

# The forest land tax systems in Slovakia and Portugal

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**Citation:** Báliková K., Jesus-Silva N., Bessa Vilela N., Korená Hillayová M., Šálka J. (2023): The forest land tax systems in Slovakia and Portugal. *J. For. Sci.*, 69: 427–437.

**Abstract:** Forests cover almost one half of European land. Therefore, land taxes, including taxes from forests, are essential for a municipality's income. The land tax system is implemented on different levels, mainly nationally and locally. Therefore, many land tax features are settled by federal law, and others differ according to the local tax administrators. The objective of the paper is to compare the current laws and principles and the implementation process of forest land in Slovakia and Portugal. We have selected countries from different geographical areas of Europe. Even though the forest compositions and forest ownership differ, we aimed to identify whether the forest land tax systems can be similar. We analysed the legislation and strategic documents on the national level that helped us to describe the land tax system and its general features (e.g. taxpayer, tax rate, tax base, exemption options, tax period, or penalties). In both countries, the national tax law governs the tax implementation and settles any basic processes related to tax collection. The municipalities have the right to revise both the tax rates and exemptions. The results also show that forest owners in Slovakia have more options for tax exemptions than in Portugal.

**Keywords:** forest property; local government bodies; municipalities; property taxes

Governments supply various goods and services from national to local levels. Taxes, as the transfer of money from one individual to another, are a solid base for the government budget on different levels (Bailey 1995; Stiglitz, Rosengard 2015). The local tax system heavily relies on property taxes (Brown, Hepworth 2002; Stiglitz, Rosengard 2015). Property taxes are imposed on funds and im-

movable properties owned by individuals and enterprises based on the property's assessed value (OECD 2022). In many European countries, land tax is included in the real estate taxes administered by municipalities and cities, so it belongs to the local taxes. Immovable property taxes are expedient to local governments because it is clear which governmental office has tax revenue from the im-

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Supported by the Slovak Research and Development Agency (APVV-19-0612, APVV-0408-20) and by the Ministry of Education, Science, Research and Sport of the Slovak Republic (KEGA No. 004SPU-4/2023); the empirical results were analysed within the COST Action CA20123 Intergovernmental Coordination from Local to European Governance (IGCOORD) framework.

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movable property, e.g. land, and such property cannot evade the tax collector (UN-HABITAT 2013). The administration of land taxes is placed upon local governments with various levels of autonomy, which means that local governments can decide about levying the tax, the nature of the tax, establish the base of the tax or determine the tax rate, and enforce the tax on their own. Land taxes are also very visible; they are not paid in small amounts as income tax, but directly by the taxpayers, mostly on an annual basis (Bird, Slack 2004). Kalkhul et al. (2017) describe two main land tax systems: systems related to the land value or unit value. The first is based on the proportional value of the land location (value different for the city centre and suburbs), and the second is on the tax rates for given area sizes (i.e. per ha of land). The European Environment Agency report (2010) also mentions a land tax system based on the method of land use. Land use taxation encourages higher housing densities and potentially lowers the prices in high-density areas.

Land taxes can potentially affect the decision about the land use, and also the owners' approach, mainly if the land is an open-access resource and no one can be excluded from using some goods and services that arise from it (Ostrom 1990). This is also the case with forest land, where some goods and services are used for free, and no one has exclusive rights to these services. Others cannot be excluded from using it or benefiting from it (Desgupta et al. 2000). As a result, non-marketable services provided by forests, well known as ecosystem services (MEA 2005), such as recreation or water purification, do not have any producer, property rights, or clear claim structures and fair transaction costs (Sternberg 1996). Preferential land tax programmes could help forest owners mitigate these discords (Ma et al. 2014; Bálíková et al. 2021) and achieve various sustainable goals (EEA 2010; Kalkhul et al. 2017; Frey et al. 2019) or promote ecosystem services that arise from open-access forest land (Kilgore et al. 2018, Bálíková et al. 2021). Consequently, tax exemptions can incentivise owners to categorise their forest from productive to another category, e.g. recreational forest or protected (Klemperer 2003).

The preferential land tax programmes applied across Europe are considered from two main viewpoints (Brown, Hepworth 2002): (i) exemptions and reliefs applied due to the nature of the tax-

payer, (ii) exemptions and reliefs applied due to the nature of the property.

