7%. The same test was then applied to each district in the Trenčín Region. The results indicate that the legal minimum rent should range from 2.4% to 6.1%, with average and median rates around 3.5%. The lower the land quality, the higher the minimum rent rate needs to be to match the usual rent. Setting a uniform rate for the entire region would cause the minimum rent in districts like Ilava, Nové Mesto nad Váhom, and Partizánske to exceed the usual rent by €10 to €15 per 1ha.

The average rent in the Nitra Region is €95.50/ha/year, while the legal minimum is €22.98. To better align with market values, the minimum should be raised to at least 4% of the land's regulated value. In the Nitra Region, the minimum rent should range from 3.1% to 4.5%, with an average and median of 4%, to meet its purpose. Lower rent variability suggests more uniform natural conditions than in the Trenčín Region. A 4% rate in the Nitra Region would negatively impact the Topoľčany district, raising the minimum rent by €14/ha/year above the usual rent.

The above indicates that there are several possible approaches to adjusting the minimum rent. Firstly, the minimum rent could be abolished alto-



gether, as it has been shown that the market can ensure the protection of landlords' rights more effectively than the current legal regulation. If minimum rent is deemed necessary, it could be based on: (1) usual rents by cadastral areas; (2) regional rates (e. g. 4% in Nitra, 3.7% in Trenčín); (3) district rates (2.4% - 6.1% in Trenčín, 3.1% - 4.5% in Nitra); (4) an updated and regularly revised pricing regulation from 2005. Setting rates by region or district could be enabled by a provision in Act No. 504/2003 Coll., authorizing the Ministry to set rates via regulation. This would avoid amending the Act for each change, with reviews needed only every 5–10 years.

The above proposals require more frequent updating of the legislation based on the monitoring of market rents. However, given the obligation to send annually data on the rent paid by individual tenants, this should not cause major problems or lead to additional costs on the part of the state or the tenants. The change in the legislation could have a potential impact on some tenants who offer lower rents than the minimum rent would have been set. Such lease agreements would have to be revised from the date of entry into force of the new legislation, i.e. in accordance with the transitional provisions, which could increase administrative costs for the contracting parties. It is therefore questionable whether the minimum rent is necessary at all and whether the land lease market is not sufficient to protect the rights of the contracting parties. The introduction of an information obligation of tenants towards landlords regarding data for determining the amount of rent and exercising the rights to modify it in accordance with the law, and a publicly available register of the average amount of rent in individual cadastral areas would be sufficient to achieve an adequate remuneration for land rent for landlords.

### 4.3. The Administrative Rents

#### 4.3.1. Short overview of legal regulation

According to Decree No. 172/2018 Coll., *if in a cadastral area the sum of the provided land areas is less than one third of the agricultural land in the cadastral area, or if no data is provided, the usual amount of rent in euros per hectare is determined as 2% of the value of arable land in the given cadastral area according to a specific regulation. If the value of arable land is not determined in the cadastral area, the highest value from all neighboring cadastral areas is used.* The specific regulation refers to Act No. 582/2004 Coll. on Local Taxes and Local Fee for Municipal Waste and Small Construction Waste. This Act sets land values by cadastral area in euros per square meter. These values are used to calculate property taxes paid to local self-government based on real estate ownership. Although the stated values were originally derived from the land values calculated under Decree No. 38/2005 Coll., the legislator

increased the land values using various coefficients, up to threefold, to avoid low property taxes. As a result, these land values are higher than the land values determined under Decree No. 38/2005 Coll. This raises the question of whether the administratively set usual rent, at 2% of land value, reflects market conditions. The Ilava district example demonstrates that this setting is unlikely to align with market conditions in 2023.

#### 4.3.2. Statistical analysis of the Administrative Rents

We used a two-sample paired t-test to compare the usual rent with the administratively set rent (2% of land value) in the Trenčín and Nitra regions. If differences are identified, we will simulate the corresponding rate reflecting the market rent rate. The results (Table 2) of the t-test indicate that 2% of arable land value is too high in both regions for the administrative rent to reflect market conditions. To align with market rent, the rate would need to be reduced to 1.1% in the Trenčín Region and 1.5% in the Nitra Region. In the districts of the Trenčín Region, a rate of 0.6% to 1.5%, with a median of 1%, would better reflect market conditions. In the districts of the Nitra Region, the appropriate rate would range from 1.2% to 1.5%, with a median value of 1.4%. To align with the market, the Trenčín rate should be reduced to 1% or 1.1%, and the Nitra rate to 1.4% or 1.5%.

