



Comparison of the tax system in the Czech Republic and selected European country

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Cílem diplomová práce je analýza daňového systému České republiky a Spolkové republiky Německo se zaměřením na daňové zatížení firem. V první části práce je poskytnut úvod do tematiky zdanění následovaný analýzou harmonizace daní v rámci Evropské unie a jejích dopadů na jednotlivé členské státy. Dále je v samostatných kapitolách rozebrány český a německý daňový systém. Obě kapitoly obsahují popis struktury daňového systému a popis příslušných zákonů upravující jednotlivé daně. V závěru práce je proveden výpočet daňové povinnosti firmy v českém a německém prostředí. Je zde také provedena analýza rozdílů jednotlivých daní. Závěr práce obsahuje doporučení týkající se volby sídla podnikání, a to v závislosti na velikosti daňového zatížení dané firmy v konkrétním státě.

Klíčová slova

Česká republika, daňový systém, harmonizace daní, Německo, směrnice EU

Abstract

Comparison of the tax system in the Czech Republic and selected European country

The master thesis aims to analyze the tax system of the Czech Republic and the Federal Republic of Germany, focusing on the tax burden of companies. The first part of the thesis provides an introduction to taxation, followed by an analysis of tax harmonization within the European Union and its effects on the individual Member States. Furthermore, the Czech and the German tax system are discussed in separate chapters. Both chapters contain a description of the tax system's structure and a description of the relevant laws governing individual taxes. The company's tax liability is calculated in the Czech Republic and German at the end of the thesis. There is also an analysis of differences in individual taxes. The thesis concludes with recommendations on the choice of business location, depending on the size of the tax burden of a given company in a particular country.

Keywords

Czech Republic, EU directives, Germany, tax harmonization, tax system

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List of Abbreviations

AfA	Absetzung für Abnutzung (Deduction for wear)
CZ	Czech Republic
CZK	Czech crown
DE	Germany (Deutschland)
EU	European Union
EUR	Euro
GAC	German Assessment Code
GDR	German democratic republic
OECD	Organization for Economic Cooperation and Development
VAT	Value added tax

Introduction

Taxes are an essential part of the business. Businesses deal with them almost on a daily basis, whether it is VAT on the sale or purchase of goods or other taxes such as property tax or corporate income tax. Due to the growing trend of internationalization, companies are locating their business in other countries. However, every state has a different tax system. European Union tries to bring at least a slight harmonization of tax collection procedures and the calculation of tax liability in Europe.

Moreover, there are still significant differences between the tax systems in individual countries. These differences can be sometimes advantageous or disadvantageous for some companies who decide to locate their business in a given country. For those reasons, this thesis aims to compare the Czech and German tax systems, identify differences, and analyze differences between both systems. The purpose of this thesis is to provide information for a new company to decide on the establishment of its business based on tax liability. The main question is: Where is it for a company more convenient to establish its head office regarding the taxation?

The first part of the thesis will include an introduction to the field of taxation, focusing on the different tax classifications and descriptions of individual taxes, highlighting the importance of taxes to the state budget. Furthermore, the issue of tax harmonization in the European Union will be discussed. A brief history of tax harmonization will be described, as well as, the characterization of direct and indirect taxation. Subsequently, the tax systems of the Czech Republic and Germany will be described. Both chapters will include an overview and classification of taxes into direct and indirect ones and an overview of the legislation in force governing each tax.

The main aim will be fulfilled through the model study. Within the model study firstly the tax liability of a company in the Czech Republic will be computed, and subsequently the tax liability of a company in Germany will be calculated. In the last part based on the results of the calculation the differences between both tax systems will be identified and compared. In the end, the recommendation for the company where to have its residence will be provided.

1 Fundamentals of taxation

There is no universal definition of tax, but the following common characteristics can be found in literature: It is a compulsory payment to the government used for public purposes. It is usually imposed on income, property, and commodities. Further, it is a non-equivalent payment which means that the paid amount is not equivalent to the amount a person receives from public budgets. On top of that, it is a non-refundable payment. By paying the tax, people do not have a legal right to claim the paid amount from state budgets in the same amount they had paid. Additionally, it is also a non-purpose payment because taxpayers are unaware of the purpose on which collected money would be spent in advance. The raised funds are not tied with a specific service (Pistone et al., 2019).

All taxes collected in a particular territory are defined as a tax system. Specifically, in a straightforward way, taxes are regulated by specific state laws. As it arises from the text above, taxes are the most crucial part of government revenues. The state is trying to create a tax system that will secure the collection of specific amounts of money to cover government expenditures. The literature lists several requirements that a proper tax system should meet. The first requirement is its efficiency. This principle says that the collection process should be realized with the lowest cost and the lowest administrative burden. This principle is closely connected to the other principle, the ease of compliance principle. The tax system should be easily understandable for taxpayers who efficiently compute their tax liabilities. It is also linked with the willingness of people and businesses to keep records of their business activities and then declare their taxes. This willingness usually depends on how coherent the system is for people and how easy it is not to obey the law. The system must be flexible. It means the system should be adaptable for various situations during different economic periods. Governments should raise tax revenues when needed to gain more money to finance state expenditures in crisis (Rosen and Gayer, 2014).

Furthermore, the equity of the system is significant. Every taxpayer should pay taxes according to his/her abilities. Fairness of the tax system always evokes discussion in society, whether people with higher income should pay more taxes or the same amount as those with low incomes. This discussion never led to a consensus on a solution.

Transparency is another important principle that should not be omitted. It should be clear to everyone why taxes are collected and what is financed from the collected money (Stiglitz and Rosengard, 2015). Moreover, the efficiency of the system should be ensured. The government is always trying to design such a tax system that will provide a high yield from the taxes, but at the same time, the imposed taxes should not be at such a high level that people would be demotivated to work or they would try to avoid paying taxes. This principle can be graphically represented by the Laffer curve in Figure 1.

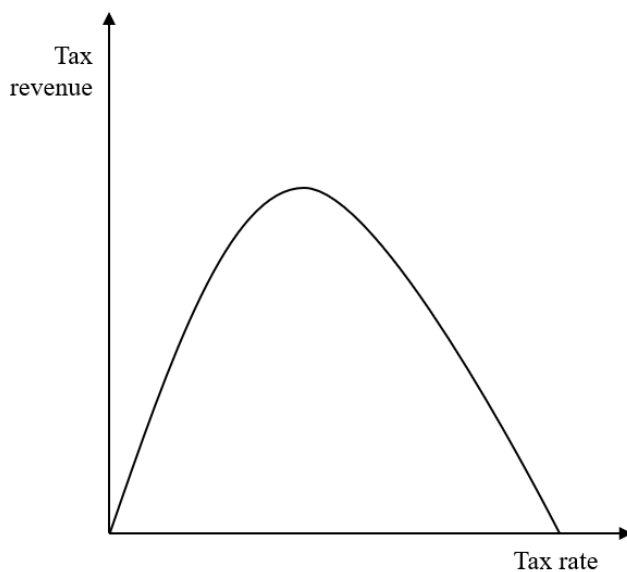


Figure 1: Laffers curve

Source: Own elaboration based on Stiglitz 2015, p. 770.

The Laffer curve shows the relationship between the tax revenue and the tax rate. Suppose the state continues to impose higher tax rates, which benefits the state budget by generating more tax revenues. In that case, the tax rates will eventually reach a point where people will no longer want to work because the state takes such a large amount of their income from them. Consequently, people will start avoiding taxes and finding ways to lower tax liability. In the end, there will be no increase but rather a decrease in tax revenues (Stiglitz and Rosengard, 2015).

1.1 Classification of taxes

The tax system consists of various types of taxes, classified according to many factors. The most common tax classification distinguishes between direct and indirect taxes. Direct taxes are levied on income, including wages, salaries, and income from capital, revenues, or property. The tax burden is borne by individuals and corporations (Frecknall-Hughes, 2015). Indirect taxes are imposed on the consumption of goods and services. They are paid by consumers of goods and transferred to the state budget by the seller or producer of specific goods. The amount of the tax is included in the final price of a particular product. Indirect taxes recognize general sales taxes and taxes levied on specific goods and services. General sales taxes include Value added tax (VAT) which is hidden in the final price of almost every commodity. Taxes levied on specific goods and services include excise taxes, customs duties, and environmental taxes. The government imposes excise duties to reduce unwanted human behavior, the consumption of addictive substances such as alcohol or cigarettes, and environmental pollution (Frecknall-Hughes, 2015). Custom duties are applied to goods that are carried across international borders. The government commonly uses this tax to increase its revenues, protect domestic industries, and regulate the movement of products (OECD, 2021). Environmental taxes are levied on goods that negatively impact the environment, and its tax base is expressed in physical units (Simonidesová et al., 2018).

Furthermore, taxes can be classified according to the distribution of the tax base. Tax rates can be set as progressive, proportional, or regressive. A progressive tax is based on the principle that the higher the tax base, the higher the tax rate must be applied to calculate the tax liability. This type of taxation is usually used to calculate income taxes (Frecknall-Hughes, 2015). On the other hand, regressive tax applies lower tax rates with a rising tax base. In the case of proportional tax, the tax base does not influence the tax rate. The tax rate is expressed as a fixed proportion of the tax base. This type of tax is also called flat-rate tax (Rosen and Gayer, 2014).

Another important classification is the classification developed by Organization for Economic Cooperation and Development (OECD). OECD divide taxes into six main categories:

- 1000 Tax on income, profit, and capital gains,
- 2000 Social security contribution,
- 3000 Taxes on payroll and workforce,
- 4000 Taxes on property,
- 5000 Taxes on goods and services,
- 6000 Other taxes (OECD, 2020).

Those categories are then further divided. A particular type of tax can be considered social security contributions. Those charges are collected from employees, employers, self-employed people, and other people who yield to income tax. The government levied this charge to cover social security payments (OECD, 2021).

1.2 Components of tax

The computation of taxes includes several stages and steps. Firstly, it is essential to identify the tax object. According to state law, the tax object is the item on which the tax is levied. At this stage, it is essential to pay attention to tax exclusions. This means that according to law, some types of tax objects are not considered liable to tax at all. The tax exclusion is commonly misunderstood with tax exemption. The tax exemption means that some parts of the tax object are excluded from the tax. So, in contrast with tax exemptions, they influence the amount of the tax base. To qualify for an exemption, the taxpayer must fulfil certain conditions required by the law. Tax taxpayers get an adjusted tax base after lowering tax objects for tax exemptions. Further, the tax base can be reduced by applying deductions. There are two types of tax deductions: standard and non-standard ones called itemized. The deduction is considered standard when a fixed amount is subtracted from the tax base without submitting any required documentation. In the case of a non-standard deduction, the taxpayer must keep a record of each item and be able to prove that a specific transaction occurred (Rosen and Gayer, 2014).

The deduction can completely change the tax base and the tax rate group in case of applying progressive taxation events. After adjusting the tax base, the tax is computed using tax rates. The tax rates are commonly expressed as a percentage. The tax credits can further reduce the calculated tax liability. Tax credits are defined as a certain amount that decreases tax liability after meeting specific conditions given by the law. There are two types of tax credits: non-refundable and refundable ones. If the tax credit amount is higher than the tax liability, the taxpayer can refund the difference. This is possible when the tax credit is refundable. In the case of the non-refundable tax credits, a taxpayer can only achieve zero tax liability. There is no legal claim for incurred tax benefits (Spilker et al., 2020).

2 European Union's tax law harmonization

In the twenty-first century, almost all companies export their goods outside the country where they operate or import material from abroad. Taxes can cause several problems in cross-border trade, given that tax systems vary from country to country. The differences, for example, lie in tax rates or the content of the tax base. Therefore, various international groups seek cooperation between states to converge individual taxes to facilitate international trade. Furthermore, individual countries are also trying to fight tax evasion.

For Europe, it was the very relevant establishment of the European Union (EU). From a customs union, the EU eventually developed into a common market. The creation of the internal market brought an end to the control of goods at the borders of the Member States and enabled further liberalization of capital movements. The EU market's current form, the single internal market, was created on 1 January 1993 when the Maastricht Treaty came into force. The single internal market is defined as an area without internal borders in which the free movement of goods, people, services, and capital is allowed. The harmonization of taxes, specifically mentioned in article 113 of the Treaty on the Functioning of the European Union, is a central element of the EU taxation system. The harmonization of Member States' legislation concerning turnover tax, consumption tax, and other indirect taxes is defined in this rule to the extent that harmonization is required to establish the common market. The cooperation of Member States' governments is crucial, as is their willingness to participate in the integration process (Boria, 2017).

There are three degrees of international cooperation in the field of taxation:

- tax coordination,
- tax approximation,
- tax harmonization.

The tax coordination aims to establish bilateral or multilateral treaties between individual states. One example is the treaties for avoiding double taxation (Široký, 2018).

The approximation of tax systems is a term used to express the extent of tax cooperation. The main goal of the tax cooperation does not necessarily have to be the harmonization of tax systems, but only the closer convergence of individual tax systems (Šíroký, 2018).

Tax harmonization aims to converge and harmonize individual states' tax systems. This aim is made possible by compliance with common rules. There are three phases of harmonization: Firstly, it is crucial to define which taxes need to be harmonized. Secondly, the tax base has to be harmonized. And lastly, harmonization of the tax rate shall be done (Šíroký, 2018). It is unnecessary to go through all three phases to achieve successful harmonization. Harmonization can be recognized as a negative and positive one. The European Commission realizes positive harmonization by implementing directives, regulations, and other legislative instruments. In this regard, it should be noted that a directive is a piece of legislation that establishes the general principles and a basic structure of a tax while allowing the Member States to set the precise rules for its application within the national state law (Boria, 2017). In the case of a successful, positive harmonization, all Member States follow the same rules. Nowadays, positive harmonization is quite problematic. While applying it, the European Commission needs to have unanimity of all Member States. At the same time, harmonization is sometimes interpreted as a violation of the sovereignty of individual Member States (Simonidesová et al., 2018).

The European Court of Justice executes negative harmonization through its fiscal jurisdiction based on individual cases. The rules then must be obeyed by the Member States which are participants of the case. The problem lies in the principle that those rules are not required to be observed by all Member States (Simonidesová et al., 2018).

2.1 Harmonization of indirect taxes

Indirect taxes significantly affect the flow of goods and services within the EU. The coordination of indirect taxation ensures the same conditions for goods and services on the market regardless of whether they are from the given Member State or another Member State.

2.1.1 Harmonization of Value added tax

According to Boria (2017, p. 5), the VAT is, without doubt, the essential indirect tax. At the beginning of the harmonization of VAT, every Member State needed to apply the same indirect taxation system. In Europe, two systems of indirect taxation were applied. France was using the VAT, and the other Member States were applying a cumulative cascading turnover tax system. In the cumulative cascading turnover tax system, a certain percentage of the product's value is paid as a tax in each production or distribution stage. In the case of a VAT system, the tax burden is entirely independent of the production or distribution chain length (Nerudová, 2014).

The cumulative cascade turnover tax system brings higher tax revenue to the state, even with low tax rates. The tax rates are significantly lower because they are levied on the gross value of production. The system is less administratively demanding for both taxpayers and the state. However, the system does not guarantee competitive neutrality because the tax burden increases with the production and distribution chain length. It is impossible to determine the tax of imported goods, and therefore external neutrality cannot be guaranteed. On the contrary, the VAT system ensures the guarantees tax neutrality, and the amount of tax can be precisely determined (Nerudová, 2014).

On the other hand, tax rates are significantly higher as they are imposed only on the value added to the goods. The administration of VAT is more demanding for both taxpayers and the state. For the reasons mentioned above, the EU decided to use a VAT system to replace the cumulative cascade system of indirect taxation. On top of that, in 1991, the destination principle was established. This principle says that the tax will be paid in the country of consumption. There existed a second principle called the country of origin principle, according to which the tax levied on goods or services would be collected in the state of origin. One of the main reasons for establishing the destination principle was to avoid double taxation. Because the goods produced in one state would be taxed here, and when the company would sell its goods in another state that applies the destination principle, it would be taxed here as well (Nerudová, 2017).