The insights and original results from the systematic comparative analysis of land tax systems in European countries related to intergovernmental fiscal relations are strong pillars of COST Action CA20123 IGCOORD's Working Group 4. Therefore, to better understand the external effects of the local land tax administration in the chosen European countries, the paper aims to compare land tax systems with a focus on exemptions on the land in the case of non-productive forests. The research question is as follows: How are forest land tax programmes administered in the selected countries?

## MATERIAL AND METHODS

### Land tax characteristics relevant to the study.

Below, we describe the basic standards of forest land taxes in the chosen countries concerning policy outputs, implementation processes and instrument characteristics (Table 1). These characteristics are chosen from two basic theories related to policy research. Firstly, the policy analysis (Windhoff-Héritier 1987) describes the policy according to the policy cycle of the chosen instruments. Secondly, the theory of governance focuses on policy implementation at different governmental levels and with regards to the actors involved (Rhodes 1997).

**Document analysis and comparison.** A qualitative document analysis was used for the systematic data collection about the related policies in the studied countries. We searched through relevant public records and organised the obtained information according to the characteristics listed in Table 1. These characteristics served as a basis of the information needed. The next step was to evaluate the extracted useful information and interpret the findings. The key areas of analysis were locked into the following themes: (i) property taxation, (ii) rural property, (iii) forest land taxation, (iv) taxation policy, and (v) forest policy. The key areas were chosen concerning the validity of the findings and with regard to throwing light on the relationship between the policy and practice in the given issue (Wach, Ward 2013). The analysed documents were:

Slovak case:

- Report on Forests 2020 (Green report)
- Act No. 326/2005 Coll. on Forests, as amended

<https://doi.org/10.17221/51/2023-JFS>

Table 1. Basic characteristics of land/property taxes

Characteristics	Research question/description
Level	On what level is land tax administrated?
Policy output	What legislation regulates the implementation process of forest land/rural land tax?
Actors involved	Who is the administrator of the land taxes? Who is the taxpayer?
Tax subject	Which forest land categories are subject to the tax?
Tax base	For what is the tax paid?
The land tax rate	How is the tax rate settled?
Valuation principles	What tax law principles regarding the valuation of the land are used?
Tax period	For what period are taxes levied?
Exemptions/reliefs	What kind of exemption is offered to forest owners, and in which cases?
Penalties	What penalties are imposed for tax offences?

- Act No. 582/2004 Coll. on Local Taxes and Local Fee for Municipal Waste and Minor Construction Waste, as amended
  - Decree of the Ministry of Finance of the Slovak Republic No. 492/2004 Coll. on Determination of General Value of the Land
  - Database on local taxes for the years 2013–2017.
- Portugal case:
- Property tax calendar – Tax Guide 2018
  - The Portuguese National Forest Inventory 2015
  - National Forestry Accounting Plan Portugal 2021–2025
  - General Taxation Law
  - Decree-Law No. 31/2020 approving the information regime for timber logging, thinning or uprooting trees and the traceability of the wood material.

Based on the desk research and descriptive policy research approach, we analysed the land tax implementation at the local level in Slovakia and Portugal (Figure 1). The data from the selected countries were compared and discussed at the European level.

The tax system of the Slovak Republic is based on the principle of justice and proportionality, i.e. the same tax objects are taxed equally (horizontal justice) and the higher the tax base, the higher the tax paid by the taxpayer (vertical justice). The principle of proportionality is still preserved (Dobrovič et al. 2016). Conversely, Portugal applies five taxation principles: (i) the principle of legality (the essential elements of taxes are formally defined by law), (ii) the principle of legal certainty (taxation is clear, understandable and predictable), (iii) the principle of equality (equality in the law and before the law), (iv) the principle of ability to pay (the tax

must be collected from those who are materially secure so that fiscal solidarity is applied) and (v) the principle of fiscal equivalence (the equivalence between the coverage for the costs and the benefit for the taxpayer must be preserved) (Nabais 2005).

