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Value added tax: effectiveness and legal regulation in Ukraine and the European Union

Abstract. *Introduction.* The accounting and tax legislation of Ukraine is in the process of its approximation to the requirements of the European Union. This is especially true for taxes accompanying the movement of goods and services in the context of cooperation between countries, with value added tax (VAT) being the main of these taxes is. *Purpose.* The purpose of the paper is to identify both common and distinctive features of the Ukrainian tax legislation on VAT with regard to the European requirements according to the current Association Agreement, assess the effectiveness of VAT rates and identify general trends in the dynamics of structural fractions of VAT in GDP and VAT rates. *Methods.* We applied the methods of scientific analysis and comparison, induction, and a systematic approach. Also, we used the expert judgment method to determine the likelihood of positive and negative consequences of lowering the VAT rate. *Results.* The study investigates the formation of legislation on administration of VAT in both the EU and Ukraine. The research determines the law basic eligibility criteria within the definition of: taxpayers, objects of taxation, tax base, tax accounting rules, tax primary documents and reports, and methods of administration. The article compares the basic details of the primary documents as well as their common and distinctive features. In particular, we compared primary and summary documents registration operations for displaying the electronic VAT administration system as well as general and reduced VAT rates in Ukraine and the EU. The authors of the article propose the main steps towards the convergence of electronic forms of primary documents. We conducted an analysis of the efficiency of VAT rates in both the EU and Ukraine and identified the factors that impact the change in the relevant indicators. The conducted research offers an overview of modern European trends in terms of improving VAT administration. *Discussion.* There is no absolutely effective VAT administration scheme. Therefore, the issue remains open and controversial. The study of the effectiveness of VAT rates in the EU and Ukraine has shown that, there was a decline in the efficiency in half of the EU countries during the 2014-2017 period. It has been estimated that a reduction of the joint European rate of VAT up to 15%, under certain specified conditions, would increase the efficiency of VAT rates in all EU countries and lead to other positive effects.

Keywords: Value Added Tax; VAT; European Union; Ukraine; Integration; VAT Taxpayers; Objects of VAT Taxation; VAT Tax Base; VAT Tax Accounting Rules; VAT Tax Primary Documents; VAT Reports
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Податок на додану вартість: ефективність і правове регулювання в Україні та Європейському Союзі

Анотація
Метою роботи є визначення основних загальних та відмінних особливостей українського податкового законодавства щодо податку на додану вартість (ПДВ) з огляду на європейські вимоги відповідно до чинної Угоди про асоціацію, оцінка ефективності ставок ПДВ і виявлення загальних тенденцій, що склались у динаміці структурних часток ПДВ у ВВП та ставок ПДВ. Проведено дослідження становлення законодавства щодо адміністрування ПДВ в ЄС та Україні. Визначено основні критерії прийнятності права в межах категорій, таких як платники податків, об'єкт оподаткування, податкова база, правила податкового обліку та звітності, податкові первинні документи та звіти, методи адміністрування. Проаналізовано спільні й відмінні риси основних реквізитів первинних документів. Проведено порівняння реєстраційних операцій з документування електронної системи адміністрування ПДВ. Досліджено загальні та знижені ставки ПДВ України та країн ЄС, а також тенденції їх зміни з 2010 року. Проведено аналіз ефективності ставок ПДВ у країнах ЄС та Україні, виявлено фактори, що вплинули на зміну показників. Зроблено огляд сучасних європейських напрямків щодо вдосконалення адміністрування ПДВ. Вивчено відповідність методів боротьби з податковими ямами в Україні до загальних принципів податкової реформи в ЄС. Запропоновано подальші кроки у напрямку податкової реформи в Україні в контексті європейської інтеграції.
Ключові слова: податок на додану вартість; ПДВ; Європейський Союз; Україна; інтеграція; платники податку на додану вартість; об'єкти оподаткування ПДВ; бази оподаткування ПДВ; правила ведення обліку з податку на додану вартість; податкові документи; податкові звіти.

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Налог на добавленную стоимость: эффективность и правовое регулирование в Украине и Европейском Союзе

Аннотация
Целью работы является определение основных общих и отличительных особенностей украинского налогового законодательства по налогу на добавленную стоимость (НДС) с учетом европейских требований, касающихся действующего Соглашения об ассоциации, а также оценка эффективности ставок НДС и выявление общих тенденций, сложившихся в динамике структурных частей НДС в ВВП и ставок НДС. Проведено исследование законодательства относительно администрирования НДС в ЕС и Украине. Определены основные критерии приемлемости права в рамках категорий, таких как налогоплательщики, объект налогообложения, налоговая база, правила налогового учета и отчетности, налоговые первичные документы и отчеты, методы администрирования. Проанализированы общие и отличительные черты основных реквизитов первичных документов. Проведено сравнение регистрационных операций по документированию электронной системы администрирования НДС. Исследованы общие и сниженные ставки НДС Украины и стран ЕС и тенденции их изменения с 2010 года. Проведен анализ эффективности ставок НДС в странах ЕС и Украине; выявлены факторы, повлиявшие на изменение показателей. Сделан обзор современных европейских направлений по совершенствованию администрирования НДС. Изучено соответствие методов борьбы с налоговыми ямами в Украине с общими принципами налоговой реформы в ЕС. Предложены дальнейшие шаги в направлении налоговой реформы в Украине в контексте европейской интеграции.
Ключевые слова: налог на добавленную стоимость; НДС; Европейский Союз; Украина; интеграция; плательщики налога на добавленную стоимость; объекты налогообложения НДС; базы НДС; правила ведения учета по налогу на добавленную стоимость; налоговые документы; налоговые отчеты.

1. Introduction

The signing of the Association Agreement between Ukraine and the European Union in 2014 obliged our state to take measures to improve the Ukrainian tax system and bring it to standards and principles that would not conflict with the requirements of the European Union.

The goal of this improvement is further intensification of economic relations, trade, investment and fair competition. In particular, attention was paid to the control of taxes, with an emphasis on VAT refund procedures in order to ensure effective tax collection and strengthen the fight against tax fraud, as well as evasion of tax payment [29].

A value added tax was first introduced in France by Maurice Laure in 1954 as a universal excise tax (indirect tax) in the form of payment of a portion of value added created at all stages of the production and sale of products (services) to the budget of the country. The common system of the value added tax is based on the concept of free movement of goods within the framework of the European Union and, in the case of Ukraine's integration into the EU, the compliance of VAT administration methods and norms will make this process for taxpayers in Ukraine painless.

2. Brief Literature Review

The experience of the EU in the field taxation has always been relevant for Ukrainian experts from Ukraine, especially for modern reformers in the Government who are developing resuscitation packages of reforms (V. Dubrovsky, O. Makeeva and others) [18]. The attention of reformers is focused on improving VAT administration and improving its transparency, in particular, in the mechanisms of reimbursement. Among modern European experts, the problem of VAT and the improvement of its administration are researched by C. Authtman (2015) [2], L. Barbone (2012) [3], L. Bartunkova (2016) [20], R. Bird (2012) [3], C. Beilshmidt (2015) [2], T. Grills (2010) [8], J. Dronner (2015) [2], P. Dylewskiy (2017) [11], W. Hellerstein (2010) [8], M. Keen (2011) [9], M. Lamensch (2017) [12], B. Lockwood (2010) [10], U. Lomas (2017) [10], M. Mattig (2015) [2], B. Mesdom (2015) [16], P. Semerad (2016) [20], K. Spies (2017) [23] and J. Vazguez-Caro (2012) [3]. Special attention is devoted to the study of the efficiency of interest rates of VAT, in particular by H. Celeby (2017) [19], S. Hodzic (2017) [19], H. Simovic and M. Deskar-Skrbic (2016) [22], and P. Sopek, (2012) [24], who studied the effectiveness of interest rates in individual EU countries and Turkey in the period up to and including 2013. It should be noted that the best transparent mechanism of VAT administration has not yet been invented. In Ukraine, the problems of VAT reform are studied by M. Andriyash (2014), M. Miller (2014) and others [1; 15; 21]. Since 2011, the European Union has been carrying out additional studies on VAT reform, and each of the existing modern methods, both in Ukraine and in the European Union, has its own disadvantages and administrative constraints, which allows VAT to remain one of the most non-transparent taxes. This is why studying the experience of reforming VAT is relevant for both European and Ukrainian specialists, which leads to finding more effective mechanisms in the fight against tax holes and reduces the administrative burden on businesses related to the registration and payment of VAT and its refund.

3. The purpose of the paper is to identify both common and distinctive features of the Ukrainian tax legislation on VAT with regard to the European requirements according to the current Association Agreement, assess the effectiveness of VAT rates and identify general trends in the dynamics of structural fractions of VAT in GDP and VAT rates.

4. Results

Establishment of the legislative framework for VAT collection in Ukraine and the EU

The formation of the regulatory base both in Ukraine and in the EU took place gradually. Modern legislation is constantly in a state of permanent reform in order to seek consensus between the simplification of tax administration, on the one hand, and the development of more transparent VAT administration schemes, on the other hand. The formation of the legislative base in the EEC began in 1967. The distinguished stages of the process of forming the legislative framework for VAT in the EU are presented in Figure 1.