The legal regulation of the administrative determined rent in the ministry's implementing regulation can be agreed with in principle, but a uniform rate for all of Slovakia is unsuitable. This rate does not correspond to the conditions in districts of the Trenčín or Nitra Regions. A region specific or district specific rate would better reflect the actual land lease market. Regular reassessment every 5 to 10 years could be made through an amendment to the decree.

Unlike the minimum rent, the institute of administratively determined rent cannot be abolished. There must be an alternative in the event of the absence of data from tenants. On the other hand, however, the rent determined in this way must correspond at least approximately to the rent determined by the market, whether for the previous period or from surrounding cadastral areas with comparable land quality and potential yields from it. The rent determined in this way would not have any negative impacts on the contracting parties and would at the same time provide transparent information about the rent in the given cadastral area. This would not distort the market situation and would equalize the information asymmetry between the contracting parties when concluding lease agreements regarding the determination of rent.





## 5. Conclusion

Agricultural land is a limited and practically non-renewable natural resource and part of our natural heritage. It is sought after not only by farmers but also by other sectors such as construction or energy. To ensure farmers remain competitive and can acquire land for producing healthy and high-quality food, it is important for land policy to protect their access to land. The fragmentation of land ownership and the issue of unknown landowners in Slovakia complicate the land market, giving farmers a competitive advantage in leasing land for agricultural production. Act No. 504/2003 Coll. aims to protect farmers' interests and investments while also respecting landowners' fundamental ownership rights. The European Court of Human Rights ensures legal protection of tenants by recognizing appropriate rent as compensation for allowing others to use their property. The land lease law should protect both tenants and lessors to establish a balanced tenant-lessor relationship.

From the perspective of Agency Theory, the agricultural land lease relationship reveals a typical principal–agent problem. Landowners (principals) are primarily motivated to preserve the long-term quality of their land and receive fair rental income, while tenants (agents) may focus on maximizing short-term profits. This divergence can lead to overexploitation of land or neglect of sustainable farming practices. The legal minimum lease term of five years and minimum rent payment, as prescribed by the legislator, aims to partially mitigate this conflict by incentivizing tenants to care for the land. However, asymmetric information—where landlords often lack insight into tenants' farming practices—intensifies agency costs related to monitoring and incentivizing responsible behavior. To address this, legislation should not only define minimum lease durations but also introduce information obligations for tenants. Similar to consumer protection laws where the entrepreneur is required to inform the consumer—who is typically the weaker party—in the land lease context, the landlord similarly suffers from limited access to relevant information. Imposing information obligations on tenants would promote transparency, accountability, and better decision-making by landowners, thereby enhancing the long-term sustainability of land use. As always, rights belong to the vigilant; it is then up to the landowner to use the provided information effectively.

From the viewpoint of Market Failure Theory, the agricultural land lease market does not function fully efficiently. Besides the information asymmetry, there are externalities such as land degradation, reduced biodiversity, and environmental damage—harms that are not reflected in market prices and that the market cannot correct on its own. Additionally, the concentration of land ownership may limit access for small-scale landowners and negatively affect rental pricing. These market failures suggest that legislative or

contractual mechanisms are necessary to reduce principal–agent conflicts and compensate for inefficient market outcomes. Therefore, effective lease agreements should include clear rules for land management, monitoring mechanisms, and incentives for sustainable land use. Legislation also plays a critical role in addressing externalities and ensuring fair access to land, which reduces the risk of market failure and supports long-term economic efficiency. In this context, the setting of minimum or administrative rents must reflect market conditions—those determined by supply and demand—or at least be grounded in them. Otherwise, such regulations risk distorting the land lease market or imposing unnecessary legal burdens. For example, minimum rent values set decades ago based on outdated price regulations, such as those from 2005, no longer serve their intended function. In the regions we studied, market-based lease pricing provided fairer outcomes for both parties than the legally fixed minimum rent established in 2004.