**Basic information about forestry in the studied countries.** The forest cover in Slovakia reached 41.3% in 2020, representing 1 951.5 thousand ha of forests. Production forests dominate in Slovakia (72.7% of all forests), followed by protected forests (17.4%) and special-purpose forests (9.9%). Considering the ownership structure, the forest is categorised as follows: state forests (40%), community forests (16.70%), private forests (11.8%), church forests (2.3%), municipal forests (7.8%), agri-cooperative forests (0.3%) and unregistered (21.1%) (Ministry of Agriculture and Rural Development of the Slovak Republic 2021). Forest ownership in Slovakia is subject to municipal property tax payments. Forest land taxes are paid from productive forests, while tax exemptions exist (Báliková et al. 2021).

Portugal is *sui generis* concerning forest ownership. Only about 3% of the forest land is owned by the state and other public administration agencies, the remainder being held by local communities (the so-called 'commons', 'baldios' in Portuguese), with about 6% being primarily subject to the compulsory Forest Regime Act, and by private owners (92%, of which 4% are managed by industrial companies) (Agencia Portuguesa do Ambiente 2020). Portuguese forest land is specified according to the spatial distribution of the tree species. The forest categories are related to the dominant species (maritime pine, eucalyptus, cork oak, holm oak, stone pine and others), covering more than 3 mil-