The main objective of the Directives adopted since 2008 was to simplify and improve the system for VAT collection in international trade and to combat fraud in this area. In particular, new rules for determining the place of service provision have been introduced; and the obligation of companies to submit tax reporting to other authorities is also on the Obligatory European Sales List (ESL). There is also a new VAT refund procedure applied in other EU member states.

It should be noted that, despite a high degree of unification, there is not really a single EU-wide regulation of VAT within the EU. Directive 2006/112 gives the EU countries the opportunity to make reservations and apply their own exceptions to the general rules. Thus, the order and terms of registration, the requirements for taxable transactions, the categories of goods and services subject to standard or at subtracted rates, as well as the specific rates of these rates, can vary significantly in each EU country.

The Directive establishes general rules for VAT administration within the EU and sets minimum rates. In 2018, a new package of amendments to Directive 2006/112/EC was proposed. It introduced changes in the peculiarities of value added tax and the VAT reverse charge mechanism in order to identify cross-border commodity trade in single taxable supplies, so that taxation occurred exclusively in the country's consumption of goods. It is proposed to amend more than 200 articles of the Directive, which is half of the existing ones. These changes are aimed at securing a truly common VAT in the middle of the EU and are expected to come into force in 2022.

In Ukraine, the value added tax was first introduced on 1 January 1992. The sequence of the formation of the VAT legislation in Ukraine is shown in Figure 2.

The VAT payers

It should be noted that according to Art. 9 Directive 2006/112/EU is a taxable person for any company that supplies goods or services for commercial purposes in the EU [6]. The registration of a VAT payer may be mandatory or voluntary, but it automatically entails the obligation to keep an account and to compose the relevant reporting in the country of registration.

In Ukraine, according to Art. 180 of the Tax Code of Ukraine, the category «VAT payer» has a narrower and more specific meaning. In particular, VAT payers in Ukraine refer to only those who conduct or plan to conduct economic activities and are registered in their voluntary decision as payers of value added tax, etc. [30]. The registration of a VAT payer in Ukraine is a purely voluntary procedure. Even with the fulfilment of the mandatory criteria (if the total amount of transactions performed for the supply of goods / services subject to taxation during the last 12 calendar months totalling more than UAH 1,000,000 (excluding value added tax) is equivalent to EUR 31.786 thousand with the rate set by the National Bank of Ukraine at UAH 31.46/ EUR 1 as of 08 August 2018), the person conducting such an activity in some cases (for small business entities) may choose a simplified taxation system and not to be registered as a VAT payer. Also, there are certain simplifications for small businesses within the EU, which are covered in Articles 282-292 of Directive 2006/112/EU, in particular for companies whose turnover is less than EUR 5,000. For each country, the limits at which an enterprise must necessarily register with the VAT payer is different, in the vast majority of cases it comprises EUR 10,000. For example, in the Czech Republic, the taxpayer must become a business entity if its turnover exceeds one million CZK in the period of the past 12 months, with GBP 81,000 in the United Kingdom, etc. [19; 21; 30]. Thus, the criteria put forward by the VAT payer in Ukraine are narrower than the European ones, yet they do not contradict the requirements of Directive 2006/112/EU.

Transactions subject to taxation

As regards the definition of the list of transactions subject to VAT, in terms of the Ukrainian legislation and the EU Directive, it is worth noticing that they are partially compliant, as shown in Figure 3.

It should be noted that categories such as «Export» and «Import» apply exclusively to trade with countries that are not members of the European Union, and all trade within the EU is referred to either «Supply» or «Acquisition».

In contrast to Ukraine, where transactions subject to taxation are operations relating to the supply of goods and services, transactions in the purchase of goods by VAT payers from non-payers are subject to taxation in the EU. This is quite logical since the real VAT payer is always the final consumer of goods, and all subjects of the chain of VAT payment to the end user are, in fact, its administrators, which list and transfer the VAT share (the difference between the obligation and the loan) into the budget. When purchasing goods from a non-payer of VAT, the VAT payer in the EU has no right to a tax credit and must transfer to the budget the entire amount of the tax liability. In Ukraine, this mechanism is also used in determining the VAT base, but it is not allocated to a separate category of taxable transactions.

Commonly, European VAT payers are charged VAT on their sales («Outgoing tax» or «VAT when selling», the equivalent of which in Ukraine is «Tax liability with VAT») and have the right to deduct VAT accrued on goods and services purchased by them, which is used for their commercial activity («Input tax» or «VAT when purchasing», the equivalent of which in Ukraine is «Tax credit with VAT»). The difference between the source and the input tax is charged to the budget. Depending on the nature of the transactions in the EU countries, different rules that determine the place, rate and procedure for VAT can be applied.

Tax base

In the EU, according to Art. 72 Directive 2006/112/EU, is the basis for the taxation of the market value of goods and services, which is not less than purchasing prices or the full cost of services rendered [6].

In accordance with the domestic legislation, the content of the interpretation of the VAT base is partially similar. However, Art. 188 of the Tax Code of Ukraine provides a more specific explanation for this category in order to prevent its understatement. Thus, operations for the supply of goods and services are valued at a contractual value that cannot be lower than their purchase price or regular prices. In the case of supply of non-current assets, the tax base cannot be lower than the book value (residual) of the object according to the accounting data, etc.

The place of delivery

According to Articles 31-71 of Directive 2006/112/EC, the place of delivery for goods and services is determined on the basis of the type of taxable transactions (Figure 4).

As with export-import, when trading within the EU, VAT is not included in the sales price, which means that in

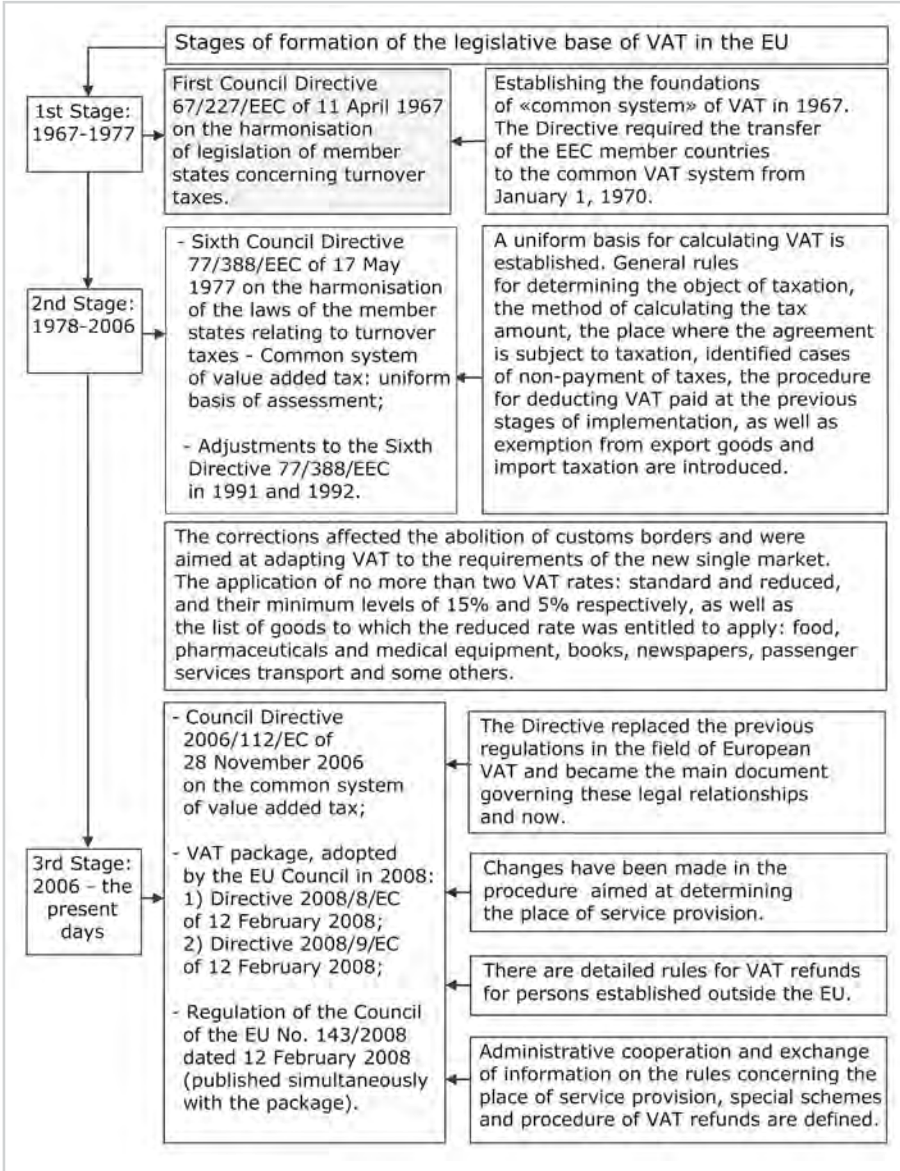

Fig. 1: **Stages of the process of forming the legislative base for VAT in the European Union**
Source: [5-6; 27]