A positive development in this regard is the publication of usual rents on the Ministry's website, which supports greater transparency and can help both parties make more informed decisions. Nevertheless, the current land lease law fails to meet its intended objectives, and we therefore recommend repeal the legal norms on the land rent or its amendment to better align with modern economic realities and theoretical foundations.

There are some limitations of the study in relation to the dataset. Although tenants are required to report rental data to the district office annually, there are no penalties for failing to comply with this obligation. It is sufficient if data are submitted by tenants who farm at least one-third of the cadastral area for the usual rent to be calculated. If this area is smaller, the usual rent is determined by a special administrative procedure. It may happen that data from key tenants in the given cadastral area are missing, which can distort the results. The second limitation is that although tenants provide data to the relevant office, the result is an average rent for the entire cadastral area. This may include rents from expiring contracts that have not changed for 5–10 years, as well as rents from newly concluded leases, where at least a small rent increase is typically expected compared to the expiring ones. This can distort the resulting figure, the average rent, downward and create the impression that the market rent in each cadastral area is lower than it would be if based solely on newly concluded leases (yet it is higher than the minimum set by current law). However, the dataset on the ministry's website is currently the only publicly available source of information on rental prices.



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### **Other materials and legal regulations:**

- Act no. 40/1964 Coll. Civil Code <<https://www.slov-lex.sk/ezbierky/pravne-predpisy/SK/ZZ/1964/40/>>
- Act no. 330/1991 Coll. On land consolidation, land ownership arrangement, land offices, land fund, and land associations <<https://www.slov-lex.sk/ezbierky/pravne-predpisy/SK/ZZ/1991/330/>>
- Act No. 504/2003 Coll. on the Lease of Agricultural Land, Agricultural Enterprise and Forest Land and on the Amendment of Certain Acts <<https://www.slov-lex.sk/ezbierky/pravne-predpisy/SK/ZZ/2003/504/>>



- Act No. 582/2004 Coll. on Local Taxes and Local Fees for Municipal Waste and Minor Construction Waste <<https://www.slov-lex.sk/ezbierky/pravne-predpisy/SK/ZZ/2004/582/20041101.html>>
- Case of Bittó and others v. Slovakia, no. 30255/09, judgment of 28.4.2014, ECtHR (Third Section)
- Case of Hutten-Czapska v. Poland, no. 35014/97, judgment of 19.6.2006, ECtHR (Grand Chamber)
- Case of Statileo v. Croatia, no. 12027/10, judgment of 10.7.2014, ECtHR (First Section)
- Case of Vassallo v. Malta, no. 52795/20, judgment of 12.9.2023, ECtHR (Second Section)
- Commission Interpretative Communication on the acquisition of agricultural land and European Union law, 2017/C 350/05 <[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=oj:JOC\\_2017\\_350\\_R\\_0005](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=oj:JOC_2017_350_R_0005)>
- Decree of the Ministry of Agriculture and Rural Development of the Slovak Republic No. 172/2018 Coll., which establishes details on the manner and scope of keeping and providing records and determining the usual rent <<https://www.slov-lex.sk/ezbierky/pravne-predpisy/SK/ZZ/2018/172/>>
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- Judgment of the Court of Justice of 1 December 2005 in Case C-213/04 Ewald Burtscher v. Josef Stauderer
- Judgment of the Court of Justice of 23 September 2003 in Case C-452/01 Margarethe Ospelt and Schlössle Weissenberg Familienstiftung
- UN Declaration on the Rights of Peasants and Other People Working in Rural Areas <<https://digitallibrary.un.org/record/1650694?v=pdf>>

## Acknowledgements

**Author contributions:** authors have given an approval to the final version of the article. Author's total contribution to the manuscript: Jarmila Lazíková (50%); Barbora Tarišková (50%).