The European Union is also fighting against harmful tax competition between individual Member States. This can occur when each state applies a different tax rate on the same product or service. So, according to Directive no. 92/77/EEC, Member States could apply only three tax rates of VAT. One general and two reduced. Additionally, minimum tax rates were defined. The minimum rate for the regular tax rate is 15%, and the minimum rate for reduced tax rates is 5% (Široký, 2018).

2.1.2 Harmonization of Excise duties

Excise duties also influence the flow of goods and services on the European market, and therefore they are also harmonized by the EU. At first, the items on which the tax will be levied and the common tax rates were determined. Excise duties are imposed on the consumption of mineral oils, alcohol, tobacco products, natural gas, and other related products and electricity. In the case of excise duties, the destination principle is also used. So, according to the national law, the product is taxed in the country of consumption. Some countries apply limits for the import or export of those commodities. Directive no. 2008/118/EC states the general regime for collecting taxes and introduces the so-called term tax warehouses. The product on which is a tax levied on can be transported between those warehouses without paying a tax. Additionally, the directive introduces simple custom tariffs. Member States can also impose a tax on other products within the framework of the directive. In a more detailed way, the rates and structure of excise duties are described in individual directives according to the subject of taxation (Široký, 2018). Table 1 shows an overview of directives applied in the case of indirect tax.

Table 1: Directives regulating harmonization of indirect taxes

Field of harmonization	Directive
Value-added tax	Directive no. 2006/112/EC on the common system of value added tax
Excise taxes	Directive no. 2020/262 of 19 December 2019 laying down the general arrangements for excise duty (recast)
	Directive no. 2011/64/EU on the structure and rates of excise duty applied to manufactured tobacco
	Directive no. 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity
	Directive no. 92/84/EEC on the approximation of the rates of excise duty on alcohol and alcoholic beverages
	Directive no. 92/83/EEC on the harmonization of the structures of excise duties on alcohol and alcoholic beverages

Source: Own elaboration based on Široký 2018, p. 148 and 190.

2.2 Harmonization of direct taxes

Harmonization of direct taxes has not reached such success as the harmonization of indirect taxes. The biggest obstacle in harmonizing the legislation of direct taxes lies in significant differences in the construction methods of a tax base, forms of taxation, deductions and tax credits, taxable period, etc. There is also a big difference between individual accounting systems and the accounting profit or loss perception. There are two systems: one where the accounting profit or loss is adjusted to the tax base and the other where the accounting profit or loss and the tax base are monitored separately (Nerudová, 2017).

The main goal of the EU in terms of harmonization of direct taxation is to eliminate double taxation and tax avoidance. However, the Member States consider the harmonization of direct taxes as a violation of their fiscal sovereignty, and it is not easily acceptable for them. Since for the approval of directives is needed, the consent of all countries is directives rarely approved (Boria, 2017). Consequently, the harmonization of direct taxes has been executed by the negative harmonization through fiscal jurisdiction of the European Court of Justice (Simonidesová et al., 2018). However, despite these obstacles, some degree of harmonization has been achieved.

Crucial in the harmonization process of direct taxes was Directive no. 77/799/EHS concerning mutual assistance by the Member States' competent authorities in the field of direct taxation. The main objective of the directive was to combat international tax evasion and avoidance and identify artificial profit shifts in multinational enterprise groups. Since its adoption, the directive has been amended several times and was finally replaced in 2013 by the new Directive 2011/16 / EU.

Furthermore, in 1990, a Convention on the elimination of double taxation in connection with the adjustments of profits of associated companies was signed. This convention determines principles and methods which help to stop double taxation. It can be caused in case of different understandings of transfer prices in the different Member States. This convention is always valid for five years and then is automatically extended. Furthermore, in 1993, based on Council Regulation No. 218/92, the obligation to use the tax identification number as a unique designation of tax subjects was introduced (Široký, 2018).

3 Czech tax system

The Czech tax system was established in 1993. The system is based on a set of tax laws published in the Collection of Laws of the Czech Republic. During the system's existence, there have been many tax reforms. After the Czech Republic joined the EU in 2004, the current system had to be adapted to the systems used within the EU. This event caused several amendments to the tax legislation. The most significant modification was the introduction of a value-added tax system (Radvan, 2020). The structure of the Czech tax system is shown in Figure 2

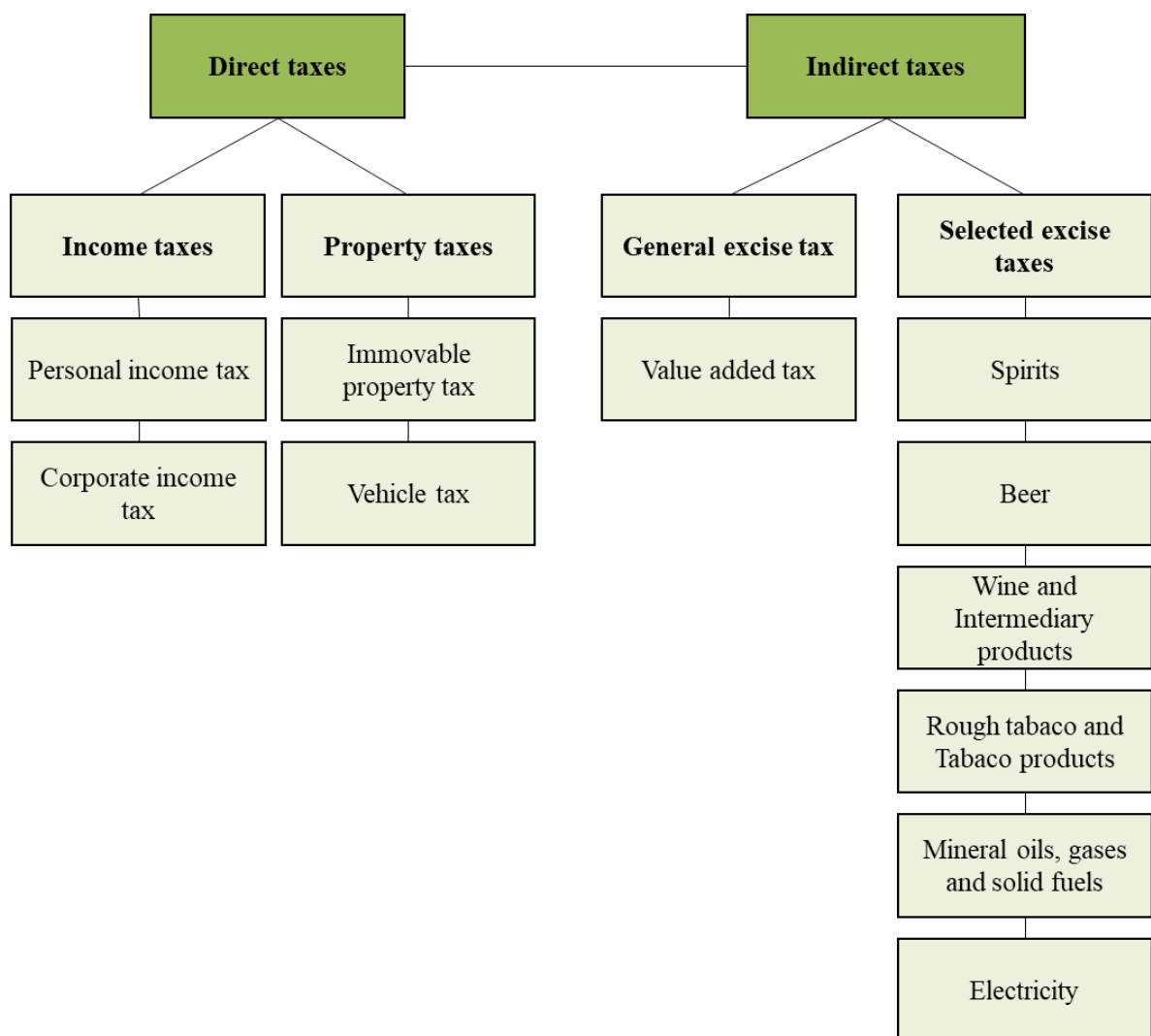


Figure 2: Structure of the Czech tax system
Source: Own elaboration based on Radvan 2020 p.29.

As shown in Figure 2, the Czech tax system consists of direct and indirect taxes. Direct taxes include taxes imposed on income of individuals and corporations, property taxes, including vehicle tax from the vehicles used for business purposes and immovable property tax. There are two kinds of indirect taxes: VAT and excise duties, that include taxes levied on spirits, beer, wine, intermediate alcohol products, rough tobacco and tobacco products, mineral oils, gases, and solid fuels and electricity. Each tax is regulated by an individual legal act, overview of legal acts can be found in Appendix A.

Act No. 280/2009 Coll on., tax procedure code, defines the general principles of collecting taxes. This act regulates the procedure of tax administrators, the rights and obligations of taxpayers and third parties that arose in the tax administration of taxes. Tax administration aims to identify and determine taxes. Additionally, the act ensures collection of taxes correctly. The basis for the correct determination of tax liability is submitting tax returns, reports, and statements by taxpayers (Marková, 2021).

3.1 Personal income tax

Personal income tax is together with the corporate income tax regulated by Act No. 586/1992 Coll., on income taxes. A taxable person is an individual person. The act distinguishes two types of individuals: a tax resident and a tax non-resident. A tax resident is considered a person who has a domicile in the Czech Republic or stays there for at least 183 days in the calendar year. All incomes from the Czech Republic and abroad gained by tax residents are subject to the income tax. A tax non-resident is a person who stays in the Czech Republic solely for studying or treatment or does not meet the conditions for tax residents. Only income earned in the Czech Republic is taxable. As mentioned above, the tax object is the income of an individual. The act defines the following types of income:

- income from dependent activity,
- income from independent activity,
- capital property income,
- rental income,
- other income (Marková, 2022).

If a taxpayer has more types of income, the tax base for every type of income must be calculated separately and then summarize those tax bases to get the total tax base. The act also specifies which incomes are not taxable (e.g., loans). Furthermore, it states the incomes exempted from tax in section 4 of the Income Tax Act (e.g., scholarship). Taxpayers in the Czech Republic can reduce their tax base by using tax deductions directly in the tax return or through employers. Tax deductions are stated in section 15 of the act and include for example blood donation, in the amount of CZK 3,000 for every donation, or organ donation in the amount of CZK 20,000. There are special deductions for entrepreneurs:

- **tax loss** deductible in following five years after its occurrence (additionally in the maximum amount of CZK 30,000,000). As consequence of the COVID-19 pandemic there was in 2021 established the opportunity of carried back the loss for two years (Economist Intelligence 2021),
- **expenses for R&D** that are limited to 100% or 110% of such expenses spent during the given year,
- the sum of 110% or 50% of **the entry price of the property for education and education expenditure** equals CZK 200 multiplied by the number of hours of vocational education.

Personal incomes are taxed with a 15% tax rate. If the taxpayer has an annual income higher than 48 times the average monthly salary, the amount above this limit is taxed by 23%. In 2022, the annual limit is CZK 1,867,728, which is CZK 155,644 monthly. The computed tax liability can be reduced with tax credits stated in sections 35ba to 35bd of Income Tax Act (Marková, 2022). One of the credit tax preferences for children can be applied only by one of the parents and can affect the tax liability in a way that it can be negative. In this case, a tax bonus occurs, and the taxpayer can require that money from the state. Specific tax credits apply for people with an independent income when they are employing disabled people:

- CZK 18,000 for a disabled person,
- CZK 60,000 for a severely disabled person.

The tax period for personal income tax is a calendar year. The tax return has to be submitted by the taxpayer before 1 April. The taxpayers are not obliged to submit the tax return when the gain is lower than CZK 15,000 in a taxable period, or the income comes only from one employer. In this case, the taxpayer signs the tax statement, and the employer submits the tax return for the employee. The employee then pays tax advance payments through the year (Marková, 2021).

3.2 Corporate income tax

Like the personal income tax, the corporate income tax is regulated by Act No. 586/1992 Coll., on income taxes. The taxpayers are entities that were established to achieve profit. There is an exemption for foundations and associations. Their main goal is not profit, but they are considered to be taxpayers. As in the case of personal income tax, the act distinguishes tax residents and tax non-residents. The tax resident is a company with head office in the Czech Republic. All of its incomes from the Czech Republic or abroad are taxable. The non-resident is a business entity that does not have a head office in the Czech Republic. The only income that is taxable is the one generated in the Czech Republic. The tax object is the income resulting from the company's activities and disposal of all assets. Section 18 of the income taxes act defines which incomes are not taxable (Radvan, 2020).

All incomes are summarized, and the costs incurred in securing and achieving taxable income are subsequently subtracted from the total income. The difference is considered as a tax base. Nevertheless, it is essential to be aware that there are tax deductible costs and those that are not. The law considers the costs incurred in achieving and securing income tax deductible. On the contrary, the not deductible expenses do not serve the above-mentioned purposes. Those not deductible expenses increase the tax base. Typically, between those expenses include accounting depreciation, representation expenses and gifts, which are then deductible in specific amount, but firstly are added to the tax base. Business entities can usually use two types of depreciation. The first one is the accounting depreciation established by the company's internal rules, and the second is the tax depreciation defined by Act No. 586/1992 Coll., on income taxes in section 26.

Only the tax depreciation can be considered a tax deductible expense. When the accounting depreciation is higher than the tax ones, the difference increases the tax base.

Tax depreciation

The tax depreciation is applied to tangible and intangible assets. According to the law, it is mainly based on the fact that some of the assets are not possible to project to expenses right after purchase but gradually through tax depreciation. Tangible assets are defined as:

- individual movables or their sets, the entry price of which exceeds CZK 80,000 and have operational and technical functions longer than one year,
- buildings, houses, and flats or non-residential premises, constructions,
- permanent crops with a fertility period longer than three years,
- adult animals and their groups with an entry price higher than CZK 80,000,
- technical improvement.

First of all, it is crucial to determine the depreciation group of the asset. There are six depreciation groups. Those groups establish the tax life of an asset, and afterward, determine the coefficient and rates for calculating the annual depreciation (Vančurová, 2020). Appendix B includes the groups of assets and an example of each group. There are two methods of depreciation: straight-line and accelerated. If the company decides to use the straight-line method, each depreciation group is assigned by the rates for the first year and subsequent years. Furthermore, there is a special rate for the situation when there has been the technical improvement of assets. The rates are listed in Appendix C. The straight-line depreciation is calculated by using formulas (1) and (2).

$$\text{depreciation in first year} = \frac{EP}{100} * C_1 \quad (1)$$

$$\text{depreciation in following years} = \frac{EP}{100} * C_F \quad (2)$$

where: EP = entry price of an asset,
C₁ = coefficient for first year,
C_F = coefficient for following years.

If the company decides to use accelerated depreciation, there are relevant coefficients for the depreciation groups for the first and subsequent years. Also, there are coefficients for the increased residual value (Vančurová, 2020). The coefficients are listed in Appendix D. The accelerated depreciation is calculated by using formula (3) in first year and (4) in subsequent years.

$$\text{depreciation in first year} = \frac{EP}{C_1} \quad (3)$$

$$\text{depreciation in following years} = \frac{RV*2}{C_F - DY} \quad (4)$$

where: EP = entry price,

RV = residual value,

C_1 = coefficient for first years,

C_F = coefficient for following years,

DY = number of years for which was asset already depreciated.

Additionally, in the first year of depreciation, depreciation rates or coefficients may increase by 20%, 15%, or 10% under specific conditions, in the case of both types of depreciation.