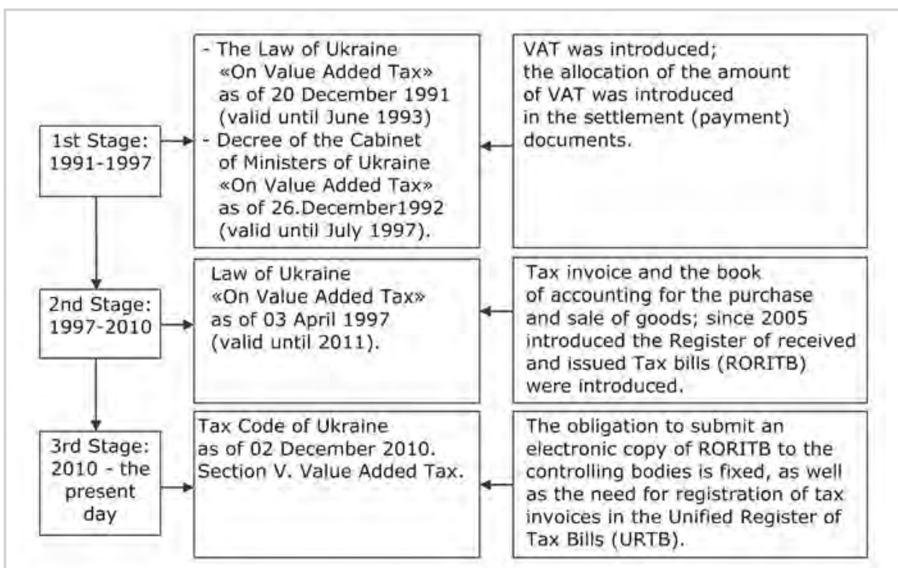

Fig. 2: **Stages of the formation of VAT legislation in Ukraine**
Source: [14; 30]

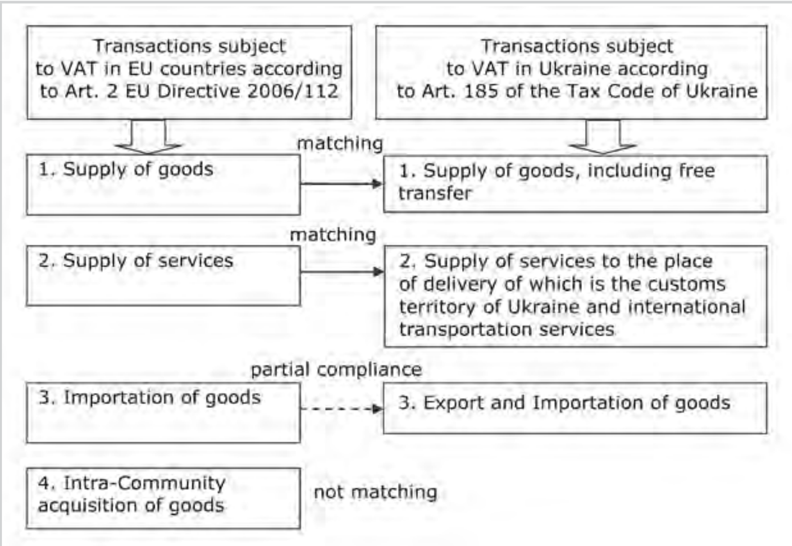

Fig. 3: **Compliance with the list of transactions subject to VAT, as defined by the Tax Code of Ukraine and EU Directive 2006/112**
Source: [6; 30]

on an equal footing when competing with imported goods and exporting their own products.

According to Art. 186 of the Tax Code of Ukraine, the place of supply of goods and services in terms of their content is determined similarly to European norms.

Tax accounting rules

In the VAT system in the EU, as well as in Ukraine, the «first event» rule applies to VAT. This arrangement is in line with Articles 63 and 65 of Directive 2006/112/EC, which define the date of occurrence of VAT liabilities as well as the date of the event that occurred earlier, i.e. before the date of the transfer of funds or the date of delivery (that is, the «first event» rule). In particular, under Art. 63 of the Directive, the fact of the occurrence of a tax liability takes place, and a VAT liability arises, when the supply of goods or services occurs. According to Art. 65 of Directive 2006/112/EC, if the payment has to be made to the account before the delivery of goods or services (prepayment), then the VAT liability arises after receiving the payment equal to the required amount.

A similar situation is observed in Ukraine. This is in line with the international obligation: the country of origin of the goods its sale is taxed at a zero rate. The seller receives the right to deduct «incoming VAT» only subject to certain conditions which are determined in accordance with the requirements of the national legislation of the EU member states.

The buyer is also required to report VAT on the amount of his purchases in the EU. When performing normal conditions (such as in internal operations), the buyer has the right to tax reductions similar to a tax credit in Ukraine. This means that the tax amount is not actually paid to the budget, but remains in the form of accounting. The process of such reporting is similar to the display of a domestic loan with VAT at the debit of the account «Calculations with the budget».

In order to provide producers with greater competitiveness on the external market, exports of goods abroad are subject to VAT at zero rates. Similarly, in the EU, as well as in Ukraine in this context, the term «zero rate of VAT» (as opposed to the term «exemption from VAT») means that the exporter should not only not add VAT to the price of the goods being exported (that is, invoices are issued without VAT), but also has the right to reimbursement from the budget of the VAT paid by him earlier in the production or purchase of the exported goods. In turn, the value added tax is levied on goods imported into the country from abroad. In essence, such an operation is not a process of creating the added value, but only ensures the neutrality of the European VAT and turns it into a net «for consumption». The tax is charged only on intra-EU consumption, with both European and foreign producers being

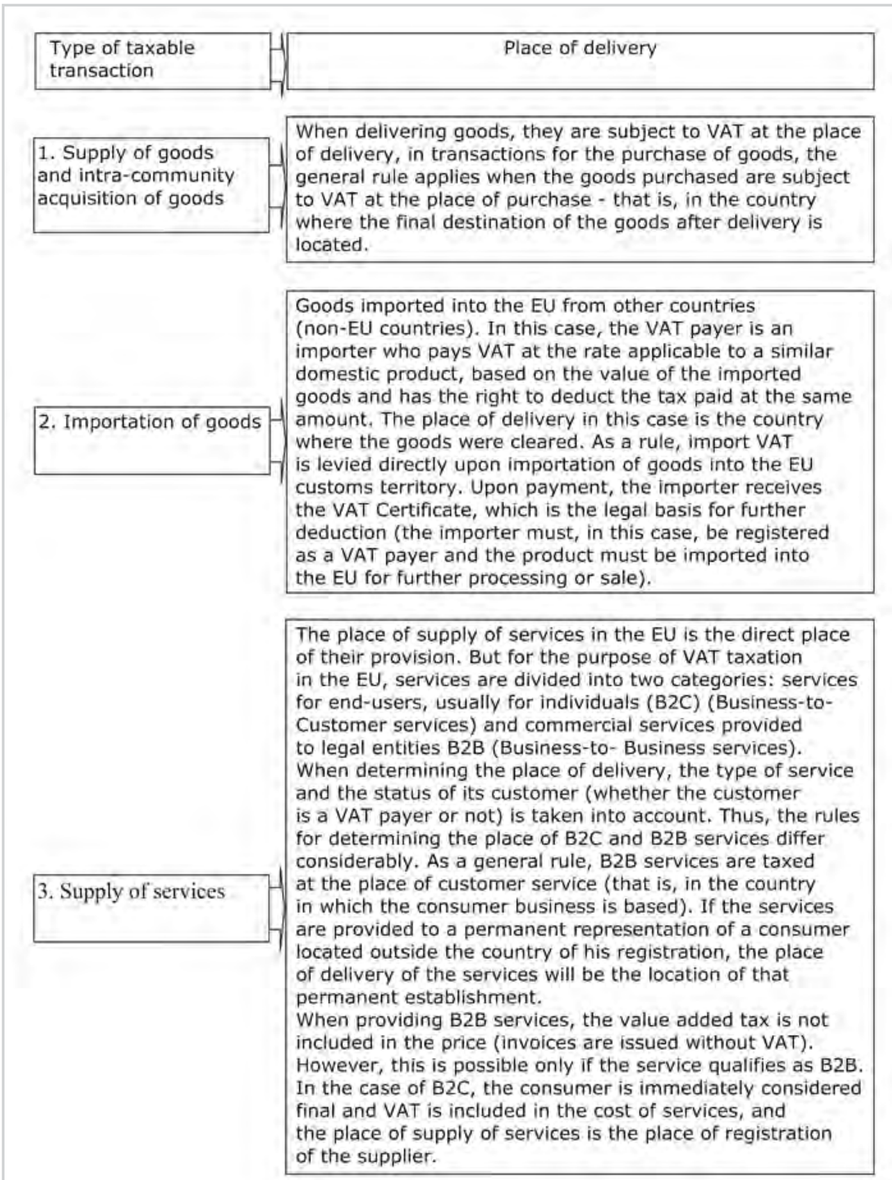

Fig. 4: **Definition of the place of delivery depending on the type of operations in the EU**
Source: [6]

the provisions of Section 5 of the Association Agreement provide for a gradual approximation to the tax structure defined in the «Acquis communautaire». The possibility of applying the cash method is provided for in Article 66 of Directive 2006/112/EC, but not as a general rule, but only for certain transactions or for certain categories of persons. A similar exclusion is used in the Tax Code of Ukraine, which provides for the cash method to reflect the tax payers supplying different types of energy and provide services for the maintenance of housing and communal services.