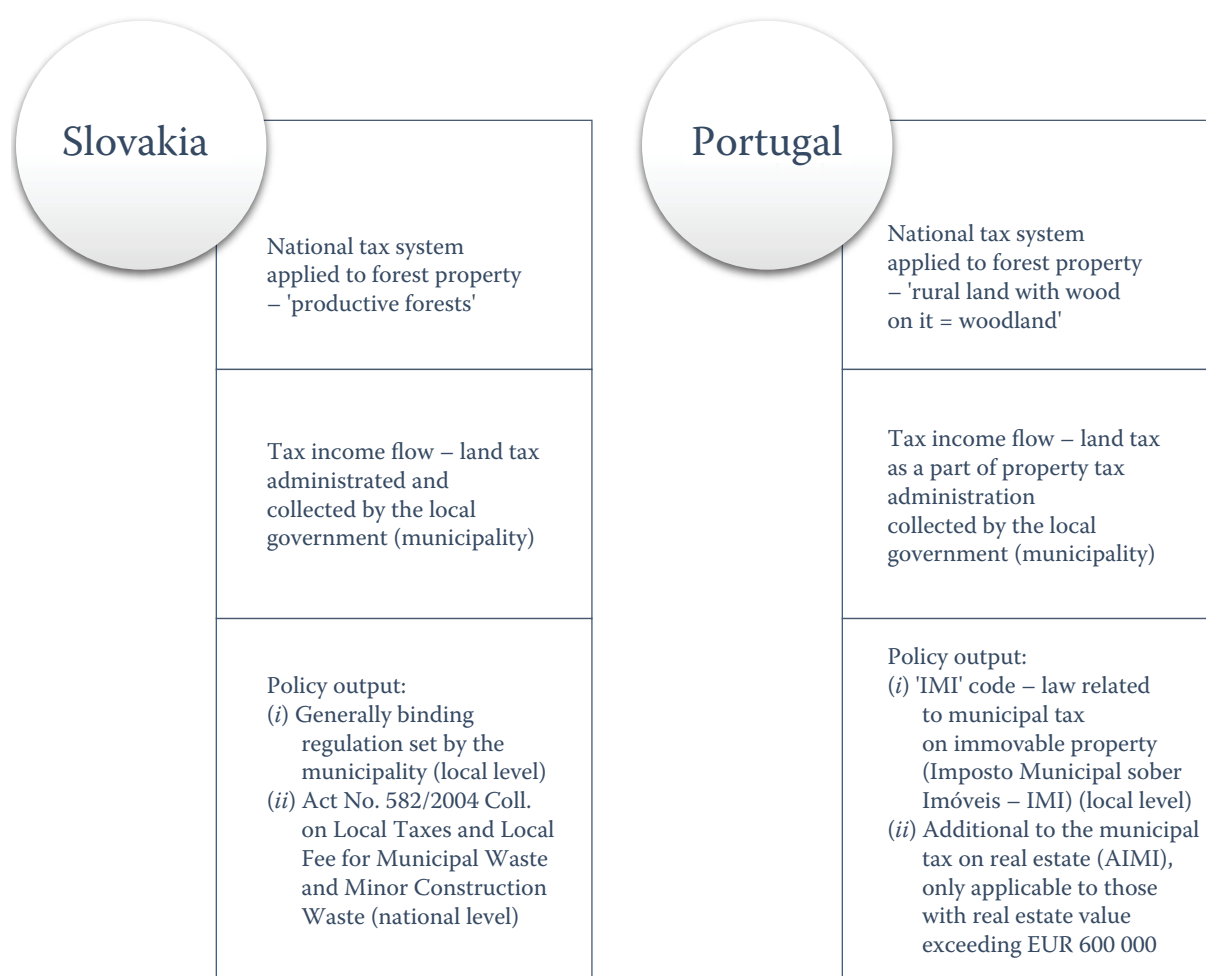


Figure 1. Land tax specification in the selected countries

lion hectares, which represents one third of the country (Tomé et al. 2016).

## RESULTS

In the following section, we analyse various aspects of the land taxes in the selected countries, considering the role of national and local governments, distribution, administrative processes, and implementation.

Forest land tax system in the Slovak Republic. The policy output of land taxes in Slovakia represents the relevant legislation on the national and local levels.

The Act No. 582/2004 Coll. on Local Taxes and Local Fee for Municipal Waste and Minor Construction Waste governs the standard specification of land tax implementation on the national level. This law determines the basic frame of forest land tax implementation (Table 2) and allows for the ad-

justment of tax collection at the local level. Municipalities, as tax administrators, are free to decide whether to levy land tax and set their rates, and have extensive autonomy on a tax basis, i.e. exemptions or tax rate reductions (Plaček et al. 2020).

The basis for the tax is the value of the forest land. The tax is determined by multiplying the area of the plots in square metres and the value of the forest land per square metre (Vartašová, Červená 2019). The tax base calculation method is defined exhaustively by the Tax Act. The valuation of the forest land is based on the Decree of the Ministry of Finance of the Slovak Republic No. 492/2004 Coll. on the Determination of General Value of Property and the Decree of the Ministry of Agriculture No. 38/2005 Coll. on the Determination of the Value of the Land Plots and its Groves for Land Consolidation. It represents the sum of the basic value of the forest plot and the value of the location factor depending on the distance of concentration and the distance of transportation.

<https://doi.org/10.17221/51/2023-JFS>

Table 2. Forest land tax and its specification in Slovakia

Characteristics	Research question/description
Level	national/regional
Policy output	(i) Act No. 582/2004 Coll. on Local Taxes and Local Fee for Municipal Waste and Minor Construction Waste (national level) (ii) Generally binding regulation set by the municipality (regional level)
Actors involved	policy formulators: government (national level)  tax administrator: municipality in whose territory the forest is located (regional level)  taxpayer: (i) land administration of state/municipality/district forests, which is registered in the real estate cadastre (ii) forest owner/landowner (non-state)
Tax subject	production forests, ponds, and other economically used water bodies
Tax base	land value without forest stands (land area in m <sup>2</sup> × value of the land 1 m <sup>2</sup> according to valid regulations)
Land tax rate	from 0.25% to 2.5% of the value of the forest land
Valuation principles	they are settled by the law
Tax period	calendar year (01.01.20XX–31.12.20XX)
Exemptions/reliefs	yes – related to tax subject and taxpayer (exemption from tax liability in the case of taxes of less than EUR 5)
Penalties	finances related to the late tax return and interests due to late payments

An expert determines the value of the forest land. The expert opinion is made on behalf of the municipality. If the forest owner disagrees with the value, he or she can submit a new expert opinion prepared at his or her expense. The lowest land tax rate is settled at 0.25% of the value of the forest land. The tax administrator (municipality) could set the rate ten times higher based on local conditions.