After the adjustments, the taxpayer gets the tax base which can be furthermore modified with deductions. Tax deductions regarding the corporate income tax are the same as in the case of the personal income tax from the income from the independent activity. Additionally, the company can apply deduction from the gifts. Those gifts have to exceed the minimum amount of CZK 2,000. Then the taxpayer can deduct maximally 10% of the tax base. The tax rate is 19%. After computation of tax liability, the company can reduce its liability with a tax credit. There is only one tax credit regarding employing disabled people. The amounts are the same as for people with income from independent activity mentioned above (Marková, 2022). The tax period is a calendar year, financial year, or accounting year if it is longer than 12 following months. The tax return must be submitted by 1 April of the following year. If the tax advisor proceeds the tax return, the period is extended till 1 July (Economist Intelligence, 2021).

3.3 Vehicle tax

Vehicle tax is regulated by Act no. 16/1993 Coll., on vehicle tax. Vehicle tax is levied on vehicles used for business purposes. Furthermore, the Act states that the tax is also applied to the vehicles not used for business activities and their maximal permitted weight exceeds 3.5 tons. Those vehicles are registered or operated in the Czech Republic. A taxpayer is considered a person who is written in the technical certificate of the vehicle. It does not matter whether it is an individual or corporation. Additionally, the employer whose employees use their car for business trips is considered to be a taxpayer (Marková, 2022).

The tax is not levied on: special tracked vehicles, special vehicles, vehicles with a special license plate, and other vehicles, including agriculture forestry tractors and their trailers. From the tax are exempted vehicles with less than four wheels, vehicles used for domestic public transport purposes, vehicles of diplomatic missions and consular offices, publicly beneficial vehicles (e.g., ambulance or police vehicles), and ecological vehicles (e.g., with electric engine, hybrid engine). The tax base for personal vehicles is expressed in the engine size in cubic centimeters (Marková, 2022). Appendix E includes tax rates for personal vehicles expressed in CZK per cubic centimeter in section 6 of the Vehicle Tax Act.

In the truck's case, the tax rate depends on the total weight in tons and the number of axles. For instance, if the truck weighs up to 1 ton and has two axles, the tax rate will be CZK 1,800. The complete overview of the tax rates is in section 6 of the Vehicle Tax Act. When employees use their car for business trips, the tax rate is CZK 25 per usage or 1/12 of the annual rate per month. There are several possibilities for how to reduce tax liability. Those discounts are based on the purpose of the used of vehicle and the date of first registration of vehicle (Marková, 2022).

In 2022, the Ministry of Finance announced the remission of vehicle tax patches for 2022 as a result of rising fuel prices. (Ministerstvo financí, 2022)

3.4 Property tax

The area of property tax is regulated by Act no. 338/1992 Coll., on immovable property tax. The tax is divided into two groups: building tax and land tax. The division is required since these taxes are assessed individually while there are differences in tax bases and tax rates. However, the combination of these taxes results in a single immovable property tax (Radvan, 2020).

3.4.1 Land tax

Tax object of land tax is a land located and registered in the Czech Republic. Lands excluded from the tax are stated in the second section of the Immovable Property Tax Act. For instance, the land built up by taxable buildings, forests in protected areas, or ponds servings for fish farming. Furthermore, several lands are exempted from the tax. Those lands are specified in section 4 of the immovable property tax act. Mainly, the exemptions are based on the fact that the land is not used for business activities or serves public purposes. For the application of those exemptions, it is necessary to regularly fill in the tax return. However, in some cases, it is not required, for instance, for lands owned by the state. Furthermore, the act distinguishes the permanent exemption and temporary exemption. The taxpayer is the owner of the property. The state can also own the property. In this case, the act in section of the act specifies who the taxpayer is (Vančurová, 2020).

The tax base is the area of land expressed in square meters. Additionally, for arable land, hop fields, vineyards, gardens, orchards, and permanent forest stands, the tax base is the average price for square meters multiplied by the land area in square meters. The average price is stated by the regulation of the Ministry of Agriculture. Furthermore, if it is a commercial forest or pond with intensive or industrial fish farming, the tax base is the land area multiplied by the amount of CZK 3.80. The price of the land can also be determined by the price regulation valid as of 1 January of the taxable period (Marková, 2022). The tax rates differ based on the type of the land, its quality, location, and property usage type, as shown in Appendix F.

3.4.2 Building tax

Liable to buildings tax are buildings and dwelling units used for business or personal use, such as houses, flats, recreation buildings, garages, or manufacturing buildings. As in the case of land tax, the taxpayer is the owner of buildings or dwelling units. The taxpayer is the renter if the building or dwelling units are rented.

Additionally, section 8 of the Immovable Property Tax Act describes the state's ownership and determines who bears the tax burden. Many buildings are liable to the tax, but the act also states which buildings are exempted from the tax. The conditions are very similar to the land tax. Generally, it is applied to the buildings not used for business activities and serving the public. As an example, can be mentioned building owned by universities or hospitals. For some, the exemption can taxpayer applied only through a tax return. Some buildings are exempted permanently, and some buildings like those affected by disasters or cultural monuments are excluded temporarily.

Furthermore, buildings with flats which are the object of this tax are excluded from the tax. The tax base of buildings is expressed in a built-up area in square meters as of the 1 January of taxation period. In the case of dwelling units, is the tax base the adjusted floor area in square meters to the 1 January of taxation period. The adjusted floor area equals the floor area in square meters multiplied by the coefficient. If the owned unit includes the share in the land, the coefficient is 1.22. For other types of units, it is 1.20. The tax rates are distinguished according to the type of building. Furthermore, is the tax liability influenced by the location of the building, if it is in the national park and protected areas, the tax rate is multiplied by a coefficient of 2.00. Additionally, can the municipality establish a coefficient of 1.5 for selected buildings (Marková, 2022). Appendix G provides an overview of tax rates for buildings and dwelling units. The tax rate can be increased by CZK 0.75 per square meter for every additional above-ground building floor. By buildings used for business activities, the above-ground floor's built-up area covers 1/3 of the build-up area of the building. Moreover, by residential houses, buildings for recreation, garages, and other buildings, the build-up area of additional above ground floor covering 2/3 of build-up area in case. Section 11a of the act defines the increased tax rates if the taxpayer runs its business in a house or dwelling unit (Marková, 2022).

Finally, the tax rate for the building tax and land tax is then multiplied by the coefficient based on the number of inhabitants. The coefficients are listed in Appendix H. Municipalities can furthermore increase the coefficients or establish additional by binding decree (Sobotovičová, 2020). The tax period for land and building taxes is a calendar year. The tax return has to be submitted by 31 January. The tax return is only handed at the time of purchase, selling, or the change of building. In the following years, the taxpayer is only obliged to pay the tax according to the computed liability from previous years (Marková, 2022).

3.5 Value-added tax

Because the Czech Republic is a member of the EU, the legal act governing the VAT area is based on the EU's law.. The main legal act regulating this area is Act No. 235/2004 Coll., on value-added tax. The subject of the tax is:

- the supply of goods and provision of services with the place of taxable transaction in the Czech Republic,
- import of goods with the place of taxable transaction in the Czech Republic, provision of services by a foreign supplier to a domestic entrepreneur,
- acquisition of new means of transport from another Member State for money from the person not liable to the tax.

As a taxpayer can only be considered the company. The company transfers money to the responsible office according to its computed tax liability. The company can become a taxpayer voluntarily if it is beneficial for it (trading with taxpayers of VAT) or compulsorily if the turnover of a company exceeds the limit of 1.000.000 CZK in 12 following subsequent months. This shall be announced to the tax authority via the registration form. Then from the first day of the second month after the limit was exceeded, a company become a taxpayer (Kuneš, 2021).

Furthermore, there is an identified person. It is a company purchasing goods or receiving services from another Member State. When realizing such activities, there arises a duty to submit a tax return in the tax period when the activities had occurred.

Regarding the exemptions, there can be identified two groups of them: the exemptions with deduction and exemptions without deduction. The exemptions without deduction are mentioned in section 51 of the Value-added Tax Act (e.g. radio and television broadcasting, financial activities or insurance activities). The exemptions with deduction can be found in section 63 of the act on value-added tax. To this category belongs delivery of goods to another Member State, acquisition of goods from another Member State, export of goods, provision of a service to a third country, the exemption in exceptional cases stated in section 68, transport and services directly linked to the import and export of goods, passenger transport, import of goods, import of goods in the personal luggage of a passenger or a member of the aircraft crew and import of fuel by a passenger (Kuneš, 2021).

The tax base includes primarily the price of goods or services and expenses related to the acquisition of goods, e.g., transportation costs or excise duties. The tax rate depends on the type of services or goods. There is a general tax rate of 21% in the Czech Republic and two reduced rates of 15% and 10%. The general tax rate applies to all goods and services except those object to the reduced tax rates. The products and services on which the reduced tax rates are applied are mentioned in appendix 3 and 2 of the act on value-added tax. The tax rate of 15% is applied, for example, on the sale of food and drinks (except alcoholic drinks), plants and seeds, animal feed. Moreover, the 10% tax rate, for instance, applies to accommodating services, catering services, books, newspapers, medicaments, or drinkable water (Vančurová, 2020).

The tax period is a calendar month. It is crucial to differentiate between the output tax and input tax regarding VAT. If a taxpayer buys goods or services from another taxpayer, input tax is incurred. On the contrary, the output tax arises on the sale of goods and services. The difference between output and input VAT indicates the tax liability. If the difference is positive, the company has a tax liability to the tax office. If it is negative, the company can require the amount paid on top of its liability from the tax office.

3.6 Excise duties

Excise duties are levied only on the selected types of products by state. In the Czech Republic, petroleum oils (hydrocarbon fuels), spirit, beer, wine, semi-products, and tobacco products (including rough tobacco and heated tobacco products) belong to those products. Excise duties are regulated by Act no. 353/2003 Sb., on excise duties. Since 2008 there are also excise duties levied on natural gas and other gases, solid fuels, or electricity. Those taxes are often called energy, or ecological and are regulated by Act no. 261/2007 Sb., Public Budgets Stabilization Act. The tax base is usually expressed in natural units and tax rates in CZK. The taxation period is a calendar month. The tax return has to be submitted separately for every excise duty unless the goods are imported. In this case, a customs declaration serves as a replacement for a tax return. Furthermore, tobacco labels are replacing the tax return in the case of tobacco products. Unlike other taxes, the administration of excise duties is the responsibility of the customs office and not the tax office (Radvan, 2020).

4 German tax system

The German tax system is at first look much more complicated than the one in Czech Republic, because the system in Germany consists of three levels. The taxes are imposed by the federal government, federal states, and municipalities (IamExpat Media B.V., 2022). The structure of the German tax system is shown in Figure 3.

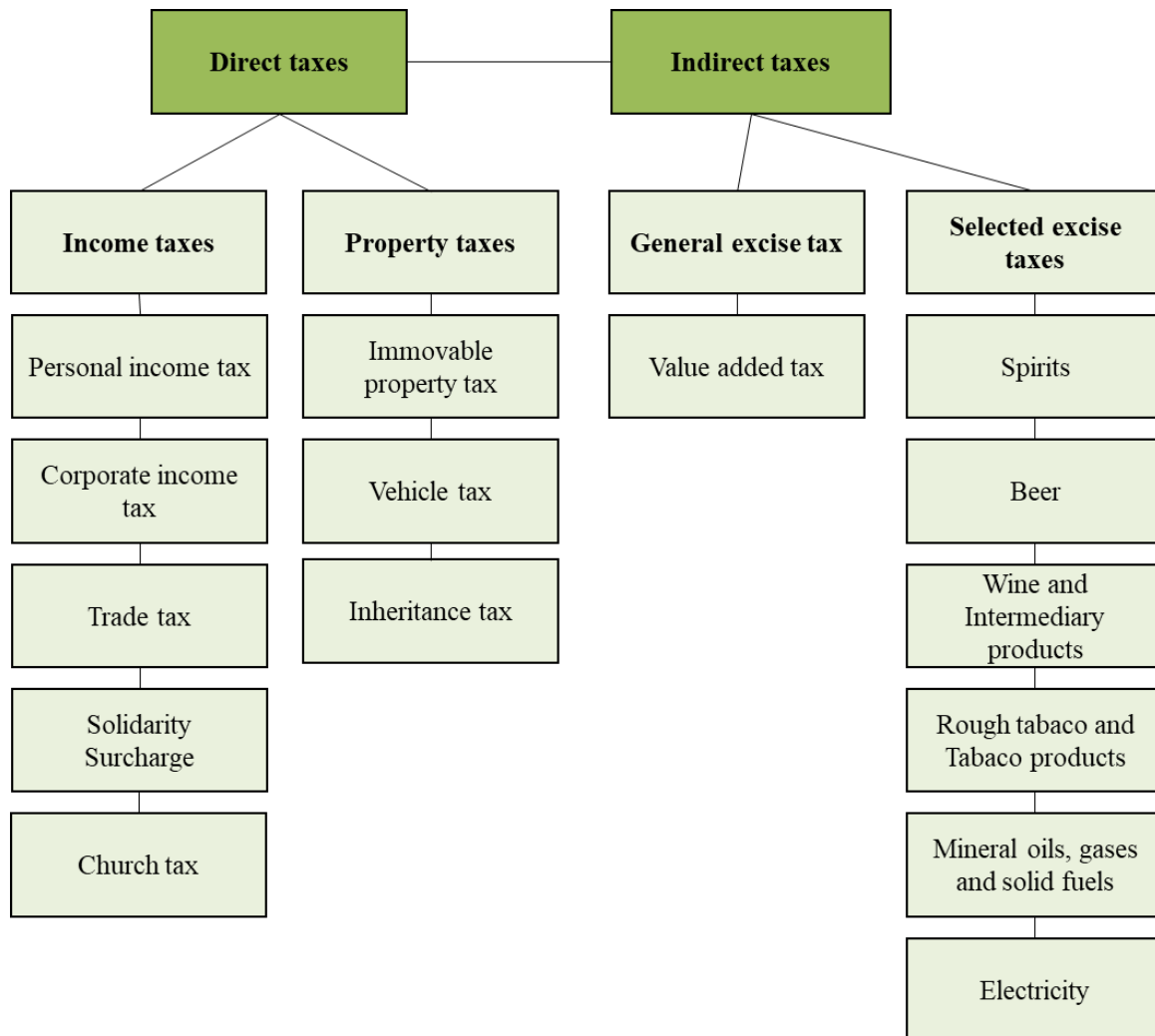


Figure 3: Structure of the German tax system
Source: Own elaboration based on Jochum 2018.

As shown in Figure 3, direct taxes include income taxes with personal income tax, corporate income, and trade tax. Furthermore, it is necessary to pay solidarity surcharge and church tax if the taxpayer is a member of a religious community.

Additionally, property taxes are also considered to be direct taxes. Those taxes include immovable property tax, vehicles tax, and inheritance tax. The content of indirect taxes is similar to the Czech structure. There are value-added tax and excise duties. The area of taxes is within Germany regulated by several Acts divided according to the type of tax. Overview of legal acts can be found in Appendix I.

4.1 Personal income tax

The area of personal income tax is regulated by the Income Tax Act (Einkommensteuergesetz). The German tax system also differentiates between a tax resident and tax non-resident, similarly as in the Czech Republic. The tax residents have unlimited liability to the tax, so their income gained in Germany or abroad is taxed. The non-residents have a limited tax liability, so only the income generated in Germany is liable to the tax. There is an option for married couples to be taxed jointly. They both must be subjected to unlimited tax liability and do not live permanently separated. The Act defines the following seven types of income:

- income from agriculture and forestry,
- income from trade or business,
- income from independent activity,
- employment income,
- income from a capital asset,
- income from rents and leases,
- other income defined by the law (Bundesamt für Justiz, 2021a).

Any income derived from non-economic activities, such as inheritance, donations, income from gaming and lottery, and mutual assistance (e.g., among neighbors), is not subject to the income tax. However, such incomes may be liable to another type of tax, such as inheritance tax.

The tax base is computed as a difference between incomes and expenses used for achieving income. Those expenses include for example:

- employment expenses – travel costs or work equipment,
- personal expenses – paid alimony, contributions to German charities, childcare expenses or education expenses,
- business expenses – losses, operating material, or interest expenses.