Tax rates

Regarding tax rates, it should be noted that Directive 2006/112/EU does not set specific requirements for a common tax rate for all EU countries. It sets a minimum standard and reduced rate of 15% and 5%, while the specific VAT rate is set by each EU member state on its own. Let us explore the trends in the changes of VAT rates in EU member states and Ukraine for the period between 2010 and 2018 according to Table 1. It should be noted that the lowest VAT rate in the EU is in Luxembourg, comprising 17%; all the other participating countries have rates of over 20%, except for Cyprus with its 19% and Malta with its 18%. Denmark is the only EU country that does not apply a preferential VAT rate (in the EU, this rate applies mainly to social goods).

The highest VAT rate is reported in Hungary at 27%. The vast majority of EU countries do not apply the 0% VAT rate, except for export transactions, except for only Estonia, Ireland, Latvia and the United Kingdom, where the 0% rate is applied to a number of socially-traded goods.

Also, within the framework of the European Union, there are areas where VAT is not charged (special tax zones), in particular the island of Helgoland, Bühingen-on-Upper Rhine, Ceuta, Melilla, the Canary Islands, Guadeloupe, Guyana, Martinique, Reunion, Livigno, Campione-D'Italia, the Italian waters of Lake Lugano, Mount Athos, Jungholz, Mittelberg, Greenland, the Faroe Islands, the Aland Islands, the Channel Islands and Gibraltar [7, 22, 26].

Based on Table 1, we note that only 6 EU countries has had no change in VAT rates since 2010. These are Belgium, Denmark, Estonia, Lithuania, Germany, and Sweden, representing 25% of the number of all the EU member states. Romania is the only country in which there is a tendency towards a general reduction of VAT rates. In the majority of the EU countries (70%), we observe a general trend toward increasing the basic VAT rates or adding and increasing the reduced ones. This allows us to talk about common trends in the EU regarding an increase in the tax pressure on VAT, which is related precisely to the effective fiscal role of this tax. It should be noted that the most common basic VAT rate among EU countries is 20%, which corresponds to the domestic practice. According to Table 1, it is determined that the average VAT rate for all EU countries is 21%.

In Ukraine, along with Europe, the standard and reduced VAT rates are also at 20%, 7% and 0%, respectively. At the

Tab. 1: **Trends in the change of VAT rates between the European Union and Ukraine from 2010 to 2018**

Country	Standard VAT rate, %	Reduced VAT rate, %	Changes in VAT rates from 2010 to 2018	General trend
Austria	20	0; 10 & 13	in 2016 added reduced rate 13%	Increment
Belgium	21	0; 6 & 12	-	Unchanged
Bulgaria	20	0 & 9	in 2011 increased reduced rate from 7 to 9%	Increment
Great Britain	20	0 & 5	in 2011 increased standard rate from 17.5 to 20%	Increment
Greece	24	0; 6 & 13	in 2011 increased reduced rates from 6.5, and 13%, after them lowered rate until 6% in 2015, in 2016 increased standard rate from 23 to 24%	Increment
Germany	19	0 & 7	-	Unchanged
Denmark	25	0	-	Unchanged
Estonia	20	9	-	Unchanged
Italy	22	4; 5 & 10	in 2012 increased standard rate from 21 to 22%, in 2016 added reduced rate 5%	Increment
Ireland	23	0; 4,8; 9 & 13,5	in 2011 added reduced rate 9%, in 2012 increased standard rate from 21 to 23 %	Increment
Iceland	21	0; 4 & 10	in 2012 increased standard rate from 18 to 21%, and reduced rate increased from 8 to 10%	Increment
Cyprus	19	0; 5 & 9	from 2012 to 2014 increased standard rate from 17 to 19%	Increment
Luxemburg	17	0; 3 & 8	In 2015 increased standard rate from 15 to 17%, and reduced rate increased from 6 to 8%	Increment
Latvia	21	0 & 12	in 2011 increased standard rate till 22%, but in 2012 turn it to previous level	Unchanged
Lithuania	21	0; 5 & 9	-	Unchanged
Malta	18	0; 5 & 7	in 2011 added reduced rate 7%	Increment
Netherland	21	0 & 6	in 2012 increased standard rate from 19 to 21%	Increment
Portugal	23	6 &13	in 2011 increased standard rate from 21 to23%	Increment
Poland	23	0; 5 & 8	in 2011 increased standard rate from 22 to 23%, and reduced rates increased from 3 to 5% and from 7 to 8%	Increment
Romania	19	0; 5 & 9	in 2016 lowered standard rate from 24 to 20%, in 2017 till 19%	Lowering
Slovenia	22	9,5	in 2013 increased standard rate from 20 to 22%, and reduced rates increased from 8.5 to 9.5%	Increment
Slovakia	20	0 & 10	in 2011 increased standard rate from 19 to 20%	Increment
Hungary	27	5 & 18	in 2012 increased standard rate from 25 to 27%	Increment
France	20	2.1; 5.5 & 10	in 2014 increased standard rate from 19.6 to 20% and reduced rates increased from 8 to 10%	Increment
Finland	24	0; 10 & 14	in 2013 increased standard rate from 23 to 24%, and reduced rates increased from 9 to 10% and from 13 to 14%	Increment
Croatia	25	5 &13	in 2013 added reduced rate 5%, in 2014 reduced rates increased from 10 to 13%	Increment
Czech	21	0; 10 & 15	in 2015 added reduced rate 10%	Increment
Sweden	25	0; 6 & 12	did not happen	Unchanged
Ukraine	20	0 & 7	in 2015 added reduced rate 7%	Increment

Source: Compiled by the authors based on [25-27] rate of 7%, the tax is paid on the supply and import of drugs and raw materials for their manufacture. Export operations and operations on maintenance and refueling of aircraft, international transportation, refueling of vehicles and vessels of the Navy, which leave the customs territory of Ukraine, the sale of goods in duty-free shops are at the rate of 0%. Thus, domestic VAT rates are fully in line with the provisions of Directive 2006/112/EC. In particular, the standard rate of 20% corresponds to the requirements for basic rates, which must be not less than 15; the preferential rate of 7% corresponds to the preferential rates set by EU member states at the level of not less than 5%, as well as 0% for export operations and duty-free trade zones.

Given the large variation in VAT rates in the EU countries, it should be noted that VAT receipts for the EU as a whole make up more than 17.5% in the structure of tax revenues by 2016 and is the second largest source after personal income tax payments for individuals (Figure 5).

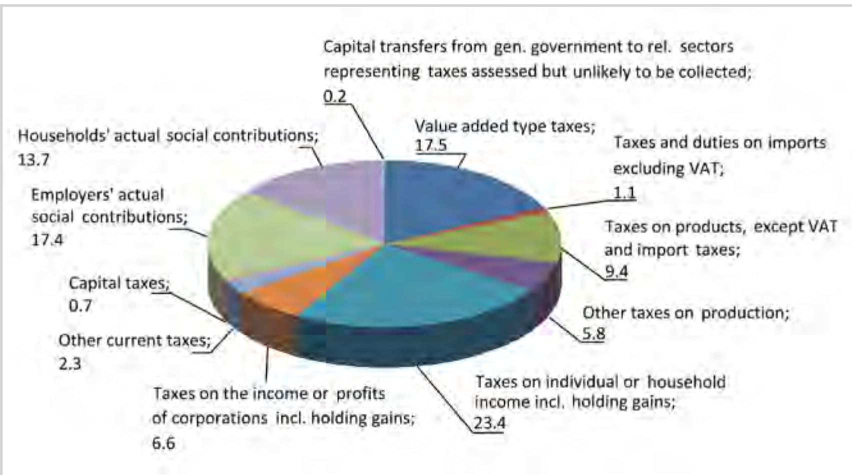

Fig. 5: **Structure of tax revenues across the European Union in 2016, %**
Source: Compiled by the authors based on [26; 28]

According to the European Statistics Agency, over the past 5 years, total income from indirect taxes in the EU has been dominated by aggregate direct tax revenues, and their structure in the GDP of the EU and Ukraine tends to increase [26]. Based on data from the implementation of the Consolidated Budget of Ukraine for 2014-2017, it is determined that VAT revenues increase during the indicated years by 1% annually: from 35% in 2014 to 36% in 2015, 37% in 2016 and 38% in 2017 [17]. According to Table 2, we will see how the share of VAT in the GDP of the EU and Ukraine has changed since the Association Agreement was signed in 2014.