Land tax relief is a measure of the state, i.e. a public compensation mechanism which aims to support specific ecosystem services of forests from the point of view of specific subcategories of protective and special purpose forests (Sarvašová et al. 2019). In Slovakia, facultative and obligatory reliefs are implemented based on the Act No. 582/2004 Coll. on Local Taxes and Local Fee for Municipal Waste and Minor Construction Waste. Furthermore, facultative land tax exemptions are regulated locally by the generally binding regulation set by the municipality. Land tax exemptions include: (i) obligatory exemptions – protective and special purpose forests, forests in national parks, forest land in the ownership of the church, the Slovak Red Cross, schools, universities, and scientific institutions; (ii) facultative

exemptions – swamps, bogs, windbreaks and zones of hygienic protection of water resources, clear-cut forests, publicly accessible parks, forests in water sanitation zones of the 2<sup>nd</sup> and 3<sup>rd</sup> degree, the taxes amount to less than EUR 5 per year.

The forest owners experience increased benefits, which can be characterised as a reduced expected income for the municipality. The land tax reliefs represent more than a four million EUR annual loss for the municipalities budget in Slovakia. Conversely, the municipality's reduced taxes indirectly support the forest owners, who consider it necessary and as economic benefit (Báliková et al. 2021).

The tax liability for land tax arises on January 1 of the tax period that follows the tax period in which the person becomes the land owner. If a forest owner does not submit a tax return for the land tax in time or only after a request from the tax administrator, he or she will receive a penalty. The penalty is a fine up to the amount of the levied tax, being at least EUR 5 and no more than EUR 3 000. The late payment interest is between EUR 60 and EUR 3 000 according to the municipality's regulations.



Table 3 demonstrates the different land tax rates and exemptions across Slovakia. We searched through the capital cities of each of the eight districts in the valid General Binding Directives and we can conclude that the tax rates differ in each observed location and with the exemption option for the forest owners. This is in agreement with the national law prescription, as the municipality has the right to change the land tax implementation at the local level.

**Forest land tax system in Portugal.** Portugal's land and property taxes are divided into several tax codes, and one explicitly related to forest land taxation is missing. This legislation is governed nationally and mainly focuses on general

tax administration and implementation processes (Carvalho, Oliveira 2003) and taxpayer obligations and rights (de Mota Lopes 2008). The information about the property taxation to which the forest land belongs can be found in the specific municipalities' laws (Tiboni et al. 2020), as in the Slovak case. Forest ownership in Portugal is subject to the payment of the municipal property tax – Immovable Property Tax (Imposto Municipal sobre Imóveis – IMI). The Addition to the Municipal Tax on Real Estate (AIMI) is an extra tax applied in Portugal, levied on properties with a market value higher than EUR 600 000. This suggests that the properties being referred to have a significant market value and are considered high-end or luxury properties with-

Table 3. Examples of different tax rates for forest land in Slovakia

Administrator	The tax rate for forest land (%)	Land tax exemptions
Zvolen	0.40	(i) forests in national parks, protected areas, nature reserves (ii) clear-cut productive forests till the year of first thinning (iii) land of publicly accessible parks, premises, and sports grounds
Bratislava	0.30	(i) zones of protection of natural medicinal resources of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree and sources of natural mineral waters of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree (ii) land of publicly accessible parks, premises, and sports grounds
Trnava	1.25	(i) land of publicly accessible parks, premises, and sports grounds
Trenčín	1.00	(i) land of publicly accessible parks, premises, and sports grounds
Žilina	1.25	(i) swamps, areas of bogs and salt marshes, peat bogs, draws, groves, windbreaks, zones of hygienic protection of water resources of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree, zones of protection of natural medicinal resources of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree, and sources of natural mineral waters of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree (ii) forests in national parks, protected areas, nature reserves (iii) clear-cut productive forests till the year of first thinning (iv) land of publicly accessible parks, premises, and sports grounds (v) land in forests set aside for the distribution of electricity and heating gases
Nitra	0.25	(i) swamps, areas of bogs and salt marshes, peat bogs, draws, groves, windbreaks, zones of hygienic protection of water resources of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree, zones of protection of natural medicinal resources of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree, and sources of natural mineral waters of the 1 <sup>st</sup> and 2 <sup>nd</sup> degree (ii) forests in national parks, protected areas, nature reserves (iii) clear-cut productive forests till the year of first thinning (iv) land of publicly accessible parks, premises, and sports grounds (v) land in forests set aside for the distribution of electricity and heating gases
Banská Bystrica	1.20	N/A
Prešov	1.87	(i) land of publicly accessible parks, premises, and sports grounds
Košice	0.50	(i) forests in national parks, protected areas, nature reserves in the 3 <sup>rd</sup> or 4 <sup>th</sup> level of nature protection (ii) land in forests set aside for the distribution of electricity and heating gases

<https://doi.org/10.17221/51/2023-JFS>

in the real estate market of Portugal. The specific range could vary depending on the context, but it generally indicates a relatively high price point in the Portuguese real estate market.