Furthermore, lump-sum expenses can be applied by everyone without any proof. The system also provides certain deductions for children, older, or disabled people. Germany applies a progressive taxation system. The tax rate increases continuously with each additional euro of income. The rates range between 14% to 45%. There is also a tax-free amount of EUR 9,984 (PwC, 2022a).

The taxation of the income from employment gets even more complicated. At the same time, the employees are divided into six groups according to personal characteristics (e.g., marital status or a number of children). Those groups are defined in section 38b of the Income-tax Act. For these reasons, it is impossible to construct a general estimate of income taxation, and taxation must always be calculated individually in each situation (Bundesamt für Justiz, 2021a).

Except for the income tax, the taxpayers in Germany are liable to the solidarity surcharge. It counts for 5.5% of the computed income tax liability. This tax was established in 1995, and it serves for financing education, health care, and infrastructure of countries of the former German Democratic Republic (GDR). The tax is not obligatory to be paid by individual taxpayers up to a certain amount of income. Furthermore, there are special conditions for married couples (PwC, 2022a).

Additionally, registered members of the religious community have to pay church tax. The tax amount equals 8% of gross income if the taxpayer lives in Bavaria and Baden Württemberg or 9% in other states. The taxable period for personal income tax is the calendar year (Jochum, 2018).

4.2 Taxation of company's income

Company's income taxation consists of three parts. There is a corporate income tax, trade tax and solidarity surcharge. All taxes will be discussed in the following subchapters.

4.2.1 Corporate income tax

The corporate income tax is regulated by the Corporate Income Tax Act (Körperschaftsteuergesetz). The act distinguishes companies with limited and unlimited tax liability. The limited tax liability applies to non-resident companies that are not registered in Germany. Those companies must pay different types of tax on revenue obtained from German sources. The unlimited tax liability is characterized by the company's head office located in Germany or registration in Germany. Then all incomes, whether earned in Germany or abroad, are liable to the tax. The obligation to pay this tax is further conditioned by the company's legal form (Bundesamt für Justiz, 2021b).

To calculate the tax base the company's profit is adjusted by expenses occurred during the accounting period. The determination of taxable income is done according to the Income Tax Act and Corporate Income Tax Act (Jochum, 2018). All costs related to business activities can be included in tax-deductible expenses unless the law prohibits it. A list with additional deductible expenses for companies is in section 9 of the Corporate Income Tax Act. Those expenses include, for example: donations or loss. Donations can be deductible in the amount of 20% of net taxable income or 0.4% of total sales revenue and wages paid throughout the year. Donations to charities registered in other EU/EEA Member States are tax-deductible if the receiving charity fulfills German recognition conditions. The transferred loss is not time limited. The amount of loss relief claimed in a single year is restricted to EUR 1 million plus 60% of the current income that exceeds that level. The remaining 40% of income above EUR 1 million is subject to trade and company taxes at current rates. This is known as minimum taxation (PwC, 2022b).

Non-deductible expenses are then listed in section 10 of the act. Those expenses include, for instance, income taxes, trade tax, or VAT (Jochum, 2018).

Depreciation of asset

Depreciation of assets is regulated by the Income Tax Act. Usually, the asset with a useful life of over one year is depreciable. The depreciation period depends on the average economic useful life of the asset established in tables issued by the Ministry of Finance. Furthermore, the useful life and depreciation rates depend on the sector in which the asset is used. The depreciation is normally calculated by using the straight-line method, but in some cases, the accelerated method is allowed. Annual depreciation is calculated by using formula (5).

$$\text{annual depreciation} = \frac{\text{net book value}}{\text{useful life}} \quad (5)$$

Furthermore, types of depreciated assets and depreciation of buildings are mentioned in the section 7 of the Income Tax Act. Generally, buildings not used for accommodation purposes and built after 31 May 1985 are annually depreciated by 3% (Bundesamt für Justiz, 2021a).

The corporate income tax rate is 15%. The tax return must be submitted by the 31 May of the following year. If a tax advisor executes the tax return, the period is extended to 31 December (PwC, 2022c).

4.2.2 Trade tax

The trade tax is regulated by the Trade Tax Act (Ewerbsteuergesetz). Although the federal law governs the tax, the establishment of tax rates and tax assessment is in the hands of municipalities. The tax is levied on business income regardless of whether it is a company or partnership income. The exemption applies to freelancers such as doctors or lawyers. (Bundesamt für Justiz, 2021c). As it concludes from the text above, the tax rate differs based on the company's location. First of all, the tax base is computed. The determination of the tax base is similar to the determination of the tax base in the case of corporate income tax. Nevertheless, there are several differences regarding the adjustments of the tax base.

The act specifies both the amounts that are not deductible and must be added up to the tax base and the amounts that can decrease the tax base (Jochum, 2018).

Those amounts are stated in sections 8 and 9 of the Trade Tax Act. From the profit can be, for example, deducted: 1.2% of the unit value of a real estate included in the company's asset or profits from shareholdings in other companies. The profit has to be increased by the amounts by which the profit was decreased when calculating the corporate income tax. Those amounts are defined in section 8 of the Trade Tax Act. Furthermore, there are tax-free amounts that are deductible from the adjusted profit. In the case of partnership and individuals, it is EUR 24,500, and for companies, it is EUR 5,000. (Bundesamt für Justiz, 2021c)

After those deductions the adjusted profit is multiplied by the tax rate established by state in amount of 3.5%. The result is called tax assessment base. Then it is multiplied by the municipal factor stated by municipalities. The average multiplier is around 400%. The taxation period is the calendar year. However, the payments are made quarterly via advanced payments based on the previous year's tax liability (Germany: Trade & Invest, 2022a).

Lastly, companies, as well as individuals, are obliged to pay the solidarity surcharge. In companies' cases, only the amount of calculated corporate tax after tax credit deduction serves as the base for calculation. The rate is 5.5% of the 15% tax base. So it is 0.8% of the taxable income. Together with corporate income tax, it counts for 15.825% (Germany: Trade & Invest, 2022a).

4.3 Vehicle tax

In Germany, car owners have to pay the vehicle tax and the emissions badges. The Vehicle Tax Act regulates the vehicle tax. The amount of the tax is dependent on the type of vehicle (e.g., personal car or motorhome). The tax is paid annually after the registration of the vehicle. Furthermore, the tax is different for diesel and gasoline engines in the case of personal vehicles. For vehicles with diesel engines, the tax is higher. The exemption applies for purely electric vehicles for at least the first five years after their registration. The tax and its computation for personal cars differ based on the date of registration. The tax computation for personal vehicles registered to 30 June 2009 depends on the engine type (gasoline, diesel, Wankel), engine capacity in cm³, and classification in the emission class.

In the case of personal cars registered within the period from 30 June 2009 to 31 December 2020 is the tax rate derived from the engine type, engine capacity in cm³ and CO² value. For a personal vehicle with gasoline and Wankel engine are the rates following:

- EUR 2.00 for 100 cm³ of the engine capacity,
- plus EUR 2.00 depending on the value of CO² per g/km.

For a personal vehicle with a diesel engine:

- EUR 9.50 for 100 cm³ of the engine displacement/capacity,
- plus EUR 2.00 depending on the value of CO² per g/km.

Furthermore, there is a tax-free amount of CO² depending on when the vehicle was first registered. If the car was first registered. For personal vehicles registered from 1 January 2021 is the tax determined by the CO² value to favor low emission vehicles. The portion of the CO² value that exceeds 95 g/km must be split among the six CO² levels to establish the CO² related tax amount. The amount of 95 g/km continues to be tax-free. The Table with tax rates can be found in Appendix K. To this tax liability is then added the tax computed according to the engine capacity in 100 cm³ and engine type. This amount stays the same as in the previous period (Generalzolldirektion, 2021).

For the specific calculation of the vehicle tax, the taxpayers can use the Federal Ministry of Finance calculator available on their websites. On top of the vehicles tax, the taxpayers has to pay attention to the emission badges. Several largest cities established those badges. The purpose of those badges is to reduce air pollution. In those particular cities are so-called environmental green zones to which only cars with a green sticker are permitted. Most of the vehicles are eligible for the badge. However, if the vehicle is older than 12 years, it can be prohibited from entering the environmental green zones. Those zones are usually located in larger cities like Berlin, Munich, or Leipzig (IamExpat Media B.V., 2022).

4.4 Property tax

The property tax is levied on the property whether it is used for business purposes or not. The legal base is the Property Tax Act (Grundsteuergesetz).

The taxpayer is the owner of the property. Properties are divided into two groups: A - properties used for agriculture and B – immovable property.

The rates are dependent on the location of the property and the type of property. The tax assessment is executed at three levels. First of all, the federal tax office determines the property's unit value. This value is then multiplied by the tax measurement amount stated by the Property Tax Act. To find out the tax measure, it is crucial to get through German Assessment Code (Bewertungsgesetz). Lastly, the resulting tax measurement amount is multiplied by the municipality multiplier. These multipliers are differentiated depending on groups A and B (GTAI: Germany Trade & Invest, 2022b).

Firstly, the property value is multiplied by the property tax rate stated by state. The result is then multiplied by the municipality multipliers. In the last years, the reform of property tax has been accepted. From 1 January 2022, all properties will be revaluated (Grundsteuer.de, 2022). The formula for revaluation of property used for commercial purpose can be found in Appendix K.

To the existing groups A and B a new group C (construction buildings) will be added from 2025. The new property tax calculation will be applied from 2025 (GTAI: Germany Trade & Invest, 2022b).

4.5 Value-added tax

Since the value-added tax system is harmonized across the European Union, the rules are very similar in Germany and the Czech Republic. The issue of VAT is regulated by the Value added tax Act (Umsatzsteuergesetz). The subject of the value-added tax is the supply of goods and services in Germany or the import of goods into Germany.

As a taxpayer is considered a company that exceeded the limit of EUR 17,500 in the previous calendar year or expected to exceed the limit of EUR 50,000 in the following year. Furthermore, as the Czech Republic the company can voluntarily become the taxpayer. There are two tax rates: the general one of 19% and one reduced of 7%. The reduced rate is applied to the local public transport, food, newspapers, or books. Until the end of the year 2022, as a consequence of COVID-19 pandemic the reduced rate can be used even on food except drinks provided in restaurants or other catering services (PwC, 2022d).

Section 4 of the Value added tax Act lists the exemptions from the tax (e.g., export of goods to the third country). Furthermore, section 15 of the Value Added Tax Act mentions deduction on input tax. The final tax liability is a difference between input and output tax. Generally, the tax returns are assessed monthly or quarterly by the tenth day of the following month.

If the VAT payable in the preceding calendar year did not exceed EUR 1,000, the taxpayer might be exempt from filing preliminary returns. A one-month permanent filing extension is typically allowed in exchange for an advance payment of one-eleventh of the total net tax due during the preceding year. Otherwise, payment is also required by the tenth of the following month. The taxation period is the calendar year. The taxpayer has to submit an annual return at the end of the year. Then the amount of the tax liability is recalculated. If the total sum does not comply with the monthly or quarterly sums, the taxpayer must explain the situation (PwC, 2022d).

4.6 Excise duties

As in other states imposing excise duties serves to limit consumption of several products. In Germany, excise duties are levied on alcohol and alcohol beverages, manufactured tobacco, mineral products, energy products, and electricity. The list of products on which the tax levied is nearly the same as in other EU countries. Additionally, in Germany, excise duties are imposed on coffee. The tax base of all taxable products is expressed in natural units, and usually, the tax rate is in EUR. Every type of excise duty has a deadline by which the declaration has to be submitted monthly (PwC, 2022d).

5 The tax burden of a company in the Czech Republic and Germany

The aim of this part of the thesis is focused on the calculation of the tax liability for model company if it would be settled in the Czech Republic or Germany. The company's main activity is the purchase and sale of goods. The distribution of goods to customers is executed through an external company that ensures transportation. Goods are offered on the company's websites. Furthermore, the company applies straight-line depreciation. In the accounting period, the company realizes the same amount of profit EUR 253,792.37, whether the company is settled in Germany or the Czech Republic. Following operations realized during the period are not considered in the calculation of the profit mentioned above, for the reason of different system of considering those amounts in the calculation of taxes.

- representation expensed: EUR 3,000 (not promotion – dinner for partners),
- paid interest payments: EUR 2,500,
- donation to local charity EUR 2,000.

Additionally, the company bought its storage for a purchased price of EUR 402,576.49 with an area of 1,100 m² and land with an area of 4,790 m². All expenses are the same in the Czech Republic and Germany. The company plan is to realize the following turnovers during the year 2022 in Table 2.

Table 2: Monthly turnovers of the company

Month	Turnover
January	EUR 11,400
February	EUR 28,500
March	EUR 28,500
April	EUR 28,500
May	EUR 38,500
June	EUR 38,500
July	EUR 38,500
August	EUR 48,500
September	EUR 48,500
October	EUR 68,500
November	EUR 97,000
December	EUR 97,000

Source: Own elaboration.

Table 3 provides an overview of the operations made during the year, expressed as the amount of money without VAT.

Table 3: Overview of the operations made by the company in 2022

Operation	Price without VAT
Purchase of a new company car	EUR 16,807.57
Purchase of a building	EUR 402,576.49
Purchase of goods with a standard rate	EUR 277,100
Purchase of goods with a reduced tax rate	EUR 231,200
Purchase of goods from another Member State	EUR 17,000
Sale of goods with a standard rate	EUR 324,000
Sale of goods with a reduced tax rate	EUR 247,900

Source: Own elaboration.

In 2022 the company purchased and started to use the company car. Detailed information concerning the car can be found in Table 4.

Table 4: Specification of the company car

Car	Year of first registration	Purchase price	Engine capacity	Type of engine	CO ²
FABIA Combi	2022	EUR 16,807.57	999 cm ³	gasoline	120 g/km

Source: Own elaboration based on Škoda Auto 2022.

For the presentation of differences and following recommendations, the company's tax liability will be calculated in Germany and the Czech Republic for 2022.

5.1 Tax liability of a Czech company

The following subchapters will be devoted to calculating the liability for the company settled in Liberec in the Czech Republic, marked as CZ-COM. For a better visualization of the results, all amounts will be expressed in euros. The applied exchange rate is CZK 24.840 for one euro (21.03.2022, ČNB, 2022). In some cases, the liability will be computed in CZK and then recalculated into EUR to minimize distortions in amounts. However, in the case of VAT and corporate income tax, the amounts will be directly computed in EUR.

5.1.1 Property taxation

In order to calculate the total tax liability for property tax, land tax and building tax must be calculated separately.

Land tax

As mentioned above, the total area of the land counts 4,790 m². Before the calculation, the area needs to be adjusted by the build-up area, which is 1,100 m². According to the law, the build-up is exempted from the tax. So, the difference between 4,790 m² and 1,100 m² equals 3,690 m². The result is then used as a tax base to compute the tax liability of land tax.

Then, it is necessary to determine the tax rate according to Act No. 338/1992 Coll. on immovable property tax. This type of land can be classified as other lands, so according to Appendix F, the tax rate is CZK 0.20.

Then according to the number of inhabitants in Liberec, the municipality coefficient is determined. Liberec has around 104,000 inhabitants, which means the municipality coefficient equals two, as mentioned in the Appendix H. Lastly, the correction coefficient established by municipality Liberec is 3.5. The computation of land tax is shown in Table 5.

Table 5: Calculation of the land tax liability in the Czech Republic

Land tax	Tax liability
Tax base	3,690 m ²
Tax rate	CZK 0.20
Municipality coefficient	2.00
Correction coefficient	3.50
Tax liability (CZK)	$3,690 \cdot 0.20 \cdot 2 \cdot 3.50 = \text{CZK } 5,166$
Tax liability (EUR)	$5,166 / 24.840 = \text{EUR } 207.97$

Source: Own elaboration.

As shown in Table 5, the adjusted land area in m² is multiplied by the tax rate CZK 0.20, then the municipality coefficient of 2, and the correction coefficient 3.5. The final tax liability is then equal to CZK 5,166. The result is then divided by CZK 24.840 to transform the number into EUR.

