Theoretical Considerations on VAT Structure Rates in the European Union

Ionela BUTU[1], Petre BREZEANU[2], Adriana PORUMBOIU[3], Raluca-Andreea GHEȚU[4]
[1,2,3,4] *University of Economic Studies, Bucharest, Romania*
butuionela19@stud.ase.ro, petre.brezeanu@fin.ase.ro,
adriana_porumboiu@yahoo.com, gheturaluca93@yahoo.com

Abstract. *According to the well-known statement of the American scientist Benjamin Franklin, the Polymath, in a letter to Jean-Baptiste Leroy in 1789: "Nothing is certain in this world, excepting death and taxes". This article provides an overview of theoretical concepts existing in the specialized literature regarding VAT rates. The present paper summarizes the current VAT rates applied by member states in EU and the definition of the concept. Generally speaking, the VAT systems in place across the European Union are still quite heterogeneous, despite the common legal framework and guidelines in place. In addition to the reduced rates, some Member States also have super-reduced rates, parking rates and zero rates. Also, I highlight the evolution of the VAT Revenue in 2017-2018. Besides these, I underlined the image of the emergent states regarding the percentage in GDP of the indirect, direct and social contributions and VAT average rate, in comparison with the developed countries.*

Keywords: Indirect taxes, direct taxes, VAT standard rate, VAT reduced rates, VAT super-reduced rate, parking rate, VAT revenue.

JEL classification: **H25, H20.**

1. Introduction

In the current economic context, the tax represents a non-refundable mandatory contribution, unconditional and non-payment contribution due to the state budget by physical or juridical persons on their income and for the goods they own. The taxpayer consents to pay the tax and voluntarily comply to this burden, until a certain point when taxes exceed limits of tolerability, phenomena occur in which causes serious damage to the state ability to collect these revenues (Brezeanu Petre, 2009).

Historically, taxes have been with us for as long as civilization (Alain Charlet and Jeffrey Owens), so the Value added tax - VAT at 65 years old is relatively young. VAT was first introduced in France, from the initiative of Maurice Loire in 1954 and in the following years was adopted by the member states of the European Union as well as other states (Lacrita-Grigorie, 2009). In most countries it has been used to increase revenues.

The Value Added Tax, VAT – is as the name implies a tax on the value added at each stage of the production chain. Each trader applies the relevant VAT to each outgoing invoice. (Copenhagen Economics, 2007). To be more specific, we can extend this definition and say that value added tax is a general consumption tax, which includes all stages of the economic circuit, respectively: production, services and distribution, up to final consumers, an indirect tax that is established on transactions relating to the transfer of property and service supplies (Avram, M., Avram, V., 2012).

In Romania, the value added tax was introduced on 1 July 1993 (Government Ordinance No. 3/1992). Since then and so far, value added tax is determined by the difference between the VAT collected (for sales) and VAT deductible (for purchases), the method being applied in most European countries.

2. General Aspects Regarding Value Added Tax - VAT

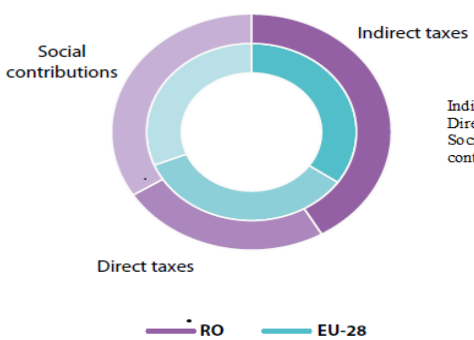
As stated in the literature, high tax rates will destroy the tax base (A. Smith, 1776). This concept was materialised in 1980, by the american economist Arthur Laffer, who demonstrated, using a curve that lowering taxes can bring more revenue to the budget, because it's can stimulate the economy. Thus, the level of tax rates and their trend have a significant impact on budget revenues. Hence, if the tax rates are under acceptable level of the Laffer curve, the tax pressure will decrease, thus reducing the tax risk.

In Europe, VAT is based on Directive 2006/112/EC on the common system of value added tax which regulates essentially two aspects: the establishment of transactions that are subject to VAT and the application of a minimum standard rate of 15%. Given that neither the standard VAT rates nor the reduced VAT rates or exemptions are fully harmonized, and Member States may adopt their own measures, the main objective of Directive 2006 is for the common system of VAT to achieve the highest degree of *simplicity* and *neutrality*. Achieving this goal means that, within the territory of each Member State, similar goods and services bear the same tax burden, whatever the complexity of the economic chain (Directive 2006/112/CE).