**Funding:** This work was funded by the EU Next Generation EU through the Recovery and Resilience Plan for Slovakia under the project No. 09I01-03-V04-00094 and supported by the Horizont Európa under the project No. 101081307 EUROPE-LAND: Towards Sustainable Land-use Strategies in the Context of Climate Change and Biodiversity Challenges in Europe.



## Appendix

Table 1. Paired t-test of usual rent in the districts of Trenčín and Nitra regions

| The Trenčín region        |                       |              | The Nitra region       |              |
|---------------------------|-----------------------|--------------|------------------------|--------------|
| Usual rent                |                       | Minimum rent | Usual rent             | Minimum rent |
| Mean                      | 38,20                 | 9,84         | 95,50                  | 22,98        |
| Observance                | 340                   | 340          | 414                    | 414          |
| P ( $T \leq 1$ ) two-tail | $9,96 \cdot 10^{-84}$ |              | $1,70 \cdot 10^{-205}$ |              |

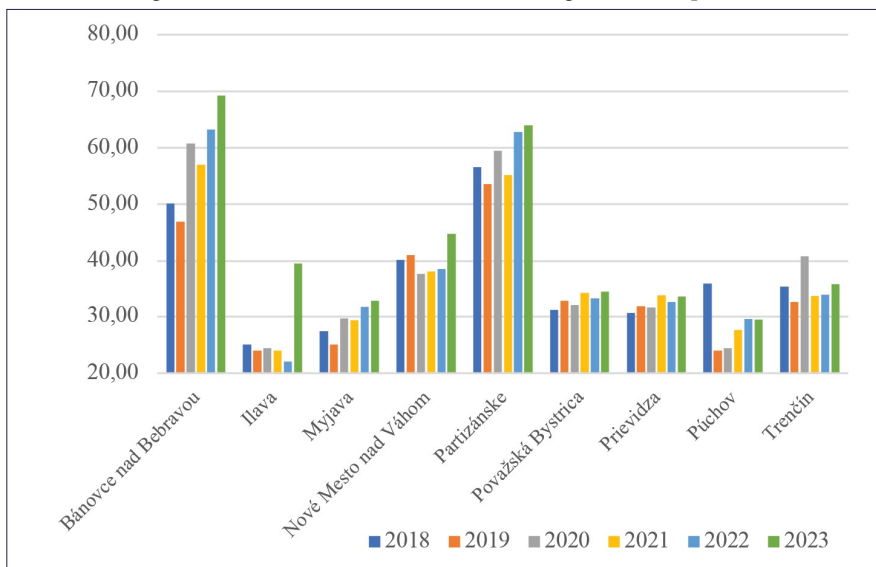
Source: Own preparation based on data available in the ministry website and in the legal regulations

Table 2. Paired t-test of usual rent in the districts of Trenčín and Nitra regions

| The Trenčín region        |                       |                     | The Nitra region      |                     |
|---------------------------|-----------------------|---------------------|-----------------------|---------------------|
| Usual rent                |                       | Administrative rent | Usual rent            | Administrative rent |
| Mean                      | 38,20                 | 69,62               | 95,50                 | 131,34              |
| Observance                | 340                   | 340                 | 414                   | 414                 |
| P ( $T \leq 1$ ) two-tail | $6,68 \cdot 10^{-62}$ |                     | $2,95 \cdot 10^{-85}$ |                     |

Source: Own preparation based on data available in the ministry website and in the legal regulations