According to Table 2, the largest share of VAT in the structure of GDP of countries such as Croatia, Denmark, Hungary, Sweden, and Estonia is more than 9%, due to the fact that these countries have the highest VAT rates. However, in general, the EU has recorded a tendency to reduce the share of VAT in the GDP of countries, which was the result of more accelerated GDP growth in European countries. In particular, this decline is recorded in 60% of EU member states, except those countries where there was a temporary drop in GDP during the specified period, in particular Greece, Poland and the United Kingdom. They recorded a slight increase in the share of VAT in GDP. In Romania, there was a sharp fall in the share of VAT in GDP in 2016, which was caused by lowering all tax rates. It should be noted that in order to assess the effectiveness of the VAT rate in the country, the most accepted indicator is the efficiency of the rate of the VAT (ER), which is defined as the ratio of aggregate VAT revenues to GDP and the standard VAT rate in a particular country. The effectiveness of VAT rates in the EU until 2013 was determined by Sabina Hodzic and Hulya Celebi (2017) [19], while the effectiveness of VAT rates in Croatia was created by Sopek Petar (2012) [24]. Let us determine the ER in the EU and Ukraine from 2014 to 2017. The results of the calculation of the indicator are presented in Table 3.

According to Table 3, we note that, as it was four years ago, the most effective is the VAT rate in Croatia, which is one of the largest in the EU. The least effective is the VAT rate in Ireland, as a consequence of the low VAT share in the GDP of the country, which is the smallest in the EU. We also note that during 2014-2015 there was a decrease in the effectiveness of VAT rates in half of the EU countries, except Austria, Great Britain, Denmark, Greece, Estonia, Italy and the Netherlands. The highest decline in the rate of performance was recorded in Luxembourg in 2015 due to an increase in interest rates. These trends have different causal relationships in each of the EU countries: lowering the growth rates of the EU GDP, raising VAT rates (in the case of Greece), decreasing tax pressure on small enterprises to pay VAT, in particular exemption from VAT of small enterprises turnover, etc. There is a tendency towards increasing the efficiency of the VAT rate in Ukraine due to the low GDP growth rate and the introduction of an additional 7% reduced VAT rate on medical products. Given the diversity of trends, the growing importance of VAT control and the elimination of tax lending and VAT refunds both in Ukraine and in the EU are becoming more and more relevant.

If we assume that in the system of common administration of VAT all EU member states will eventually come to the common rates stated in the Directive, then we will note that the efficiency of the VAT rate will increase with certain fluctuations in the structural share of VAT as a share of GDP. Let us calculate it taking into account the

Tab. 2: **Specific weight of VAT in GDP of the European Union and Ukraine from 2014 to 2017, %**

Country	Years				Absolute deviation		
	2014	2015	2016	2017	2015-2014	2016-2015	2017-2016
Austria	7.6	7.6	7.7	7.7	0	0.1	0
Belgium	6.9	6.7	6.8	6.6	-0.2	0.1	-0.2
Bulgaria	8.9	9	9.2	9	0.1	0.2	-0.2
Great Britain	5.8	6.3	6.8	7.3	0.5	0.5	0.5
Greece	7.1	7.3	8.2	8.4	0.2	0.9	0.2
Germany	6.9	7	7	7	0.1	0	0
Denmark	9.4	9.4	9.6	10	0	0.2	0.4
Estonia	8.7	9.2	9.4	9.4	0.5	0.2	0
Italy	6.0	6.1	6.1	6.6	0.1	0	0.5
Ireland	4.9	4.6	4.7	4.5	-0.3	0.1	-0.2
Iceland	6.3	6.5	6.4	6.4	0.2	-0.1	0
Cyprus	8.6	8.5	9.2	9	-0.1	0.7	-0.2
Luxemburg	7.5	6.6	6.5	6.4	-0.9	-0.1	-0.1
Latvia	7.5	7.7	8.2	7.8	0.2	0.5	-0.4
Lithuania	7.6	7.7	7.8	7.5	0.1	0.1	-0.3
Malta	7.6	7.4	7.3	6.8	-0.2	-0.1	-0.5
Netherland	6.4	6.6	6.9	6.9	0.2	0.30	0
Portugal	8.5	8.5	8.5	8.5	0	0	0
Poland	7.1	7	7	6.7	-0.1	0	-0.3
Romania	7.6	8.1	6.5	6.1	0.5	-1.6	-0.4
Slovenia	8.4	8.3	8.2	7.9	-0.1	-0.1	-0.3
Slovakia	6.6	6.9	6.7	6.6	0.3	-0.2	-0.1
Hungary	9.2	9.6	9.3	8.9	0.4	-0.3	-0.4
France	6.9	6.9	6.9	7	0	0	0.1
Finland	9.2	9.1	9.1	9.1	-0.1	0	0
Croatia	12.6	12.8	13	12.8	0.2	0.2	-0.2
Czech	7.4	7.3	7.4	6.2	-0.1	0.1	-1.2
Sweden	9.0	9	9.2	9.2	0	0.2	0
Ukraine	8.2	9	9.8	10.6	0.8	0.8	0.8

Source: Calculated by the authors based on [25; 27]

World Bank's forecast for the growth of the Euro zone economy and Ukraine for 2018-2020 under the following conditions:

a) if the standard VAT rate is reduced to 15%, the structural part of the VAT in GDP will not change;
b) if the standard VAT rate is reduced to 15%, the structural part of VAT in GDP will decrease by 0.5%;
c) if the standard VAT rate is reduced to 15%, the structural part of VAT in GDP will decrease by 1%;
d) if the standard VAT rate will be reduced to 15%, the structural part of VAT in GDP will decrease by 1.5%;
e) if the standard VAT rate is reduced to 15%, the structural part of VAT in GDP will decrease by 2%;

The results of calculations are given in Table 4.

According to Table 4, it can be seen that in the case of adopting 15% of the basic VAT rate, its efficiency will increase in all the EU member states subject to a constant share of VAT in GDP, or its reduction by up to 1%. In the case of a 1.5% reduction in the VAT fraction of 1.5% in GDP in countries such as Romania, Malta, Germany and Luxembourg, there will be a decrease in the effectiveness of the interest rate on VAT. That is, the reduction of the basic interest rate of GDP to 15% would have a positive effect on the effectiveness of the rate relevant to 85% of the EU member states and in Ukraine. However, with the reduction of the share of VAT in GDP by 2% or more, the efficiency of the interest rate will decrease by 50% among the EU countries. Let us consider other consequences, which can cause a similar decrease in the rates (Figure 6).

Given the World Bank projections for GDP growth in Ukraine and the Euro zone countries by 2020, including the growth of trade volumes, it is possible to count the influence of the negative consequences of those indicated in Figure 6 and its leveling due to increased trade and increased purchasing power of the population. According to the results of the survey, the expert

Tab. 3: **ER Efficiency of the VAT rate in the European Union and Ukraine in the period between 2014 and 2017, %**

Country	Years				Absolute deviation		
	2014	2015	2016	2017	2015-2014	2016-2015	2017-2016
Austria	37.83	38.00	38.50	38.50	0.17	0.50	0
Belgium	32.86	31.90	32.38	31.43	-0.95	0.48	-0.95
Bulgaria	44.50	45.00	46.00	45.00	0.50	1.00	-1.00
Great Britain	29.00	31.50	34.00	36.50	2.50	2.50	2.50
Greece	31.01	31.74	34.17	35.00	0.72	2.43	0.83
Germany	36.32	36.84	36.84	36.84	0.53	0	0
Denmark	37.60	37.60	38.40	40.00	0	0.80	1.60
Estonia	43.50	46.00	47.00	47.00	2.50	1.00	0
Italy	27.42	27.73	27.73	30.00	0.30	0	2.27
Ireland	21.30	20.00	20.43	19.57	-1.30	0.43	-0.87
Iceland	30.00	30.95	30.48	30.48	0.95	-0.48	0
Cyprus	45.26	44.74	48.42	47.37	-0.53	3.68	-1.05
Luxemburg	50.00	38.82	38.24	37.65	-11.18	-0.59	-0.59
Latvia	35.71	36.67	39.05	37.14	0.95	2.38	-1.90
Lithuania	36.19	36.67	37.14	35.71	0.48	0.48	-1.43
Malta	42.22	41.11	40.56	37.78	-1.11	-0.56	-2.78
Netherland	30.48	31.43	32.86	32.86	0.95	1.43	0
Portugal	36.96	36.96	36.96	36.96	0	0	0
Poland	30.72	30.43	30.43	29.13	-0.29	0	-1.30
Romania	31.67	33.75	32.50	32.11	2.08	-1.25	-0.39
Slovenia	38.18	37.73	37.27	35.91	-0.45	-0.45	-1.36
Slovakia	33.00	34.50	33.50	33.00	1.50	-1.00	-0.50
Hungary	34.07	35.56	34.44	32.96	1.48	-1.11	-1.48
France	34.50	34.50	34.50	35.00	0	0	0.50
Finland	38.33	37.92	3792	37.92	-0.42	0	0
Croatia	50.40	51.20	52.00	51.20	0.80	0.80	-0.80
Czech	35.24	34.76	35.24	29.52	-0.48	0.48	-5.71
Sweden	36.00	36.00	36.80	36.80	0	0.80	0
Ukraine	41.00	45.00	49.00	53.00	4.00	4.00	4.00

Source: Compiled by the authors based on [25; 27]