Building tax

As in the case of the land tax, at first it is necessary to determine the building type. In this case, it is a building used for business activities regarded as other kinds of business, as mentioned in Appendix G. The tax rate for this building is therefore CZK 10.00. Also, by calculating building tax, the municipality coefficient of 2 has to be applied. Furthermore, the additional municipality coefficient of 1.50 and correction coefficient in the same amount as in case of land tax of 3.5 are applied. The calculation of building tax can be found in Table 6.

Table 6: Calculation of the building tax liability in the Czech Republic

Building tax	Tax liability
Tax base	1,100 m ²
Tax rate	CZK 10.00
Municipality coefficients	2.00
	1.50
Correction coefficient	3.50
Tax liability (CZK)	$1,100 * 10.00 * 2 * 1.50 * 3.50 = \text{CZK } 115,500$
Tax liability (EUR)	$115,500 / 24.840 = \text{EUR } 4,649.76$

Source: Own elaboration.

As shown in Table 6 at the beginning of the calculation, the storage area is multiplied by the tax rate. Then the result is multiplied by the municipality coefficients of 3.5 in total and the correction coefficient of 3.5. The final tax liability of CZK 115,200 is divided by 24.840 to get the result in EUR. The final tax liability after recalculation is then EUR 4,649.76. The property tax liability is then $207.97 + 4,649.76 = \text{EUR } 4,857.73$.

5.1.2 Vehicle tax

Due to the actual situation of increasing fuel prices, the Minister of Finance announced the forgiveness of the advance payments for vehicle tax for the year 2022. However, that does not mean the tax is cancelled. Since the thesis aims to establish a general overview and existing differences between tax systems, the tax calculation is executed. As known from Table 4 company bought one car with an engine capacity of 999 cm³. The calculated vehicle tax is shown in Table 7.

Table 7: Calculation of the vehicle tax in the Czech Republic

Vehicle tax	Tax liability
Engine size	999 cm ³
Tax rate	CZK 1,800
Tax credit	48%
Final tax liability (CZK)	$1,800 * (1 - 0.48) = \text{CZK } 936$
Final tax liability (EUR)	$936 / 24.840 = \text{EUR } 37.68$

Source: Own elaboration.

For the computation of the vehicle tax liability is crucial to find out in-car specifications the information regarding engine capacity. According to the engine capacity, the tax rate is determined. The engine size of 999 cm³ belongs car to the group ranging from 800 cm³ to 1,250 cm³ with the tax rate of CZK 1,800. A tax credit can reduce the liability since the vehicle is brand new and first registered in January 2022. The tax credit is 48%. So the final tax liability will be CZK 936 since the results shall be executed in EUR, so the result is divided by CZK 24.840. The final tax liability is then EUR 37.68.

5.1.1 Value-added tax

The limit for compulsory registration for VAT is in the Czech Republic CZK 1,000,000, which is around EUR 40,258. According to Table 2 the company will exceed this amount in March and, therefore, it will be obliged to register as a taxpayer till the 15th of April 2022 and become a taxpayer from 1 June 2022. However, it is possible to become a taxpayer voluntarily, which is convenient for CZ-COM s. r. o., while companies' business partners are taxpayers. Table 3 list all operations made by the company in 2022. That information is general and has to be recalculated according to the Czech Republic's Act No. 235/2004 Coll. on value-added tax. As mentioned before, in the Czech Republic there are three VAT rates. The first general rate of 21% is applied to almost all products which are not subject to two reduced rates. The reduced rates are 15% and 10%. For the model company only the general rate, and the second reduced rate of 10% are relevant.

The reduced rate is applied to books that the company also sells. Tables 8 - 19 provide an overview of carried-out operations during the year. The tables include the prices without VAT, the appropriate tax rate, and computed VAT. Additionally, it contains the information, whether it is the input or output operation.

Table 8: Calculation of the VAT January in the Czech Republic

January					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of new company car	16,807.57	21	3,529.59	20,337.16	<i>Input</i>
Purchase of building	402,576.49	21	84,541.06	487,117.55	<i>Input</i>
Purchase of goods with a standard rate	5,000	21	1,050	6,050	<i>Input</i>
Purchase of goods subject to the reduced rate	5,000	10	500	5,500	<i>Input</i>
Sale of goods with a standard rate	4,000	21	840	4,840	<i>Output</i>
Sale of goods with reduced rate	7,400	10	740	8,140	<i>Output</i>

Source: Own elaboration.

As is shown in Table 8, at the beginning of the year the company buys the building and company car. Both goods are subject to the general tax rate of 21%. The price of the products without VAT is multiplied by 0.21, resulting in the VAT of EUR 3,529.59 for a company car and EUR 84,541.06 for a building. Both operations can be marked as input tax operations. Then company purchase the goods, which are subsequently sell. The goods are subject to the general rate of 21% and part of it to the reduced rate of 10%. The tax is for goods that are to the general rate of EUR 1,050, and the goods that are subject to the reduced rate of EUR 500. These operations are also considered as the input tax operations.

Furthermore, in the same month company sell its goods which are subject to both first reduced and general rate. The tax is EUR 840 for goods subject to the general rate and EUR 740 for the goods subject to the first reduced rate. Both operations are output tax operations. The final tax liability for January is computed as the difference between output and input operations: $(840+740) - (3,529.59+84,541.06+1,050+500) = \text{EUR } 86,991.7$. So, the company request a refund because of the overpayment.

Table 9: Calculation of the VAT February in the Czech Republic

February					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	7,000	21	1,470	8,470	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	10	1,500	16,500	<i>Input</i>
Sale of goods with a standard rate	10,000	21	2,100	12,100	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

In February company continued with its business activities. As shown in Table 9, company purchase and sell goods subjected to the reduced and general tax rates. The total value of the input tax is EUR 2,970, and the output tax is EUR 3,950. So the final tax liability for February is computed also as the difference between output and input tax: $(2,100+1,850) - (1,470+1,500) = \text{EUR } 980$. The company has to pay the tax in this amount of difference to the tax office.

Table 10: Calculation of the VAT March in the Czech Republic

March					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	9,000	21	1,890	10,890	<i>Input</i>
Purchase of goods with reduced tax rate	10,000	10	1,000	11,000	<i>Input</i>
Sale of goods with a standard rate	10,000	21	2,100	12,100	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

The same situation as in February continued in March. Company has output operations in the amount of $2,100 + 1,850 = \text{EUR } 3,950$ and input operations in the amount of $1,890 + 1,000 = \text{EUR } 2,890$ as shown in Table 10. The tax liability is then $3,950 - 2,890 = \text{EUR } 1,060$.

Table 11: Calculation of the VAT April in the Czech Republic

April					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	9,000	21	1,890	10,890	<i>Input</i>
Purchase of goods with reduced tax rate	12,500	10	1,250	13,750	<i>Input</i>
Purchase of goods from another Member State	6,250	10	625	6,875	<i>Output</i>
Sale of goods with a standard rate	10,000	21	2,100	12,100	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

As shown in Table 11, in April on top of the purchase and sale of goods subject to the standard and reduced rate, the company purchased goods from another Member State subject to the reduced rate. In the case of this operation, it is a reverse charge system, which means that the goods can be bought without VAT, and the obligation to pay the tax is transferred to the receiver of goods according to the local law. The tax liability is computed the same as in the case of the previous operations. The price without VAT is multiplied by 0.10, which equals EUR 625. This operation is considered to be the output one while the company is obligated to transfer the tax to the state. The purchase of goods is marked as an input operation. The liability for goods subject to the general rate is EUR 1,890 and for goods subject to the reduced rate is EUR 1,250. Tax liability of sold and purchased goods is determined as in previous months. The tax liability for goods sold at the general rate is EUR 2,100 and for goods subject to the reduced rate is EUR 1,850. Those two operations are considered as the output operations. The monthly liability is then calculated as $(625+2,100+1,850) - (1,890+1,250) = \text{EUR } 1,435$.

Table 12: Calculation of the VAT May in the Czech Republic

May					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	9,000	21	1,890	10,890	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	10	1,500	16,500	<i>Input</i>
Sale of goods with a standard rate	20,000	21	4,200	24,200	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

As shown in Table 12, in May the company buys goods for EUR 10,890, from which is the VAT equal to EUR 1,890. Then company purchase goods subject to the reduced rate in the total amount of EUR 16,500 with VAT from which the VAT is EUR 1,500. The company also sell some of its goods subject to the reduced and general rate.

The goods are sold for EUR 24,200 includes the VAT of EUR 4,200. The reduced rate is then in the amount of EUR 1,850. Company's tax liability for May is: $(4,200+1,850) - (1,890+1,500) = \text{EUR } 2,660$.

Table 13: Calculation of the VAT June in the Czech Republic

June					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	12,000	21	2,520	14,520	<i>Input</i>
Purchase of goods with reduced tax rate	12,500	10	1,250	13,750	<i>Input</i>
Sale of goods with a standard rate	20,000	21	4,200	24,200	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

As shown in Table 13, in June company purchases goods with total input tax $2,520 + 1,250 = \text{EUR } 3,770$ and with output tax in the amount of $4,200 + 1,850 = \text{EUR } 6,050$. So, the final tax liability for June is $6,050 - 3,770 = \text{EUR } 2,280$, which has to be transferred to the tax office.

Table 14: Calculation of the VAT July in the Czech Republic

July					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	15,000	21	3,150	18,150	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	10	1,500	16,500	<i>Input</i>
Sale of goods with a standard rate	20,000	21	4,200	24,200	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

As shown in Table 14, in July the company buys and sells goods subject to reduced and general tax rates. At the end of the month its tax liability is: $(4,200+1,850) - (3,150+1,500) = \text{EUR } 1,400$. Therefore, the company is obliged to pay tax to the tax office in the calculated amount.

Table 15: Calculation of the VAT August in the Czech Republic

August					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	15,000	21	3,150	18,150	Input
Purchase of goods with reduced tax rate	17,500	10	1,750	19,250	Input
Purchase of goods from another Member State	6,250	10	625	6,875	Output
Sale of goods with a standard rate	30,000	21	6,300	36,300	Output
Sale of goods with reduced rate	18,500	10	1,850	20,350	Output

Source: Own elaboration.

As shown in Table 15 in August, company continued to operate and sells goods with an input tax of $3,150 + 1,750 = \text{EUR } 4,900$. In addition, the company purchases goods from another Member State subject to a reduced VAT rate. As this is a reverse charge system, the company has to pay this tax as output tax. Together with the sell goods, the output tax amounted to $625 + 6,300 + 1,850 = \text{EUR } 8,775$. Therefore, the company has to pay EUR 3,875 to the tax office at the end of the month.

Table 16: Calculation of the VAT September in the Czech Republic

September					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	20,000	21	4,200	24,200	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	10	1,500	16,500	<i>Input</i>
Sale of goods with a standard rate	30,000	21	6,300	36,300	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

As shown in Table 16 similarly, in September the company buys and sells goods, and its tax liability is: $(6,300+1,850) - (4,200+1,500) = \text{EUR } 2,450$.

Table 17: Calculation of the VAT October in the Czech Republic

October					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	22,000	21	4,620	26,620	<i>Input</i>
Purchase of goods with reduced tax rate	17,500	10	1,750	19,250	<i>Input</i>
Sale of goods with a standard rate	50,000	21	10,500	60,500	<i>Output</i>
Sale of goods with reduced rate	18,500	10	1,850	20,350	<i>Output</i>

Source: Own elaboration.

There were also no unusual VAT transactions in October as shown in Table 17. The company's tax liability is $(10,500+1,850) - (4,620+1,750) = \text{EUR } 5,980$.

Table 18: Calculation of the VAT November in the Czech Republic

November					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	30,000	21	6,300	36,300	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	10	1,500	16,500	<i>Input</i>
Sale of goods with a standard rate	60,000	21	12,600	72,600	<i>Output</i>
Sale of goods with reduced rate	37,000	10	3,700	40,700	<i>Output</i>

Source: Own elaboration.

As shown in Table 18, in November, there is an increase in the volume of sales of goods, and the output tax amounts to $12,600+3,700 = \text{EUR } 16,300$, and the input tax amounted to $6,300+1,500 = \text{EUR } 7,800$, resulting in a tax liability of EUR 8,500.

Table 19: Calculation of the VAT December in the Czech Republic

December					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	10,000	21	2,100	12,100	<i>Input</i>
Purchase of goods with reduced tax rate	20,000	10	2,000	22,000	<i>Input</i>
Sale of goods with a standard rate	60,000	21	12,600	72,600	<i>Output</i>
Sale of goods with reduced rate	37,000	10	3,700	40,700	<i>Output</i>

Source: Own elaboration.

As shown in Table 19 at the end of the year, the company continue its operations and record output tax of $\text{EUR } 12,600 + 3,700 = \text{EUR } 16,300$ and input tax of $\text{EUR } 2,100 + 2,000 = \text{EUR } 4,100$ resulting in the total tax liability of $\text{EUR } 12,200$.

5.1.2 Income taxation

For the purpose of this model study taxation of income includes in the Czech Republic only the corporate income tax which is 19%. For the value of the acquired assets to be reflected in the cost, it is necessary to calculate the tax depreciation for the period before calculating the income tax.

Depreciation

As mentioned above, the company applies the straight-line depreciation for both the storage building and personal car. The storage building belongs to the depreciation group 5, so its useful life is 30 years. The coefficient for this group is 1.4 for the first year and 3.4 for the following years.

Because of the large amount of data the amounts of annual depreciation is shown in Appendix L. Table 20 shown only the calculated depreciation for the first three years of its useful life.

Table 20: Calculation of the depreciation of company's building in the Czech Republic in the first three years

Useful years	Coefficient	Annual depreciation	Accumulated depreciation	Net book value
1	1.4	EUR 5,636.07	EUR 5,636.07	EUR 396,939.79
2	3.4	EUR 13,687.60	EUR 19,323.67	EUR 383,252.82
3	3.4	EUR 13 687,60	EUR 33,011.27	EUR 369,565.22

Source: Own elaboration.

For the computation of straight-line depreciation of a building, the formula (1) is used in the first year. The depreciated amount for first-year equals to $(402,576.49/100)*1.4 = \text{EUR } 5,636.07$. For the following years, formula (2) was applied. The depreciated amount for the second year and the following years equals to $(402,576.49/100)*3.4 = \text{EUR } 13,687.60$. Additionally, Table 20 contains the information regarding the cumulated depreciation and carrying amount of the building.

The car belongs to the second depreciation group, so the useful life is five years. The coefficient for the first year is 11 and for the following years 22.25. The calculation of the depreciated amounts for the period of the useful life of the care is calculated in Table 21.

Table 21: Calculation of the depreciation of company's car in the Czech Republic

Useful life	Coefficient	Annual depreciation	Accumulated depreciation	Net book value
1	11	EUR 1,848.83	EUR 1,848.83	EUR 14,958.74
2	22.25	EUR 3,739.68	EUR 5,588.52	EUR 11,219.05
3	22.25	EUR 3,739.68	EUR 9,328.20	EUR 7,479.37
4	22.25	EUR 3,739.68	EUR 13,067.88	EUR 3,739.68
5	22.25	EUR 3,739.68	EUR 16,807.57	EUR 0.00

Source: Own elaboration.

As in the case of building, the formula (1) was used to calculate annual depreciation for the first year. The annual depreciation in subsequent years is equal to $(16,807.57/100)*11 = \text{EUR } 1,848.83$. Annual depreciation in subsequent years is calculated using the formula (2): $(16,807.57/100)*22.25 = \text{EUR } 3,739.68$.

So the total amount of deductible annual depreciation for 2022 is $5,636.07 + 1,848.83 = \text{EUR } 7,484.9$. It is crucial to pay attention to the non-deductible expenses when calculating the corporate income tax. The above mentioned amounts at the beginning of the chapter as non-deductible expenses can be marked as representation expenses in the amount of EUR 3,000 and provided as gifts in the amount of EUR 2,000. The provided gift can then be deductible in the amount of 30%. The whole calculation of corporate income tax is shown in Table 22.