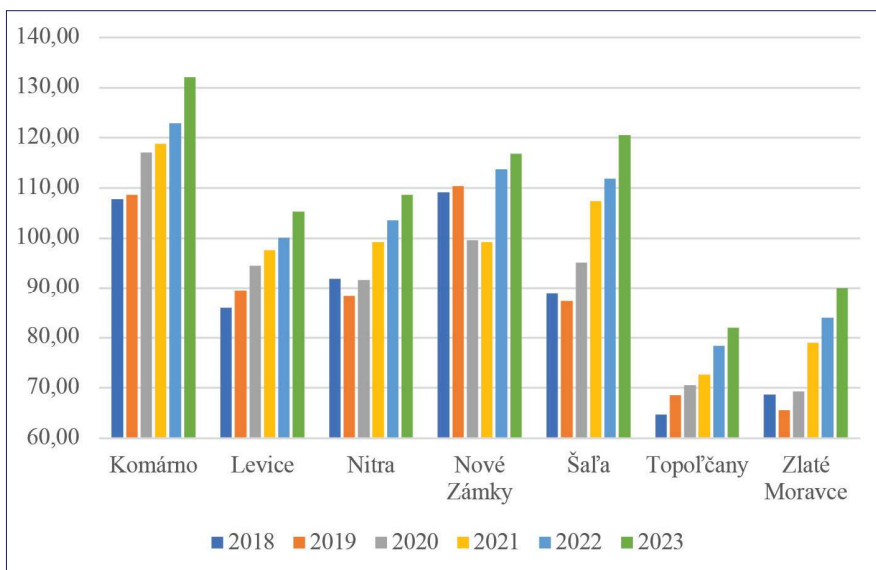
Chart 1. Average usual rent in the districts of Trenčín region in euro per 1 ha



Source: Own preparation based on data available in the ministry website

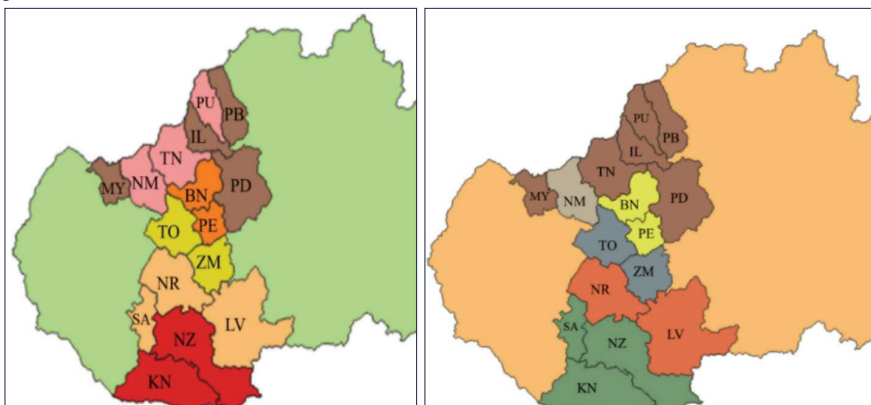
Chart 2. Average usual rent in the districts of Nitra region in euro per 1 ha





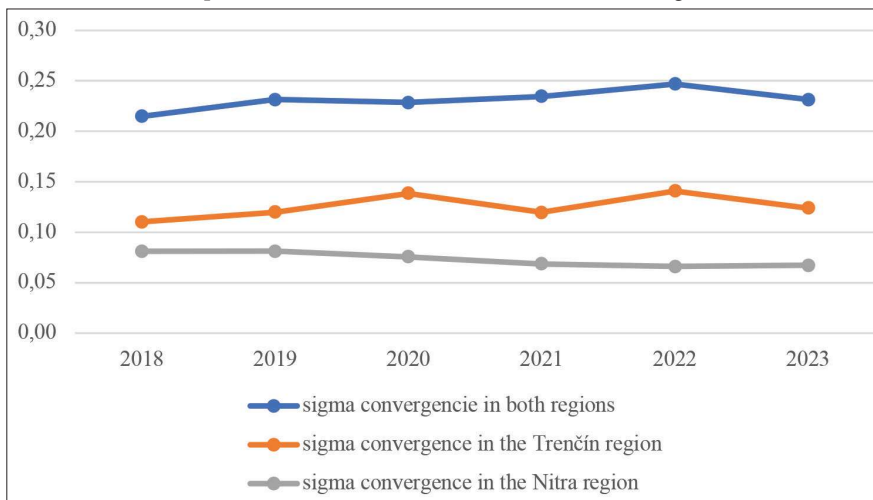
Source: Own preparation based on data available in the ministry website

Chart 3. The groups of districts according to the difference in the usual rent in both regions in 2018  
2023



Source: Own preparation based on data available in the ministry website

Chart 4. The development of usual rent in the Trenčín and Nitra regions



Source: Own preparation based on data available on the ministry website