Tab. 4: **Forecast the ER efficiency of 15% VAT rate in the European Union and Ukraine for 2019, %**

Country	ER Efficiency of 15% VAT rate, %						Absolute deviation, calculated from the predicted values of 2019, units				
	2019 forecast at current conditions	A	B	C	D	E	A-2019	B-2019	C-2019	D-2019	E-2019
Austria	38.50	51.33	48.00	44.67	41.33	38.00	12.83	9.50	6.17	2.83	-0.50
Belgium	31.43	44.00	40.67	37.33	34.00	30.67	12.57	9.24	5.90	2.57	-0.76
Bulgaria	45.00	60.00	56.67	53.33	50.00	46.67	15.00	11.67	8.33	5.00	1.67
Great Britain	36.50	48.67	45.33	42.00	38.67	35.33	12.17	8.83	5.50	2.17	-1.17
Greece	35.00	56.00	52.67	49.33	46.00	42.67	21.00	17.67	14.33	11.00	7.67
Germany	36.84	46.67	43.33	40.00	36.67	33.33	9.82	6.49	3.16	-0.18	-3.51
Denmark	40.00	66.67	63.33	60.00	56.67	53.33	26.67	23.33	20.00	16.67	13.33
Estonia	47.00	62.67	59.33	56.00	52.67	49.33	15.67	12.33	9.00	5.67	2.33
Italy	30.00	44.00	40.67	37.33	34.00	30.67	14.00	10.67	7.33	4.00	0.67
Ireland	19.57	30.00	26.67	23.33	20.00	16.67	10.43	7.10	3.77	0.43	-2.90
Iceland	30.48	42.67	39.33	36.00	32.67	29.33	12.19	8.86	5,52	2.19	-1.14
Cyprus	47.37	60.00	56.67	53.33	50.00	46.67	12.63	9.30	5.96	2.63	-0.70
Luxemburg	37.65	42.67	39.33	36.00	32.67	29.33	5.02	1.69	-1.65	-4.98	-8.31
Latvia	37.14	52.00	48.67	45.33	42.00	38.67	14.86	11.52	8.19	4.86	1.52
Lithuania	35.71	50.00	46.67	43.33	40.00	36.67	14.29	10.95	7.62	4.29	0.95
Malta	37.78	45.33	42.00	38.67	35.33	32.00	7.56	4.22	0.89	-2.44	-5.78
Netherland	32.86	46.00	42.67	39.33	36.00	32.67	13.14	9.81	6.48	3.14	-0.19
Portugal	36.96	56.67	53.33	50.00	46.67	43.33	19.71	16.38	13.04	9.71	6.38
Poland	29.13	44.67	41.33	38.00	34.67	31.33	15.54	12.20	8.87	5.54	2.20
Romania	3.,11	40.67	37.33	34.00	30.67	27.33	8.56	5.23	1.89	-1.44	-4.77
Slovenia	35.91	52.67	49.33	46.00	42.67	39.33	16.76	13.42	10.09	6.76	3.42
Slovakia	33.00	44.00	40.67	37.33	34.00	30.67	11.00	7.67	4.33	1.00	-2.33
Hungary	32.96	59.33	56.00	52.67	49.33	46.00	26.37	23.04	19.70	16.37	13.04
France	35.00	46.67	43.33	40.00	36.67	33.33	11.67	8.33	5.00	1.67	-1.67
Finland	37.92	60.67	57.33	54.00	50.67	47.33	22.75	19.42	16.08	12.75	9.42
Croatia	51.20	85.33	82.00	78.67	75.33	72.00	34.13	30.80	27.47	24.13	20.80
Czech	29.52	41.33	38.00	34.67	31.33	28.00	11.81	8.48	5.14	1.81	-1.52
Sweden	36.80	61.33	58.00	54.67	51.33	48.00	24.53	21.20	17.87	14.53	11.20
Ukraine	53.00	70.67	67.33	64.00	60.67	57.33	17.67	14.33	11.00	7.67	4.33

Source: Calculated by the authors

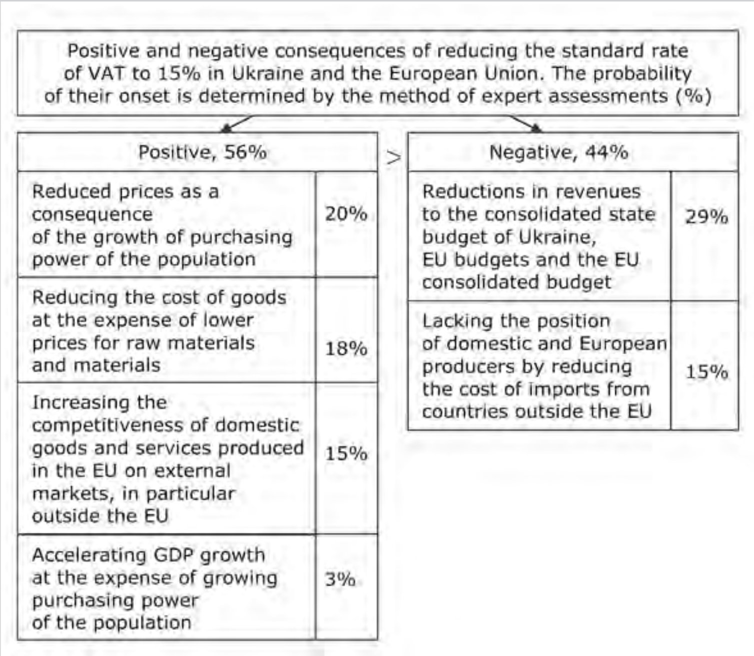

Fig. 6: **Probable consequences of lowering the standard rate of VAT to 15% in Ukraine and the European Union**
Source: Compiled by the authors

estimation method has determined that the likelihood of a positive impact by 12% is likely to outweigh the negative impact of the reduction of the interest rate on VAT.

Automation and administration of VAT. Primary and accounting documents

The administration of value-added tax in Ukraine and in the EU is in electronic form. In exceptional cases, some EU member states allow VAT to be declared in paper form, in particular as regards VAT refunds, for example in Austria, Estonia, Cyprus and Luxembourg. The domestic tax liability arises through the issuance of the electronic tax bill and its registration in the Unified Register of Tax Bills (ERRN). The European variant envisages an electronic account, which is also registered in the system of electronic administration of VAT. The data of the electronic account in the EU, as well as the tax invoice, can be checked any time by interested users through online services on the websites of fiscal services of individual countries and the EU server [25]. The data submitted by the VAT payer can be analysed by an individual tax number. In Ukraine, it consists only of digits; in the EU, each individual VAT identification number has a prefix with the code ISO 3166 - the letter code 2 - which allows you to identify the member state that provided the code.

The basic details to be contained in the primary documents in the EU and Ukraine are almost identical, although they have certain features (Figure 7). In particular, among the requisites of the same content, the following are shown in the upper part of the figure, and the different ones are displayed in the lower part of the drawing.

The invoice in accordance with Directive 2006/112/EU contains a number of additional mandatory requisites not included in the tax bill in Ukraine. It was found that 9 of the 15 European invoice details, which are the main ones for filling, determine the contents of 9 of the 10 details of the Ukrainian tax bill, which indicates the similarity of these documents by 56%. This is still a rather low indicator, so it is necessary to coordinate the requisites of primary documents with VAT.

Each member state of the EU independently sets the terms of registration of accounts in the electronic database and the terms of their storage. It is worth noting that the minimum requirements for the content of primary documents that record the fact of a tax liability in Ukraine are fully in line with the requirements of Directive 2006/112/EU, although they have different names and procedures for document circulation. In recent years, the VAT administration of EU member states, in particular regarding the registration of tax documents, has operated in real time. Countries such as Greece, Poland and Hungary have already switched to instant registration of primary tax documents. This means that, unlike Ukrainian practice, the primary document that fixes the tax obligation is registered in the fiscal system on the day it is drawn up. There are no additional terms for its registration (this period is 15 days in Ukraine).

VAT reporting

Each tax payer, both in Ukraine and in the EU, submits a VAT return with all the information necessary to calculate the tax liability that has arisen and the relevant amounts relating to the reduction of the tax liability, including the aggregate value of transactions relating to such a tax and the amounts attributed to the reduction of the tax liability, as well as the value of all exempt transactions.

The Directive does not establish a common deadline for the submission of tax returns for all EU countries, but only defines general recommendations that the deadline for submission cannot exceed two months from the end date of each tax period, which may also vary in each EU country. The tax period (for which the enterprise reports VAT) can be one two or three months. At the same time, EU member states may impose other tax periods if their duration does not exceed one year. As a result of the study of regulatory documents on the procedure for compiling and submitting VAT reporting, it has been established that the most widespread calendar period in the EU is the calendar month. In some countries, depending on the turnover of the company, calendar periods are set for the quarter and year (Austria, Luxembourg, etc.). The most stringent requirements in Germany, where the reporting period is a calendar month, and reporting must be submitted to the fiscal authorities no later than 10 days after the end of the reporting period [7]. In other countries, reporting deadlines range from 15 (Austria, Bulgaria, Cyprus) to 25 days (Lithuania), after the end of the reporting period. One of the largest reporting dates in Italy is until the last day of the second month following the tax period. The stated reporting periods in the EU countries are largely tied to the mechanisms for automating VAT refunds. In countries where different periods of declaration are allowed, the company chooses for itself the one in which it will be more convenient for it to operate with the procedures of return, that is, if VAT is to be repaid often, then the minimum period of declaration is chosen.