This law distinguishes rural properties or land with a forest on it (woodland) (Catarino, Guimarães 2013). The property and land taxes are governed locally, and municipal legislation applies (PwC 2018; Table 4).

Related to the tax base and tax rate, the valuation process differs according to the type of property, namely urban (e.g. villas, townhouses, and apartments) and rural property (forest land, cropland, scrub and grasslands, wetlands, other lands), where each property has a taxable equity value ('valor patrimonial tributável' – VPT) set according to consistent criteria. The taxable value of rural properties is based on their potential annual production income (Sousa et al. 2023). The VPT is automatically updated by the Ministry of Finance every three years. The land is taxed annually by the municipality in which it is located. Several elements are included in the land tax calculation besides the VPT and the value of the property. A location coefficient is one of the elements used to determine the VPT of properties purchased from December 2003. This coefficient varies from 0.3% to 0.5% of the value of the urban land and is 0.8% of the value of the rural land. The tax rates range between 0.4% and 3.5% of the land value. Each tax admin-

istrator, i.e. the municipality, has the rate settled by the municipal board.

The Imposto Municipal sobre Imóveis (IMI) tax is paid in the following year after its calculation. The payment could be divided into several payments. The payment remarks are settled for each tax period. For example, for the year 2023, payments can be made: (i) tax liabilities up to EUR 100 is paid one time, (ii) tax liabilities from EUR 100 to EUR 500 inclusive could be divided into two separate payments in May and November, and (iii) tax payments that exceed EUR 500 could be paid in May, August, and November (PwC 2023).

The exemption to IMI from the forest land applies to forest areas covered by the forest intervention zones and to the property intended for forestry exploitation under a forest management plan (PwC 2018). The exemption is also related to the taxpayers. If negotiated on the local (municipality) level, non-profit organisations, lower income persons, and foreign states with properties designed for diplomatic representations or religious associations are freed from the levied land tax with forests on it. Conversely, in some cases, the municipality could double the rate applicable to the rural property with forests on it (Catarino, Guimarães 2013). These exemptions or reductions could be based on factors such as the classification of the forest land, its environmental importance, or its integration within protected areas. How-

Table 4. Rural property tax and its specification in Portugal

Characteristics	Research question/description
Level	national/regional
Policy output	(i) General Taxation Law (national level) (ii) Immovable Property Tax – IMI Code (Imposto Municipal sobre Imóveis – IMI; regional level)
Actors involved	policy formulators: government (national level) tax administrator: municipality (local level) taxpayer: rural and urban property owners (land/forest owner) and corporations who own the land
Tax subject	land with forest on it (woodland), plantations, and water bodies
Tax base	land value without forest stands (land area in m <sup>2</sup> × value of the land 1 m <sup>2</sup> according to valid regulations)
The land tax rate	taxable equity value (VPT) and location coefficient, the rate varies between 0.4 to 3.5
Valuation principles	they are settled by the law and general regulations of the municipalities
Tax period	IMI is paid in the following year that it concerns, once or <i>per partes</i>
Exemptions/reliefs	yes – related to taxpayer (based on their income or establishment) and tax subjects (e.g. forests in intervention zone)
Penalties	interests due to late payments

ever, the specific criteria and conditions for exemptions or reductions vary by municipality, and information about the existing cases is not publicly accessible. For example, the tax rate in Porto ranges from 0.3% to 0.45% of the property's fiscal value. For rural properties, the rates can vary up to 0.8%. The municipality sets these rates within the legal limits. The forest owner may be exempt up to this rate in Porto.

Late payment interest is computed daily and represents 4% of the tax. The taxpayer could apply for a penalty reduction if certain requirements are met (e.g. regularisation of the tax situation/payment of the tax with proven delay).