Table 22: Calculation of the corporate income tax in the Czech Republic

Corporate income tax	Tax liability	
Profit		EUR 253,792.37
Paid interest expenses	-	EUR 20,500
Tax depreciation	-	EUR 7,484.90
Representation expenses	+	EUR 3,000
Gift	+	EUR 2,000
Adjusted tax base		EUR 230,807.47
Gift (10%)	-	EUR 2,000
Adjusted tax base		EUR 228,807.47
Tax rate		19%
Final tax liability		228,807.47*0.19 = EUR 43,473.4193 rounded to EUR 43,000

Source: Own elaboration.

The corporate income tax adjustment is based on deducting expenses from calculated profit. The company receives a loan and, during the taxation period, paid interest payments in the amount of EUR 20,500, which are fully deductible. Furthermore, depreciation was not included in the expenses during the calculation of the accounting profit. The annual depreciation is fully deductible. They are annually charged to expenses on an annual basis in the form of depreciation. As mentioned above, the amounts of representation expenses and provided gifts are added to the profit. After the adjustment, the profit company gets the tax base from which can be deductible the provided gift in the amount of 10% of taxable income. This amount is EUR 25,379.237, so the company can deduct the whole amount of the gift. The adjusted tax base is multiplied by the 19% tax rate at the end of the calculation. The computed final tax liability is EUR 43,473.4193, rounded down to thousands. So, the final liability is EUR 43,000.

5.2 Tax liability of German company

The following subchapters will demonstrate the calculation of the tax liability for the company settled in Germany in Zittau, marked called DE-COM.

5.2.1 Property taxation

To assess the property tax, it is necessary to know the value of a property that the tax office establishes according to the Act German Assessment Code. The value of a property is significantly different from the property's actual value. The tax office determines the property's value, but the calculation is not that transparent, so the calculation of property value is rough.

Due to the transition to the new system evaluation of property from January 2022 and the lack of available information for calculation of the value of the property, the property is evaluated under the new system. For commercial property under the new system the so-called method Sachwert will be used. In case of this method the values of building and land are calculated separately. Then both results are combined together.

To use this method for the valuation of a building it is important to reflect normal production cost in Appendix 42 of German Assessment Code, the construction price index published by Federal Ministry of Finance and the useful life of building according to the Appendix 38 of German Assessment Code (GAC) divided by the actual age of building. The computation of building value is executed in Table 23.

Table 23: Calculation of the building value in Germany

Real value of a building	Calculation
Normal production cost of a building in EUR/m² according to the Appendix 42 of GAC	EUR 711
Construction price index	$148.6/100 * 100 - 100 = 48.6\%$
Normal production cost of building	$711 + 48.6\% (711*0.486) = \text{EUR } 1056.546$
The building area	1.100 m ²
Building standard production value	$1056.546*1.100 = \text{EUR } 116,220.6$
Age of a building	$116,220.6*12/40 = 34,860.18$
Real value of a building	$116,220.6 - 34,860.18 = \text{EUR } 81,360.42$
The minimal value of a building (30%)	$116,220.6*0.3 = \text{EUR } 34,866.18$

Source: Own elaboration.

Table 23 shows the calculation of the real value of a building. Firstly, the normal production cost of a building according to the Appendix 42 of GAC is identified. Since the building is used for storage purposes and was built after the year 2005 the cost is EUR 711 per m². The construction price index published by the Federal Ministry of Finance for the year 2022 is equal to 148.6 (Bundesministerium der Finanzen, 2022). Since the last valuation of prices was performed in 2010 the value added to the cost is calculated as follows: the new construction price index is divided by old price index and then multiplied by 100 and reduced by 100. The 48% of the normal production cost are added to the normal production cost. Subsequently, the area of the building is multiplied by the normal production cost of building which results in building standard production value. Next, the computed age of the building is subtracted from. The age of building is computed as a difference between the age of a building in Appendix 38 of GAC which is 40 and the actual age of building which is 12. The result is then multiplied by the building standard production value. Subsequently, the value is further decreased by subtracting the standard production value. The result is the real value of building. It is also important to pay attention to the minimal value of the building which has to be at least 30% of the standard production value of a building.

Afterwards the value of land is calculated. For the calculation it is crucial to know the area of the land and the standard value of land published on the federal state websites. The calculation of land value is executed in Table 24.

Table 24: Calculation of the land value in Germany

Land value	Calculation
Area of land	3,690 m ²
Standard value of land	EUR 9 per m ²
Land value	3,690*9 = EUR 33,210

Source: Own elaboration.

Since the official websites with the standard value of land are not launched yet, the old system was used for at least estimation of the value. Based on this assumption, the standard value of the land is EUR 9 per m² (Staatsbetrieb Geobasisinformation und Vermessung Sachsen GeoSN, 2022). This value is based on the location a type of use of this property.

The standard value of the property is then multiplied with the area of the land and the result of EUR 33,210 is the land value. Subsequently, the building and land value are combined together, and the final property value is calculated. The calculation is shown in Table 25.

Table 25: Calculation of the property tax value in Germany

Property tax value	Calculation
Real value of a building	EUR 81,360.42
Land value	EUR 33,210
Preliminary property value	81,360.42 + 33,210 = EUR 114,570.42
Value coefficient according to Appendix 43 of GAC	0.50
Property tax value	114,570.42*0.50 = EUR 57,285.21 rounded on EUR 57,300

Source: Own elaboration.

The combined value of building and land is multiplied with the coefficient of 0.50 found in the Appendix 43 of GAC. Therefore, the value of property for the purpose of the property tax is equal to EUR 57,300.

After finding out the property's value, the type of property has to be determined. In this case, it is type B (immovable property). Then according to the Property tax Act, the coefficient is established. The property can be classified as another property, and therefore, a coefficient of 3.5‰ will be applied. Furthermore, it is necessary to determine the municipality multiplier. Since the company will be seated in Zittau, the multiplier is 520% for B-type properties and 330% for A-type properties (Zittau 2022). The calculation of the property tax is shown in Table 26.

Table 26: Calculation of the property tax in Germany

Property tax	Tax liability
Value of property	EUR 57,300
Coefficient	0.34 ‰
Municipality multiplier	520%
Final tax liability	$(57,300 * 0.00034) * 5.2 = \text{EUR } 101.3064$

Source: Own elaboration.

Firstly, the property's value is multiplied by the general coefficient established by the state of 3.5‰. Following the multiplication of municipality multiplier in the amount of 520%. After that, companies get the final tax liability in EUR 101.3064.

5.2.2 Vehicle tax

In the case of a vehicle tax, it is necessary to know the date of the first registration, which is, in this case, year 2022. This means that the new way of computation applicable for the vehicle from 1 January 2021 will be applied. As written in Table 4, the car has a gasoline motor with a 999 cm³ capacity. The CO² value is 120 grams per kilometer. The calculation is shown in Table 27.

Table 27: Computation of the vehicle tax in Germany

CO ² value tax	Tax liability
0 – 95 g/km	EUR 0
95 – 115 g/km	2.00*20 = EUR 40.00
115 – 135 g/km	2.20*15 = EUR 33.00
Engine size tax	10*2.00 = EUR 20.00
Final tax liability	40 + 33 + 20 = EUR 93.00

Source: Own elaboration.

In Table 27, the calculation of vehicle tax liability can be seen. It starts with the computation of the tax liability regarding the CO² value. The 95 g/km amount is tax-free, so no tax is calculated. Secondly, the tax liability for the 95 and 115 g/km range is computed.

The tax rate for this range is EUR 2 for g/km. So, the tax liability will equal EUR 40. Then follows the range from 115 to 135 g/km. Since the company car has only 120 g/km, the tax rate of EUR 2.20 multiplied only by 15 g/km. The tax liability is then EUR 33. Lastly, the engine size/type tax is computed. The tax rate of EUR 2 per 100 cm³ applies to the car with a gasoline motor. After the multiplication of tax rate and engine size, the computed liability is equal to EUR 20. After adding up all calculated liabilities, the result will be EUR 93.

5.2.3 Value-added tax

The limit for the registration to VAT in Germany is equal to EUR 50,000. According to Table 3 the company should exceed this limit in March 2022. Therefore, it will be obliged to register as a taxpayer. However, it is possible to become a taxpayer voluntarily, which is convenient for DE-COM GmbH, while the business partners of the company are also taxpayers. Table 4 include all operations incurred in the company in 2022. That information is general and has to be recalculated according to the German Value added tax Act. As mentioned before, there are two VAT rates in Germany. The general rate is 19% and is applied to almost all products that are not subject to the reduced rate.

The reduced rate is 7%. Tables 28 - 39 provide an overview of operations carried-out during the year. The tables includes the price without VAT, the appropriate tax rate, and computed VAT. Additionally, they contain the information, whether it is the input or output operation.

Table 28: Calculation of the VAT January in Germany

January					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of a new company car	16,807.57	19	3,193.44	20,001.01	<i>Input</i>
Purchase of a building	402,576.49	19	76,489.53	479,066.02	<i>Input</i>
Purchase of goods subject to the general tax rate	5,000	19	950	5,950	<i>Input</i>
Purchase of goods subject to the reduced rate	5,000	7	350	5,350	<i>Input</i>
Sale of goods with a standard rate	4,000	19	760	4,760	<i>Output</i>
Sale of goods with reduced rate	7,400	7	518	7,918	<i>Output</i>

Source: Own elaboration.

As shown in Table 28, at the beginning of the year the company purchase a new storage building with an input VAT of EUR 76,489.53 and a company car with an input VAT of EUR 3,193.44. Furthermore, the company buys some goods with a VAT of EUR 950 subject to the general tax rate and a VAT of EUR 350 from goods subject to the reduced tax rate. Some of these goods are sold with a general VAT of EUR 760 and reduced VAT to EUR 518. So, the final liability of company for January is $(760+518) - (3,193.44+76,489.53+950+350) = \text{EUR } -79,704.44$. The company can request the overpayment from the tax office.

Table 29: Calculation of the VAT February in Germany

February					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	7,000	19	1,330	8,330	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	7	1,050	16,050	<i>Input</i>
Sale of goods with a standard rate	10,000	19	1,900	11,900	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

As shown in Table 29, in February, the company purchases goods subject to the basic and reduced tax rates. The input tax then amounts to $\text{EUR } 1,330 + 1,050 = \text{EUR } 2,380$. At the same time, the company sell goods at the standard rate of tax and a reduced rate of tax, generating an output tax of $\text{EUR } 1,900 + 1,295 = \text{EUR } 3,195$. The company thus incurs a tax liability of $(1,900 + 1,295) - (1,330 + 1,050) = \text{EUR } 850$.

Table 30: Calculation of the VAT March in Germany

March					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	9,000	19	1,710	10,710	<i>Input</i>
Purchase of goods with reduced tax rate	10,000	7	700	10,700	<i>Input</i>
Sale of goods with a standard rate	10,000	19	1,900	11,900	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

In March, the company resumes its activities and sell and purchase goods, as shown in Table 30. These activities incur a tax liability of $(1,900+1,295) - (1,710+700) = \text{EUR } 785$.

Table 31: Calculation of the VAT April in Germany

April					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	9,000	19	1,710	10,710	<i>Input</i>
Purchase of goods with reduced tax rate	12,500	7	875	13,375	<i>Input</i>
Purchase of goods from another Member State	6,250	7	437.5	6,687.5	<i>Output</i>
Sale of goods with a standard rate	10,000	19	1,900	11,900	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

As shown in Table 31, in April on top of the purchase and sale of goods for the standard and reduced rate, the company purchase goods from another Member State subject to the reduced rate. In the case of this operation, it is a reverse charge system. This operation is considered as output one while the company is obligated to transfer the tax to the state. These goods are subject to the reduced tax rate in the amount of, EUR 437.5. The liability for purchased goods subject to the general rate is EUR 1,710 and for goods subject to the reduced rate is EUR 875. The tax liability for goods sell at the general rate is EUR 1,900 and for goods subject to the reduced rate is EUR 1,295. Those two operations are considered output tax operations. The monthly liability is then $(437.5+1,900+1,295) - 1,710+875 = \text{EUR } 1,047.5$.

Table 32: Calculation of the VAT May in Germany

May					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	9,000	19	1,710	10,710	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	7	1,050	16,050	<i>Input</i>
Sale of goods with a standard rate	20,000	19	3,800	23,800	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

The company continued its activities and as shown in Table 32, in May it purchases and sells goods subject to both the reduced VAT rate and the general tax rate. The company's tax liability is then: $(3,800+1,295) - (1,710+1,050) = \text{EUR } 2,335$.

Table 33: Calculation of the VAT June in Germany

June					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	12,000	19	2,318	14,318	<i>Input</i>
Purchase of goods with reduced tax rate	12,500	7	875	13,375	<i>Input</i>
Sale of goods with a standard rate	20,000	19	3,800	23,800	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

As shown in Table 33, in June the situation does not change, and the company buys goods with input tax totalling $2,318+875 = \text{EUR } 3,193$ and sells goods with output tax of $3,800+1,295 = \text{EUR } 5,095$. The resulting tax liability for the month of June is then EUR 1,902.

Table 34: Calculation of the VAT July in Germany

July					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	15,000	19	2,850	17,850	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	7	1,050	16,050	<i>Input</i>
Sale of goods with a standard rate	20,000	19	3,800	23,800	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

As shown in Table 34, in July the company buys and sell goods to its customers. The company's tax liability at the end of the month is: $(3,800+1,295) - (2,850+1,050) = \text{EUR } 1,195$.

Table 35: Calculation of the VAT August in Germany

August					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	15,000	19	2,850	17,850	Input
Purchase of goods with reduced tax rate	17,500	7	1,225	18,725	Input
Purchase of goods from another Member State	6,250	7	437.5	6,687.5	Output
Sale of goods with a standard rate	30,000	19	5,700	35,700	Output
Sale of goods with reduced rate	18,500	7	1,295	19,795	Output

Source: Own elaboration.

As shown in Table 35, in August the company buys goods with input tax of $2,850 + 1,225 = \text{EUR } 4,075$, which it then sell with output tax of $5,700 + 1,295 = \text{EUR } 6,995$. However, the company then make a purchase of goods at a reduced price from another EU Member State with a tax of EUR 437.5. The total tax liability at the end of the month is: $6,995 + 437.5 - 4,075 = \text{EUR } 3,357.5$.

Table 36: Calculation of the VAT September in Germany

September					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	20,000	19	3,800	23,800	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	7	1,050	16,050	<i>Input</i>
Sale of goods with a standard rate	30,000	19	5,700	35,700	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

As shown in Table 36, in September the company sells goods with output tax $5,700 + 1,295 = \text{EUR } 6,995$ and buys goods with input tax $3,800 + 1,050 = \text{EUR } 4,850$. The total tax liability is then $6,995 - 4,850 = \text{EUR } 2,145$.

Table 37: Calculation of the VAT October in Germany

October					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	22,000	19	4,180	26,180	<i>Input</i>
Purchase of goods with reduced tax rate	17,500	7	1,225	18,725	<i>Input</i>
Sale of goods with a standard rate	50,000	19	9,500	59,500	<i>Output</i>
Sale of goods with reduced rate	18,500	7	1,295	19,795	<i>Output</i>

Source: Own elaboration.

As shown in Table 37, in October the company continues its activities and realises a tax liability of $(9,500+1,295) - (4,180+1,225) = \text{EUR } 5,390$.

Table 38: Calculation of the VAT November in Germany

November					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	30,000	19	5,700	35,700	<i>Input</i>
Purchase of goods with reduced tax rate	15,000	7	1,050	16,050	<i>Input</i>
Sale of goods with a standard rate	60,000	19	11,400	71,400	<i>Output</i>
Sale of goods with reduced rate	37,000	7	2,590	39,590	<i>Output</i>

Source: Own elaboration.