As to the timing of paying taxes, let's note that they are tied mainly to the timing of reporting by enterprises. Taking into account that EU countries use special accounts for VAT administration, the tax is paid automatically in the month in which the account is registered. Exclusions are companies that have the right to deduct «incoming VAT», the amount of which reduces the actual liability. However, some EU countries, such as the United Kingdom, apply the practice of advance quarterly or monthly payments and a general VAT adjustment on the basis of the calendar year.

In Ukraine, a tax return is filed for the reporting period equal to the calendar month for the 20 calendar days following the last calendar day of the reporting month. The amount of the tax liability specified by the taxpayer in the tax return filed is payable within 10 calendar days after the submission of the tax return [30]. As it is in the EU, the submission of tax returns takes place electronically.

In addition to the tax return, each VAT payer in the EU provides an aggregated report on the purchasers to whom he supplied the goods. The consolidated report is compiled for each calendar quarter in a timely manner and in the manner established by the member states on their own and such a period, at their discretion, may be from one month. VAT declarations are submitted in EUR, however, member states that have not converted to the common currency may submit declarations in the national currency.

As for the improvement of the accounting organisation in the framework of the implementation of the Agreement with the European Union, it should be noted that the preparation of

Ukraine to the common VAT tax area is not being done anymore, yet it is possible to take into account certain requirements of Directive 2006/112/EC. It is expedient to introduce such a system of encoding of primary documents in Ukraine in the future. For example, it is possible to embed the code of Ukraine (UA) at the beginning of encoding tax invoices in the automated system and then go to the EU name of the original document which is an account. When added to the common tax area, one can immediately identify the place of origin of the tax invoice. Also, the practice of the EU should expect a gradual transition to the registration of tax documents in real time. However, such a step is not to be implemented yet. This step requires updated legislation, software, communication channels and data processing. Under the existing system, malfunctioning of software and overloaded communication channels often lead to blocking tax invoices or delays in their registration. At present, the problem of blocking primary documents in Ukraine is rather widespread, and the criteria to suspect the document which causes its blocking are blurred, which allows manipulating with the procedure. Delays in the registration of primary tax documents, on the one hand, deprive enterprises of a timely tax credit with VAT, and, on the other hand, incorrectly reflect VAT obligations.

The European Union has developed a special service on a common tax system that is combined with national tax services (see: http://ec.europa.eu/taxation_customs).

In this system, you can immediately check the status of any tax account, even without being registered in it. In Ukraine, unlike the EU, similar services work either on the basis of the e-tax office, which requires registration, or through specialised software. Therefore, it is expedient to supplement the existing service in Ukraine.

Also, basing on the practice of European countries and taking into account the automation of VAT administration in the EU, it should be noted that the value added tax return is in the vast majority of EU countries. In terms of calculating automation, submission of an application declaration, it does not take extra time in Ukraine; the application data are justifiable when each primary document is registered in the same automated system. In the course of reforming the VAT administration system in terms of its simplification, we consider it appropriate to reduce the number of applications of the domestic VAT declarations.

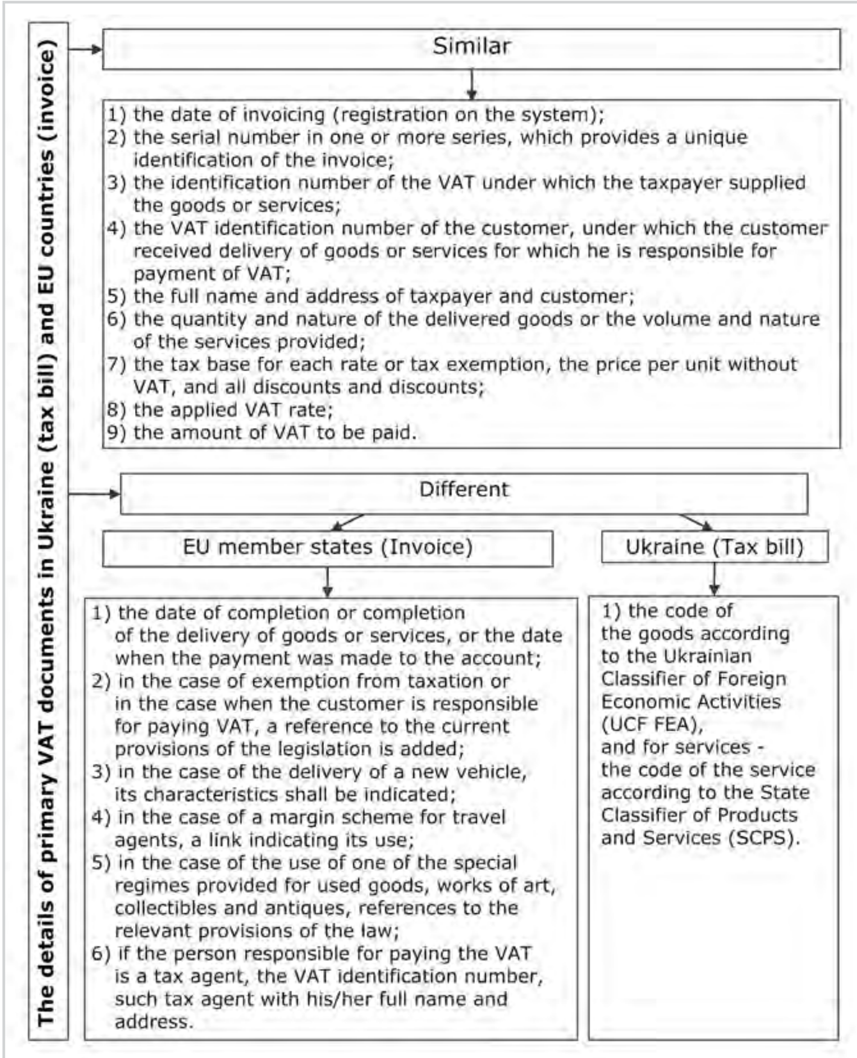

Fig. 7: **Common and distinctive invoice details of primary VAT documents in Ukraine and European member states**
Source: [6; 24]

The main directions of VAT reform

It should be noted that the reform of the VAT system, which was the subject of the discussion initiated by the European Commission in 2011, indicates the need to combat tax evasion and VAT fraud, as well as to simplify the procedures for administering this tax and make it more transparent [26]. This problem is even more relevant for Ukraine, which indicates the imperfection and non-transparency of the existing tax administration mechanism. The basis of modern methods of administration both in the EU and in Ukraine is fully automated systems that do not allow manual redistribution of tax rebates. In order to control the payment of VAT, treasury or bank split accounts are used, in which VAT is deducted from the transaction and recalculated into the budget. This is the so-called mechanism of VAT reversal, which is combined with the collection of this tax by banks, which, on behalf of the client, transfer funds to pay suppliers (VAT excluded), and the amount of VAT - the direct tax. In the reverse, VAT is taken as the basis that begins to be maintained at the end of the supply chain, when the product (service) is sold to the end user. The deduction of VAT in other (earlier) stages occurs when one of the business entities is not a VAT payer or VAT-exempt goods (services) are the subject of the transaction. It can also be noted that along with the total automation of registration processes and VAT refunds, the criteria for exemption from VAT for certain categories of small enterprises are introduced in terms of reforming the mechanism of the collection of VAT.

In Ukraine, in order to prevent VAT fraud, a system of special accounts was introduced, on which VAT payers should be held. These funds are used when registering tax invoices in order to pay a net tax liability to the budget, and the balance is calculated according to a special formula. That is, if a taxpayer has insufficient funds on a special account, such a person will not be able to register a tax invoice in the Uniform Register of Tax Bills (URTB) until he/she replenishes his own account or receives an incoming VAT (tax credit). Such a mechanism is quite effective, but it also has a drawback, since it deduces turnover from the company's working capital, which has a very negative effect on the financial position of already critically insolvent enterprises.

The indicated directions of reforming the VAT mechanism in Ukraine reflect the main trends in the reform in the EU and make the system more transparent. Taking into account the VAT reforms in Ukraine over the past four years, we have noted that the efficiency of the VAT rate is high and increases from 41% to 53% over the 2014-2017 period. This testifies to the effectiveness of those reforms, which resulted in the increased transparency of VAT collection, reimbursement and increased revenues to the budget.

5. Conclusions and perspectives of further research

The system of VAT collection in Ukraine essentially in terms of elements such as tax rates, the content of primary documents, tax periods and automated administration method fully complies with the requirements of Directive 2006/112/EU.

However, the interpretation of such categories as taxpayers and taxation objects in the domestic legislation is narrower.