## DISCUSSION

Land taxes are a significant part of the municipalities' budgets in both countries. In Slovakia, problems arise with land with unknown ownership, which negatively affects the tax collection and reduces the municipal budgets (Báliková et al. 2021). High land taxes decrease the probability of its retention by the owner (Polyakov, Zhang 2008). Land use changes driven by economic motivation can produce negative externalities, such as loss of ecosystem services. Land tax incentives for forest owners help mitigate these discords (York et al. 2005). If they are not granted transparently through legislation, policy implications related to budgetary processes can arise (James 2009).

Forest land tax preferential programmes are a stable instrument in forest and nature protection policy worldwide (IUCN 2009). In Europe, forest land or woodland tax incentives are focused mainly on non-production forest categories that do not provide income to forest owners (Sarvašová et al. 2019) and biodiversity conservation activities (Illes et al. 2017). We specified the forest land tax exemption implementation in two countries and brought insights into two land tax systems. In both countries, the local government collects the taxes and could exempt forest/rural landowners from paying taxes. Moreover, the general legislation is formulated for the whole state's territory. Conversely, the local administrator and tax collector is a municipality. The property/land taxes flow to its budget as in many other European countries (Maličká 2017). The income from land taxes is commonly governed locally and collected by the municipality, where the land is in the cadastre (UN-

HABITAT 2013). In Slovakia, forest land is a separate land tax subject category. In Portugal, the forest land belongs to the system of immovable taxes (IMI); specifically for tax administration purposes, forest land is referred to as 'rural land with wood on it'. In both countries, forest owners could receive penalties for late payments to tax administrators. The selected main characteristics of forest land taxes were presented and described in both countries (e.g. tax base, tax rate, tax subject, penalties, etc.). Regarding forest land tax exemptions across Europe, the most common one concerns land in national parks (Malme, Youngman 2001; IUCN 2009; UNECE 2018). From the point of view of a public policy analysis (Windhoff-Héritier 1987), forest land tax relief is a tool with material performance. The predominant effect of the forest land tax relief is redistributive, as it redistributes the costs and benefits between groups in society from the perspective of the involved stakeholders (Mieszkowski, Zodrow 1989). The system of land tax exemptions for forest owners in Slovakia is complex and very stable and is often used for promoting forest ecosystem services and biodiversity conservation (Giertliová et al. 2019; Báliková et al. 2021). Forestry and forest policies are generally more regulated in Central European countries (Krykorková et al. 2022), since forestry is considered to be an essential source of income in rural areas (Sarvašová, Kovalčík 2010); the taxation is more specific in the case of forest land. As a result, the forest owners seek opportunities to lower their taxes (Báliková et al. 2021). Conversely, Portugal's rural property tax system, which also covers rural land with forests, is more general in terms of the land category and has only the indirect specification of forest on it. Unlike the Slovak land tax system, the Portuguese one considers the location of the property and land. The 'location coefficient' is calculated for all IMI subjects, and it includes the accessibilities and the proximity of social equipment or public transport services to the immovable property or land (Catarino, Guimarães 2013).

## CONCLUSION

We analysed the system of land taxes in two countries of the European Union, with an emphasis being placed on defining all the land tax features. The studied countries were Slovakia and Portugal. Even though the analysed countries have different



<https://doi.org/10.17221/51/2023-JFS>

historical backgrounds and locations, we spotted some major similarities and differences. The biggest difference was observed in the core definition of forest land according to the tax law. While in Slovakia, forest land is a separate subject recognised in tax law, in Portugal, forest land is part of the immovable property taxes and the law defines it as land with wood on it. This difference mainly affects the possibilities of tax exemptions, which are tailored for forest owners in Slovakia and follow nature protection goals. The system of exemptions is not fully mapped in Portugal, and information is not as publicly accessible as in Slovakia. A common feature of land tax systems is the multilevel governance model used in both discussed countries. We believe that establishing a framework at the national level and the possibility of adapting tax implementation at the local level is an effective way of collecting taxes. Future research should follow the methodology and compare land tax systems with an emphasis on forest land in various European countries with similar backgrounds. An expert evaluation of the positives and negatives of taxation systems in different countries will help to propose an optimal solution for forest land taxation.

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Received: May 2, 2023

Accepted: July 27, 2023

Published online: October 20, 2023