During November, company purchases goods subject to the reduced and standard rates and at the same time sells some of its goods to customers subject to the reduced and standard rates as shown in Table 38. The total tax liability is then: $(11,400+2,590) - (5,700+1,050) = \text{EUR } 7,240$.

Table 39: Calculation of the VAT December in Germany

December					
Type of operation	Price without VAT (EUR)	VAT in %	VAT (EUR)	Price with VAT (EUR)	Input/Output operation
Purchase of goods with a standard rate	10,000	19	1,900	11,900	<i>Input</i>
Purchase of goods with reduced tax rate	20,000	7	1,400	21,400	<i>Input</i>
Sale of goods with a standard rate	60,000	19	11,400	71,400	<i>Output</i>
Sale of goods with reduced rate	37,000	7	2,590	39,590	<i>Output</i>

Source: Own elaboration.

In December, the company carry out business transactions with an output tax of $11,400 + 2,590 = \text{EUR } 13,990$ and an input tax of $1,900 + 1,400 = \text{EUR } 3,300$ as shown in Table 39. The total tax liability for December is then $\text{EUR } 13,990 - 3,300 = \text{EUR } 10,690$.

5.2.4 Income taxation

In Germany, the calculation of the corporate income tax is not as straightforward as in the Czech Republic. In Germany, the computation of the final liability consists of an income tax, a solidarity surcharge, and a trade tax. The calculation of all three parts will be executed in the following subchapters. Nevertheless, as in the Czech Republic, tax depreciation of fixed assets represents an important part of calculating the income taxes. Before the calculation itself, it is crucial to find out on the official websites of the Ministry of Finance the useful life of the assets. It is essential to notice that there are different tables for generally used assets and asses used by businesses in specific industries. In case of the model company applies the AfA (Absetzung für Abnutzung) tables for general asset usage. These tables inform that useful life of company car is six years.

So, the annual depreciation will be computed as the purchase price divided by the car's useful life, which equals: $16,807.57/6 = \text{EUR } 2801.26$. The complete overview of computed annual depreciation with information about accumulated depreciation and carrying amount of a property can be found in Table 40.

Table 40: Calculation of the annual depreciation of company car in Germany

Year	Annual depreciation	Accumulated depreciation	Net book value
1	EUR 2,801.26	EUR 2,801.26	EUR 14,006.31
2	EUR 2,801.26	EUR 5,602.52	EUR 11,205.05
3	EUR 2,801.26	EUR 8,403.78	EUR 8,403.79
4	EUR 2,801.26	EUR 11,205.04	EUR 5,602.53
5	EUR 2,801.26	EUR 14,006.30	EUR 2,801.27
6	EUR 2,801.26	EUR 16,807.56	EUR 0.00

Source: Own elaboration.

The situation regarding the depreciation of buildings is quite different. In the case of buildings, the depreciation is computed according to section 7 of the Income Tax Act. This section states that buildings used for business purposes registered after 1985 are depreciated annually by 3%. Suppose the company building purchase price is EUR 402,576.49 and 3% of the price is EUR 12,077.29. Suppose the purchase price is divided by the annual depreciated amount. In that case, the result is the number of years for which the asset is depreciated: $402,576.49/(402,576.49*0.03) = 33.3$ rounded on 34, which is EUR 12,077.29 as an annual depreciation. The calculation of annual depreciation in the first three years is shown in Table 40. Since the building will be depreciated for 34 years, the rest of the computed depreciation is shown in Appendix M.

Table 41: Calculation of the depreciation of building in Germany

Year	Annual depreciation	Accumulated depreciation	Net book value
1	EUR 12,077.29	EUR 12,077.29	EUR 390,499.19
2	EUR 12,077.29	EUR 24,154.59	EUR 378,421.90
3	EUR 12,077.29	EUR 36,231.88	EUR 366,344.61

Source: Own elaboration.

With the calculated car and building depreciation, it is possible to move on to the income tax calculation. Corporate income is taxed at 15% in Germany. The tax base is expressed as the difference between revenues and expenses. A detailed income tax calculation is given in Table 42.

Table 42: Calculation of the corporate income tax in Germany

Corporate income tax	Tax liability	
Profit		EUR 253,792.37
Paid interest payments	-	EUR 20,500
Tax depreciation	-	EUR 14,878.55
Representation expenses	+	EUR 3,000
Gift	+	EUR 2,000
Tax base		EUR 223,413.83
Gift	-	EUR 2,000
Adjusted tax base		EUR 221,413.83
Tax rate		15%
Tax liability		221,413.83*0.15 = EUR 33,212.073 rounded on EUR 33,212

Source: Own elaboration.

As shown in Table 42, from the profit of EUR 253,792.37 the paid interest payments and computed depreciated amounts are deductible for this year while it was not included in expenses during the profit calculation. As non-deductible are considered representation expenses and provided gift and so must be added up to the profit. After the adjustments, the company gets the tax base from which the provided gift can be deducted up to 20% of net taxable income, which is EUR 50,758.474. Therefore, the provided gift is fully deductible. The adjusted tax base is subsequently multiplied by the tax rate of 15%. The final tax liability is equal to EUR 33,212.

Solidarity surcharge

Furthermore, companies must pay a solidarity surcharge. The tax base of solidarity surcharge is the computed corporate income tax liability. The computation of the solidarity surcharge is shown in Table 43.

Table 43: Calculation of the solidarity surcharge in Germany

Solidarity surcharge	Tax liability
Tax base	EUR 33,212
Tax rate	5.5%
Tax liability	$33,212 * 0.055 = \text{EUR } 1,826.66$ rounded on EUR 1,827

Source: Own elaboration.

As it can be concluded from Table 43, the solidarity surcharge is computed as a multiplication of the final tax liability of corporate income tax in the amount of EUR 33,212 and 5.5%. The result is EUR 1,827.

Trade tax

Lastly, the company in Germany is obliged to pay the trade tax, which constitutes a significant income for municipalities. The assessment of the tax liability is nearly the same as in the case of corporate income tax, but there are several differences in deductible and non-deductible expenses.

Except for the state-established general tax rate of 3.5%, it is essential to find out the municipality multiplier. The municipality multiplier applied in Zittau is 420%. The calculation of trade tax is shown in Table 44.

Table 44: Calculation of the trade tax in Germany

Trade tax		Tax liability
Profit		EUR 253,792.37
Paid interest expenses	-	EUR 20,500
Tax depreciation	-	EUR 7,484.90
Representation expenses	+	EUR 3,000
Gift	+	EUR 2,000
Tax base		EUR 230,807.47
Paid interest payments (1/4)		EUR 5,125
Taxable value of real estate (1.2%)	-	EUR 687.6
Adjusted tax base		EUR 230,119.87
Tax free amount	-	EUR 3,900
Tax rate		3.5%
Trade tax assessment base		226,219.87*0.035 = EUR 7,917.7
Multiplier		420%
Tax liability		7,917.7*4.20 = EUR 33,254.32

Source: Own elaboration.

In case of interest payments that are deducted, there has to be added $\frac{1}{4}$ of them back, which is EUR 5,125. However, this is done only when the amount exceeds the limit of EUR 100,000. Then the tax base should be reduced by the 1.2% of the value of real estate used to calculate property tax. So, the extracted amount is EUR 687.6. The adjusted tax base is then in the amount of 230,119.87. There is also a tax-free amount for companies in the amount of EUR 3,900. The result is then multiplied by the tax rate of 3.5%, which is called the trade tax assessment base multiplied by the municipality multiplier of 420%. The final trade tax liability is EUR 33,254.32.

6 Analysis of differences

There are similarities and also relatively very differences in both tax systems. The following chapter will discuss the differences and similarities in more detail from the tax structure and the assessment of the tax point of view. At the end of the chapter, the recommendation for the company will be provided.

At first glance, the tax systems of the Czech Republic and Germany are not significantly different. Both systems distinguish between direct and indirect taxes. One difference is that the German system consists of three levels. Taxes are levied, and tax rates are set by the federal government, federal states, and municipalities. In contrast, in the Czech Republic, taxes are imposed by the state, and municipalities can impose specific coefficients in the case of certain taxes. Given both countries' membership in the European Union, one can assume that indirect taxes are very similar. Both countries apply VAT and excise duties according to the applicable EU directives. As far as direct taxes are concerned, the structure is also very similar. Both countries impose corporate and personal income taxes, the property tax, and the vehicle tax. The main difference can be seen in calculating the individual taxes and the amount of additional taxes regarding income taxation. A more detailed overview of differences and similarities is included in Table 45.

Table 45: Differences and similarities in the structure of the tax systems

Income taxes		
Only in the Czech Republic	Common	Only in Germany
	Personal income tax	Solidarity surcharge
	Corporate income tax	Trade tax
	Vehicle tax	Church tax
	Property tax	

Source: Own elaboration.

As shown in Table 45, both tax systems include personal income tax, corporate income tax, and vehicle tax. There is a minor difference in the taxation of property.

The tax consists of two parts in the Czech Republic: a land tax and a property tax. There is only property tax in Germany, including taxation of land and buildings. The building and land value are determined separately, but the tax is calculated from the combined value. The combined value, called the assessment value, is multiplied by the federal tax rate and municipality multiplier.

Furthermore, Germany imposes taxes that are not found in the Czech tax system. This includes trade tax imposed on business income, mainly providing income to municipalities. In this tax case, the tax rates are determined by both the state and the municipalities. Additionally, there is a solidarity surcharge paid both on the income of individuals and on the income of companies. This tax was first introduced in 1995 and is aimed to finance the development of infrastructure and education in the former GDR states. The calculated corporate income tax liability represents the basis for its calculation. Lastly, the church tax is applied only to personal income taxpayers who are members of church communities. The amount of the tax depends on the location.

Personal income tax

As far as income tax is concerned, the system in the two countries can be considered entirely different. There is only one income tax rate of 15% in the Czech Republic and possibly a solidarity tax for high-income earners. The tax base is an income generated by the person for example from employment or independent activity. In Germany, a progressive taxation system is applied. There are the income classes based on the amount of income with certain tax rate. The tax base is then the income less the costs incurred to achieve it. This includes, for example, transport costs. Therefore, it is difficult to establish a general procedure for calculating the tax liability, and each taxpayer must be assessed individually.

Furthermore, German taxpayers are obliged to pay a solidarity surcharge, and registered religious community members must pay the church tax. Tax credits are very similar in both countries. There is, for example, a child tax credit. It can be concluded that taxpayers in the Czech Republic are significantly better off regarding the income tax burden. Furthermore, the income tax system appears more complicated at first sight than the Czech one.

Corporate income tax

At first glance, the taxation of company profits may seem very similar in both countries. Both states apply a linear tax on profits. In the Czech Republic, the tax rate is 19%, and in Germany, it is 15%, making Germany seem much more attractive to businesses. The tax base is also the exact difference between income and expenses. The calculated profit is subsequently adjusted for deductible and non-deductible items, which are also very similar. In both countries, there is a possibility to deduct donations from the tax base, but the amount differs. It is possible to remove gifts up to 20% of net taxable income in Germany. A gift deduction is possible for up to 10% of taxable income in the Czech Republic. This amount has been changed frequently due to the coronavirus crisis, and it may change again. In both countries, the depreciation of a tangible asset is recognized as an expense. The calculation methods differ slightly in both countries. There are two types of depreciation in the Czech Republic, straight-line and accelerated. The taxpayers can choose by themselves which better suits them. Fixed assets are listed in a table with the appropriate, useful life and rates by linear depreciation and coefficient by accelerated depreciation for the first and subsequent years.

In Germany, straight-line depreciation is generally used. In some cases, other types of depreciation can also be applied. The useful life of fixed assets can be found in tables published by the Ministry of Finance. However, if a company carries out an activity falling within one of the groups of activities for which there are specific tables, it must follow them. Unlike the general rules, there is also a coefficient for every depreciated asset in these tables. In the case of buildings, the situation is different. It is governed by the Personal Income Tax Act, which determines the percentage at which the building is depreciated on an annual basis according to the date of construction of the building.

A company's tax liability does not end with income tax in Germany. The company is obliged to pay a solidarity surcharge of 5.5%, similarly to personal income taxpayers. The tax base for this tax is the calculated corporate income tax liability. Furthermore, companies are liable to pay a trade tax. The tax base is the difference between income and expenses, which is then subsequently adjusted.

Some deductible items are similar to the corporate income tax, but some are different. For example, a taxpayer can deduct 1.2% of the value of the building determined for the property tax calculation from the tax base. In the case of trade tax, 25% paid interest payments have to be added to the tax base unless it does not exceed the amount of EUR 100,000. For this type of tax, there is also a tax-free amount of EUR 3,400. The adjusted tax base is then multiplied by the tax rate set by the state and then by the rate set by the municipality.

Vehicle tax

In the case of the German system, it can be said that the system is more modern because it addresses environmental issues and favours environmentally friendly vehicles. Whereas the system in the Czech Republic only assesses the engine capacity and the registration period of the car. In both countries, electric vehicles are exempt from the tax. Furthermore, a vehicle tax is imposed on all vehicles in Germany. On the contrary, in the Czech Republic tax is levied only on vehicles used for business purposes. This fact is probably very advantageous for the country's citizens, but not for the revenue of the state budget or the business.

Property tax

The property tax system is very different in both countries. In the Czech Republic, the land tax is first set separately, based on the area of the land in square meters and the tax rate set by the state in the majority of cases. The tax liability may be increased based on a coefficient according to the municipality's population, and the municipality may also develop its correction coefficient according to the law. In the case of buildings, the system is similar. The tax is based on the area expressed in square meters, the purpose of use, and the type of building. A location-valuation coefficient and a coefficient set by the municipality are also applied to the property.

In Germany, the tax base is not the area expressed in square meters but the land and building value determined by the federal state office. This value is derived from the building's or land's floor area and its use. The land valuation system is often described as non-transparent due to the lack of accessibility of the data for the valuation.

Buildings and land are assessed based on 1935 land values or building costs in the eastern states and 1964 land values in the western states. It was initially intended to update the values every six years, but according to available information, the reassessment does not take place due to time constraints. The calculation of property values should change in 2025 and be more equitable. The assessed property value is then multiplied by the tax rate set by the state and then by the rate set by the municipality. The rates vary based on the type of property.

Value-added tax

Thanks to the European Union, the value-added tax is one of the taxes with a high level of harmonization. The European Community has issued directives and requirements for harmonizing this tax, and therefore the elements and calculations are almost identical in the compared countries. The directive obliges states to have one introductory rate of at least 15% and the possibility to apply two reduced rates of at least 5%. Both Germany and the Czech Republic comply with these rates. The difference can be found in the structure of the tax rates. In the Czech Republic, there are three rates: a primary 21%, a first reduced 15%, and a second reduced 10%. There are then two rates in Germany: a basic one of 19% and one reduced in the amount of 7%. There are also differences in the goods subject to the individual rate. A slight difference can also be identified in the registration minimum. In the Czech Republic, the conversion to EUR is approximately EUR 40,258, and in Germany EUR 50,000. In both countries, the tax return is then filed monthly.

Excise duties

As in the case of VAT, the structure and tax rates are influenced by the EU membership of both countries. The system of imposing excise duties is very similar in both countries. Germany and beyond EU-designated products impose excise duties, for example, on coffee.

6.1 Recommendation

Based on both systems' calculations and overall analysis, it would be more advantageous for the company to start doing business in the Czech Republic from a tax perspective, as shown in Table 46.

Table 46: Final tax liability of company in the Czech Republic and Germany

Tax	Tax liability in the Czech Republic	Tax liability in Germany
Corporate income tax	EUR 43,000	EUR 33,212
Solidarity surcharge	-	EUR 1,827
Trade tax	-	EUR 33,254.32
Property taxes	EUR 4,857.73	EUR 101.3064
Vehicle tax	EUR 37.68	EUR 93
VAT	EUR - 74,851.65	EUR - 68,412.97
Total tax liability	EUR -26,956.24	EUR 74.6564

Source: Own elaboration.