The comparison of the basic details of the primary documents, confirming the fact of the occurrence of the tax liability, shows that they coincide by 56%, which requires their further harmonization. The European primary document (invoice) is more extensive than the Ukrainian one, in particular the specification of the articles of the supplementary or special tax regimes allowed by Directive 2006/112/EU.

We also note that the methods of combating tax holes in Ukraine do not contradict those that are generally accepted in the European Union and that they are constantly being refined. Thus, we note that by most elements of VAT, the Ukrainian tax system is similar to the model operating in the EU. The directions of reforming the domestic mechanism for VAT collection and combating tax fraud are in line with current trends in the EU. The movement toward VAT only by the end consumer of goods and services may subsequently affect the review of the substance of the VAT administration and its content, since it is increasingly transformed from a value added tax into a tax, exclusively in terms of consumption. Therefore, it is possible that there is a likelihood of a future return to the turnover tax, although this is now in line with the principles of the EU. An analysis of the effectiveness of VAT rates has shown contradictory results in EU countries and positive trends that are shaped by the impact of the reforms in Ukraine.

The study of the effectiveness of VAT rates in the EU and Ukraine has shown that a decline in efficiency in half of the EU member states was recorded in the period between 2014 and 2017. As calculated in the study, the reduction of the joint European rate of VAT up to 15% under certain specified conditions would increase the ER efficiency of VAT rates in all the EU member states and lead to other positive effects.

Therefore, Ukraine should adhere to the chosen course of reforms in the VAT administration system and provide its full automation in order to avoid the impact of the human factor and corruption components in the process of registration and blocking of tax invoices and VAT refunds.

References

1. Andriyash, M. M. (2014). Problems of Taxation of the Value Added Tax of the EU Mem ber States. *Actual problems of international relations,122*(1), 215-227 (in Ukr.).
2. Authmann, C., Beilschmidt, C., Drönner, J., Mattig, M., & Seeger, B. (2015). VAT: A System for Visualizing, Analyzing and Transforming Spatial Data in Science. *Datenbank Spektrum, 15*(3), 175-184. doi: https://doi.org/10.1007/s13222-015-0197-y
3. Barbone, L., Bird, R. M., & Vázguez-Caro, J. (2012). The Costs of VAT: A Review of the literature. *Center for Economic and Social Research, Case Network Reports No. 106/2012.* doi: https://doi.org/10.2139/ssrn.2024880
4. Betliy, O., Giucci, R., & Kirchner, R. (2013). VAT in Ukraine: Would other indirect tax work better? *Institute for Economic Research and Policy Consulting, German Advisory Group. Policy Paper Series, PP/02/2013,* 1-9. Retrieved from http://www.ier.com.ua/files/publications/Policy_papers/German_advisory_group/2013/PP_02_2013_en.pdf
5. The Council of the European Economic Community (1970, January 1). *First Council Directive 67/227/EEC of 11 April 1967 on the harmonisation of legislation of Member States concerning turnover taxes.* EURlex-code 31967L0227. Retrieved from https://eur-lex.europa.eu/eli/dir/1967/227/oj
6. The Council of the European Union (2006, November 28). Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax. *Official Journal of the European Union, L 347/1.* Retrieved from https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=celex:32006L0112
7. State Fiscal Service of Ukraine (2018). *Global tax experience: Germany.* Retrieved from http://sfs.gov.ua/arhiv/modernizatsiya-dps-ukraini/arkchiv/mijnarodniy-dosvid-rozvitk/svitovui-dosvid/germany/59048.html (in Ukr.)
8. Hellerstein, W., & Grills, T. H. (2010, April 26). The VAT in the European Union. *Tax Analysts,* 461-471. Retrieved from https://taxprof.typepad.com/files/127tn0461.pdf
9. Keen, M. (2012). Taxation and Development - Again. *International Monetary Fund, Fiscal Affairs Department. IMF Working Paper12/220.* Retrieved from https://www.imf.org/external/pubs/ft/wp/2012/wp12220.pdf
10. Keen, M., & Lockwood, B. (2010). The Value-Added Tax: Its Causes and Consequences. *Journal of Development Economics, 92*(2), 138-151. doi: https://doi.org/10.1016/j.jdeveco.2009.01.012
11. Killington, K., & Dylewski, P. (2017, June 15). VAT deduction and noneconomic activities: art or science? *Tax Journal,* 14-15. Retrieved from https://home.kpmg.com/content/dam/kpmg/uk/pdf/2017/06/vat-deduction-and-non-economic-activities.pdf
12. Lamensch, M. (2017). The principle of «substance over form» with respect to the exercise of the right to deduct input VAT - A critical analysis of the Barlis jurisprudence. *World Journal of VAT/GST Law, 6*(2), 129-137. doi: https://doi.org/10.1080/20488432.2017.1407126
13. Lomas, U. (2017, December 27). *EU Reports On States' Tax Reforms In 2017.* Retrieved from https://www.tax-news.com/news/EU_Reports_On_States_Tax_Reforms_In_2017____76077.html
14. Malyshkin, O., Bezverchiy, K., Kovova, I., Semenova, S., Shulyarenko, S., & Karev, V. (2018). *Harmonization of accounting and auditing at enterprises of Ukraine in the context of EU.* Monograph. Kyiv: ArtEk PH (in Ukr.).
15. Melnyk, M. M. (2008). Mechanisms for regulating indirect taxes in Ukraine: advantages and disadvantages. *RFI Scientific Papers, 1,* 40-45. Retrieved from http://nbuv.gov.ua/UJRN/Npndfi_2008_1_6 (in Ukr.)
16. Mesdom, B. (2011). VAT and Cross-Border Trade: Do Border Adjustments Make VAT a Fair Tax? *Tax Analysts,* 192-203. Retrieved from http://www.taxhistory.org/www/freefiles.nsf/Files/MESDOM-15.pdf/$file/MESDOM-15.pdf
17. The Price of the State (2018). *Revenue of Ukrainians Budget.* Retrieved from http://cost.ua/budget/revenue
18. Miskyi, V. V. (Ed.). (2016). *Road Map of Reforms (September 2016 - December 2017).* Centre for Democracy and Rule of Law. Kyiv: PIH «Misto» Ltd. Retrieved from http://rpr.org.ua/wp-content/uploads/2016/09/Dorozhnya-karta-reform-RPR-do-kintsya-2017-roku.pdf
19. Hodzic, S., & Celebi, H. (2017). Value-added tax and its efficiency: EU-28 and Turkey. *UTMS Journal of Economics, 8*(2), 79-90. Retrieved from http://utmsjoe.mk/files/Vol.%208%20No.%202/UTMSJOE-2017-0802-03-Hodzic-Celebi.pdf
20. Semerád, P., & Bartůňková, L. (2016). VAT Control Statement as a Solution to Tax Evasion in the Czech Republic. *Procedia - Social and Behavioral Sciences, 220,* 417-423. doi: https://doi.org/10.1016/j.sbspro.2016.05.516
21. Boger, O. V. (2016). *Tax regulation of the innovation economy development.* Dissertation Theses. Retrieved from https://kneu.edu.ua/userfiles/d-26.006.01/2016/Boger_dis.PDF (in Ukr.)
22. Šimović, H., & Deskar-Škrbić, M. (2016). Value Added Tax Efficiency in Croatia. *EFZG Working paper series, 16-02.* Zagreb: Faculty of Economics. Retrieved from https://hrcak.srce.hr/file/223529 (in Croatian)
23. Spies, K. (2017). Fundamental freedoms and VAT: an analysis based on the Credit Lyonnais case. *World Journal of VAT/GST Law, 6*(2), 100-128, doi: https://doi.org/10.1080/20488432.2018.1460970
24. Sopek, P. (2012). Tax expenditures and the efficiency of Croatian value added tax. *Financial Theory and Practice, 36*(3), 269-296. Retrieved from http://www.ijf.hr/upload/files/file/FTP/2012/3/sopek.pdf
25. The European Commission (2018). *Taxation and customs union.* Retrieved from https://ec.europa.eu/taxation_customs/home_en
26. The European Commission (2018). *Taxation Trends in the European Union. Data for the EU Member States, Iceland and Norway.* Luxembourg: Publications Office of the European Union. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_trends_report_2018.pdf
27. The European Commission (2012). Tax reforms in EU Member States. Tax policy challenges for economic growth and fiscal sustainability 2012 Report. *European Economy, 6,* 2012. Retrieved from http://ec.europa.eu/economy_finance/publications/european_economy/2013/pdf/ee5_en.pdf
28. Eurostat Statistics (2017, December 06). *Tax_revenue_statistics.* Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Tax_revenue_statistics
29. The Verkhovna Rada of Ukraine (2014, September 16). *Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part.* Retrieved from http://zakon3.rada.gov.ua/laws/show/984_011/page10 (in Ukr.)
30. The Verkhovna Rada of Ukraine (2010). *Tax Code Ukraine in edition as of October 04, 2018, No. 2530-VIII.* Retrieved from http://zakon2.rada.gov.ua/laws/show/2755-17/page
31. J.V.S. & W.Trading spol. s r.o. (2018, March 26). *VAT in the Czech Republic, value added tax.* Retrieved from http://www.jvstrading.com/article/dph (in Russ.)

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