The corporate income tax rate is lower in Germany than in the Czech Republic. However, considering how many other taxes in the form of solidarity surcharge and trade tax the company has to pay, its total tax burden in terms of corporate income tax is significantly lower in the Czech Republic. The company's total tax liability in Germany would be EUR 33,212 plus EUR 1,827 plus EUR 33,254.32, and in the Czech Republic, only EUR 43,000. From a property tax perspective, it would probably be more advantageous to do business in Germany, where the property valuation for tax purposes is substantially lower. However, the calculation method should change in the coming years.

The tax on vehicles was EUR 37.68 in the Czech Republic and EUR 93 in Germany. In the Czech Republic, the tax is also lower in this case. And due to the current situation, where tax payments are forgiven in the Czech Republic, the company would not have to pay the advances payments of this tax in the first year.

In the case of VAT, the table shows that the value that the company receives as an overpayment for the whole year is higher in the Czech Republic. This result can be considered distorted due to purchasing a property and a company car. The VAT rates that would apply to the firm are lower in Germany than in the Czech Republic. This recommendation is based on a tax perspective only.

However, even from the point of view of the price of labour, for example, the Czech Republic can be considered more advantageous.

Conclusion

This thesis aimed to compare the Czech and German tax systems, identified differences, and analyzed them. The purpose of this thesis was to provide a basis for a new company to decide on the establishment of its business based on tax burden.

The thesis contains six chapters. The first chapter deals with an introduction to the field of taxation. The different tax classifications are mentioned, and the individual taxes are described. The importance of taxes to the state budget is also highlighted. The second chapter focuses on the issue of tax harmonization in the European Union. A brief history of tax harmonization is described. The chapter is divided into two subchapters examining the harmonization of direct and indirect taxes separately. For indirect taxes, the directives governing the area are mentioned. In the case of direct taxation, the reason for the low level of harmonization is explained. Therefore, the directives are not mentioned in the harmonization of indirect taxes.

The following two chapters describe the tax systems of the Czech Republic and Germany. Both chapters include an overview and division of taxes into direct and indirect one. An overview of the legislation governing each tax is also given. In the subchapters, individual taxes are discussed. The subject matter of the tax, exemptions from the subject matter of the tax, tax rates, and possible tax rebates are mentioned throughout.

In chapter 5, a tax liability calculation for a model company is made. The tax that considers the tax liability in a given country as one of the factors for establishing its business. The subchapters contain the calculation of the various taxes based on the findings mentioned in the previous chapters. In the last chapter, an analysis of the tax systems based on the calculations is made. The tax systems are compared based on individual taxes and the amount of tax calculated for a given company. Based on this analysis, a recommendation is given to the company to establish its business in the Czech Republic because of the very high corporate taxation.

Both systems distinguish between direct and indirect taxes. There is a big difference in the taxation of corporate profits. In the Czech Republic, companies' income is taxed at a linear

rate of 19%, whereas in Germany, the income is taxed first at a linear corporate income tax rate of 15%. Then a 5.5% solidarity surcharge is levied on the resulting tax. In addition, a trade tax must be calculated. This tax is also based on the difference between income and expenses, but different rules are applied for adjusting the tax base. There are no significant differences in other taxes. In the case of the vehicle tax, the calculation in Germany is based on CO² values and, as in the Czech Republic, on engine capacity. However, there is no assessment of the environmental performance of the car in the Czech Republic. The property tax involves a similar procedure, but the tax base is different. In the Czech Republic, the value is readily ascertainable by law, whereas, in Germany, the approach to these values is very complex and determined by the tax office. The only difference is in the VAT rates, two in Germany and three in the Czech Republic. The structure of excise duties is also similar, except that they apply this tax to other commodities in Germany. Based on the calculations and analysis, the company is recommended to locate its business in the Czech Republic when evaluating the tax aspect.

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Appendix A: Overview of laws regulating taxation in the Czech Republic

General principle	Act No. 280/2009 Coll., on tax procedure code
Direct taxes	Act No. 586/1992 Coll., on income taxes
	Act No. 338/1992 Coll., on real estate tax
	Act No. 16/1993 Coll., on vehicle tax
Social security contribution	Act No. 589/1992 Coll., on contribution on social security contribution and the unemployment policy
	Act No. 187/2006 Coll., on sickness contribution
Health insurance contribution	Act No. 5892/1992 Coll., on health care contributions
Indirect taxes	Act No. 235/2004 Coll., on value added tax
	Act No. 353/2003 Coll., on excise duties
	Act. No. 261/2007 Coll., on stabilization of public budgets, arts considering the taxation of the electricity, natural gas and solid fuels

Source: Own elaboration.

Appendix B: Depreciation groups of assets in the Czech Republic

Depreciation group	Example of an asset	Useful life
1	stationery and office supplies, computers	3
2	trucks, accumulators, machines, buses, airplanes, cars, furniture	5
3	turbines, air conditioning, ships, lifts	10
4	fencing, towers, power plants, industrial chimneys	20
5	buildings, flats, bridges, roads, waterworks	30
6	administrative buildings, department stores, hotels, schools, museums, churches	50

Source: Own elaboration based on Marková, 2022, p. 45.

Appendix C: Rates for annual straight-line depreciation in the Czech Republic

Depreciation group	Rates		
	For the first year	For subsequent years	For the increased entry price
1	20	40	33.3
2	11	22.25	20
3	5.5	10.5	10
4	2.15	5.15	5.0
5	1.4	3.4	3.4
6	1.02	2.02	2.0

Source: Own elaboration based on Marková, 2021, p. 46.

Appendix D: The coefficients for the accelerated depreciation in the Czech Republic

Depreciation group	Coefficient		
	For the first year	For subsequent years	For increased residual value
1	3	4	3
2	5	6	5
3	10	11	10
4	20	21	20
5	30	31	30
6	50	51	50

Source: Own elaboration based on Marková 2021, p 47.

Appendix E: Tax rates for personal vehicles in the Czech Republic

Engine capacity	Tax rate
up to 800 cm ³	CZK 1,200
from 800 cm ³ to 1.250 cm ³	CZK 1,800
from 1.250 cm ³ to 1.500 cm ³	CZK 2,400
from 1.500 cm ³ to 2.000 cm ³	CZK 3,000
from 2.000 cm ³ to 3.000 cm ³	CZK 3,600
above 3.000 cm ³	CZK 4,200

Source: Own elaboration based on Marková, 2022, p 117.

Appendix F: Tax rates of land tax in the Czech Republic

Type of land	Tax rate
arable land, hop fields, vineyards, garden, orchard	0.75%
permanent grassland, commercial Forest, pond with intensive and industrial fish farming	0.25%
paved areas of land used for primary agricultural production, forestry, and water management	CZK 1.00 per m ²
paved land used for: industry, construction, transport, energy, other agricultural production, other business activities	CZK 5.00 per m ²
building plot	CZK 2.00 per m ²
built-up area, courtyard, and other lands	CZK 0.20 per m ²

Source: Own elaboration based on Marková, 2022, p. 109.

Appendix G: Tax rates for buildings and dwelling units in the Czech Republic

Type of the building	Tax rate in CZK per m ²	Coefficients	
		Municipal	National parks
residential houses	2.00	-	-
<i>+ other construction forming accessories to a residential house</i>	2.00	-	-
buildings for recreation	6.00	none/1.5	2.00
<i>+ a building that fulfills an additional function to a building for individual recreation</i>	2.00	none/1.5	2.00
garage	8.00	none/1.5	-
buildings used for business activities			
primary agricultural production, forestry, and water management	2.00	none/1.5	-
industry, construction, transport, energy, other agricultural production	10.00	none/1.5	-
other business activities	10.00	none/1.5	-
other buildings	6.00	-	-
other dwelling units	2.00	-	-
separate non-residential space used for business activities			
primary agricultural production, forestry, and water management	2.00	none/1.5	-
industry, construction, transport, energy, other agricultural production	10.00	none/1.5	-
other business activities	10.00	none/1.5	-
separate non-residential space used as a garage	8.00	-	-
other separate non-residential space	2.00	-	-

Source: Own elaboration based on Radvan 2020, p. 56.

Appendix H: Coefficients for land and building tax according to the location in the Czech Republic

Number of inhabitants	Coefficient
up to 1,000	1.0
above 1,000 up to 6,000	1.4
from 6,000 up to 10,000	1.6
from 10,000 up to 25,000	2.0
from 25,000 up to 50,000	2.5
above 50,000	3.5

Source: Own elaboration based on Marková 2022, p. 109.

Appendix I: Overview of laws regulating taxation in Germany

The general principle	The Fiscal Code of Germany
Income taxation	Income Tax Act (Einkommensteuergesetz)
	Corporate Income Tax Act (Körperschaftsteuergesetz)
	Trade Tax Act (Ewerbsteuergesetz)
	Solidarity Surcharge Act (Solidaritätszuschlaggesetz)
	Church Tax Act (Kirchensteuergesetz)
Vehicle tax	Vehicle tax act (Kraftfahrzeugsteuergesetz)
Property tax	Property Tax Act (Grundsteuergesetz)
	German Assessment Code (Bewertungsgesetz)
Value Added	Value added tax Act (Umsatzsteuergesetz)
Excise duties	Basic Law (Grundgesetz für die Bundesrepublik Deutschland)
	Internal Consumption Market Act (Verbrauchssteuerbinnenmarktgesetz)

Source: Own elaboration based on Jochum 2018.

Appendix J: Overview of the rates of vehicle tax regarding CO² values in Germany

Group	CO² value in g/km	Tax rate in EUR per g/km
1	over 95 to 115	2.00
2	over 115 to 135	2.20
3	over 135 to 155	2.50
4	over 155 to 175	2.90
5	over 175 to 195	3.40
6	over 195	4.00

Source: Own elaboration based on Generalzolldirektion 2022.

Appendix K: Calculation of value of property in Germany

Real value of building			Note
Normal production cost of building		§ 259 Abs. 1 BewG, Anlage 42 Nr. II	
Construction price index	+	§ 259 Abs. 3 BewG	
Normal production cost of building	=	§ 259 Abs. 3 BewG	
The building area	*	§ 259 Abs. 2 BewG, Anlage 42 Nr. I	
Building standard production value	=	§ 259 Abs. 2 BewG	
Age of building	-	§ 259 Abs. 4 BewG, Anlage 38	Age of building according to Appendix 38/Actual age of building*building production value
Real value of building	=	§ 259 BewG	

Source: Own elaboration based on Grundsteuer.de 2022.

Appendix L: Depreciation of building in the Czech Republic

Year	Coefficient	Annual depreciation	Accumulative depreciation	Net book value
1	1,4	EUR 5,636.07	EUR 5,636.07	EUR 396,940.42
2	3,4	EUR 13,687.60	EUR 19,323.67	EUR 383,252.82
3	3,4	EUR 13,687.60	EUR 33,011.27	EUR 369,565.22
4	3,4	EUR 13,687.60	EUR 46,698.87	EUR 355,877.62
5	3,4	EUR 13,687.60	EUR 60,386.47	EUR 342,190.02
6	3,4	EUR 13,687.60	EUR 74,074.07	EUR 328,502.42
7	3,4	EUR 13,687.60	EUR 87,761.67	EUR 314,814.81
8	3,4	EUR 13,687.60	EUR 101,449.28	EUR 301,127.21
9	3,4	EUR 13,687.60	EUR 115,136.88	EUR 287,439.61
10	3,4	EUR 13,687.60	EUR 128,824.48	EUR 273,752.01
11	3,4	EUR 13,687.60	EUR 142,512.08	EUR 260,064.41
12	3,4	EUR 13,687.60	EUR 156,199.68	EUR 246,376.81
13	3,4	EUR 13,687.60	EUR 169,887.28	EUR 232,689.21
14	3,4	EUR 13,687.60	EUR 183,574.88	EUR 219,001.61
15	3,4	EUR 13,687.60	EUR 197,262.48	EUR 205,314.01
16	3,4	EUR 13,687.60	EUR 210,950.08	EUR 191,626.41
17	3,4	EUR 13,687.60	EUR 224,637.68	EUR 177,938.81
18	3,4	EUR 13,687.60	EUR 238,325.28	EUR 164,251.21
19	3,4	EUR 13,687.60	EUR 252,012.88	EUR 150,563.61
20	3,4	EUR 13,687.60	EUR 265,700.48	EUR 136,876.01
21	3,4	EUR 13,687.60	EUR 279,388.08	EUR 123,188.41
22	3,4	EUR 13,687.60	EUR 293,075.68	EUR 109,500.81
23	3,4	EUR 13,687.60	EUR 306,763.29	EUR 95,813.20
24	3,4	EUR 13,687.60	EUR 320,450.89	EUR 82,125.60
25	3,4	EUR 13,687.60	EUR 334,138.49	EUR 68,438.00
26	3,4	EUR 13,687.60	EUR 347,826.09	EUR 54,750.40

27	3,4	EUR 13,687.60	EUR 361,513.69	EUR 41,062.80
28	3,4	EUR 13,687.60	EUR 375,201.29	EUR 27,375.20
29	3,4	EUR 13,687.60	EUR 388,888.89	EUR 13,687.60
30	3,4	EUR 13,687.60	EUR 402,576.49	EUR 0.00

Source: Own elaboration.

Appendix M: Depreciation of building in Germany

Year	Annual depreciation	Accumulative depreciation	Net book value
1	EUR 12,077.29	EUR 12,077.29	EUR 390,499.19
2	EUR 12,077.29	EUR 24,154.59	EUR 378,421.90
3	EUR 12,077.29	EUR 36,231.88	EUR 366,344.61
4	EUR 12,077.29	EUR 48,309.18	EUR 354,267.31
5	EUR 12,077.29	EUR 60,386.47	EUR 342,190.02
6	EUR 12,077.29	EUR 72,463.77	EUR 330,112.72
7	EUR 12,077.29	EUR 84,541.06	EUR 318,035.43
8	EUR 12,077.29	EUR 96,618.36	EUR 305,958.13
9	EUR 12,077.29	EUR 108,695.65	EUR 293,880.84
10	EUR 12,077.29	EUR 120,772.95	EUR 281,803.54
11	EUR 12,077.29	EUR 132,850.24	EUR 269,726.25
12	EUR 12,077.29	EUR 144,927.54	EUR 257, 648.95
13	EUR 12,077.29	EUR 157,004.83	EUR 245,571.66
14	EUR 12,077.29	EUR 169,082.13	EUR 233,494.36
15	EUR 12,077.29	EUR 181,159.42	EUR 221,417.07
16	EUR 12,077.29	EUR 193,236.71	EUR 209,339.77
17	EUR 12,077.29	EUR 205,314.01	EUR 197,262.48
18	EUR 12,077.29	EUR 217,391.30	EUR 185,185.19
19	EUR 12,077.29	EUR 229,468.60	EUR 173,107.89
20	EUR 12,077.29	EUR 241,545.89	EUR 161,030.60
21	EUR 12,077.29	EUR 253,623.19	EUR 148,953.30
22	EUR 12,077.29	EUR 265,700.48	EUR 136,876.01
23	EUR 12,077.29	EUR 277,777.78	EUR 124,798.71
24	EUR 12,077.29	EUR 289,855.07	EUR 112,721.42
25	EUR 12,077.29	EUR 301,932.37	EUR 100,644.12
26	EUR 12,077.29	EUR 314,009.66	EUR 88,566.83

27	EUR 12,077.29	EUR 326,086.96	EUR 76,489.53
28	EUR 12,077.29	EUR 338,164.25	EUR 64,412.24
29	EUR 12,077.29	EUR 350,241.55	EUR 52,334.94
30	EUR 12,077.29	EUR 362,318.84	EUR 40,257.65
31	EUR 12,077.29	EUR 374,396.14	EUR 28,180.35
32	EUR 12,077.29	EUR 386,473.43	EUR 16,103.06
33	EUR 12,077.29	EUR 398,550.72	EUR 4,025.76
34	EUR 4,025.76	EUR 402,576.48	EUR 0.00

Source: Own elaboration.