Nevertheless, since the 1960s, the Member States have placed in well-developed income taxes system, based on three main reasons (Copenhagen Economics 2007) that EU countries have implemented parallel VAT systems:

- The VAT system is regarded as a lower supplement against fraud to direct taxes on labor income, which brings substantial revenues.
- Avoids disincentives on savings and investments.
- Facilitate the use of higher or lower taxation rates on different goods and services.

From the perspective of the share of the revenues generated from value added tax in European Union, it is considered relevant tax is the most important indirect tax. Figure no. 1 illustrates the tax revenues in Romania by tax category for year 2017. In order to support this idea, we highlight that in European Union - 28 countries, year 2018, the total VAT Revenues made up a significant 7,1 percentage of gross domestic product (Eurostat).



	RO	EU28
Indirect taxes	10,4	13,55
Direct taxes	6,1	13,4
Social contributions	8,5	12,17

Fig. 1. Tax revenues by main taxes, Romania compared to EU-28, 2017 (in % of total taxation)

Source: Taxation trends in the European Union Data for the EU Member States 2019

Figure No. 1 illustrates that, in Romania, 2017, the share of indirect tax revenues was 10.4% of total taxes, compared to 13.55% - the EU28, which means that indirect tax revenues are significant. In Romania, the share of direct income in total taxes was lower, 6,1%, compared to indirect taxation, a characteristic of developing countries.

3. VAT – Rules and Rates

The systematized policy of VAT, through its main segment, taxing on a relatively wide range, the amount being the unique rate, aims to achieve a high-performance financial system based on well-founded control-evaluation lines and minimizing compliance costs related to VAT legislation. However, in EU, the standard VAT rate covers only about two thirds of total consumption and the remaining third being subject to exemptions or reduced rates (Copenhagen Economics, 2007).

Even if in European Union, there are harmonized VAT rules (Directive 112/2006), their application may differ in each EU country. Each country has a standard VAT rate which applies to most supplies. This may not be less than 15%. In practice, we have goods and services for which it applies, besides the standard rate, and other reduced rates, zero rates or exemptions. Reduced rates (max. 2) may be applied to a limited category of products and services and normally cannot be less than 5%. Some countries are allowed to apply specific rates on some sales, such as: super-reduced rate, zero rate, parking rate (or intermediary rate).

3.1. Super-Reduced Rate

Some countries are allowed to apply specific rates, less than 5% on some sales. e.g.: in France a super-reduced rate of 2,1% is applied to certain services such as:

- livestock intended for use as foodstuff to non-taxable persons including farmers taxed under the special flat-rate scheme;
- some pharmaceutical products; newspapers and periodicals of general interest with a direct connection to current affairs, digital press.

According to data published by the European Commission (TAXUD, 2019), Luxembourg is the country where the 3% VAT rate is applied for the largest variety of products and services, for 24 categories, of which we exemplify:

- non-alcoholic beverages: mineral water/lemonade/fruit juices/tea;
- medical equipment, aids and other appliances normally intended to alleviate or treat disability, exclusively for the disabled;
- transport of passengers and their accompanying luggage (not applicable for domestic transport on sea);
- royalties;
- raw wool;
- restaurant and catering services (excluding alcoholic beverages); admission to sporting events; use of sporting facilities;
- renovation and repairs (substantial works on housing used as principal dwelling and (i) constructed more than 20 years prior to the start of the works (ii) newly acquired, the works to be completed in the five years following the acquisition).

3.2. Zero Rate

Some countries apply zero rates on certain sales. In this case, the consumer is not obliged to pay VAT, but the seller has the right to deduct the VAT he paid to make purchases directly related to the sale (e.g. for exports or certain financial services to non-EU customers). Cases where the zero rate is applied to consumption in the legislation of the Member States we found, generally, in developed countries: Belgium, Ireland, Denmark, Malta, Sweden, and United Kingdom:

- supplies of some food and drink intended for human consumption (excluding alcoholic drink), in Ireland, Malta and United Kingdom;
- supplies of certain recycled materials and by-products (Belgium);
- sales of newspapers usually published at a rate of more than one issue per month (Denmark);
- supplies of orally administered medicines for human consumption or supplies of medical equipment such as wheelchairs, walking frames and crutches, orthopedic appliance (Ireland);
- printing services for membership publications of non-profit making organizations. (Finland);
- medicine supplied on prescription or sold to hospitals or imported into the country to be supplied on prescription or sold to hospitals (Sweden).

3.3. Parking Rate (or Intermediary Rate)

The parking rate (or intermediate rate) applies to certain goods or services that are not eligible for a reduced rate, but which, in some Member States, were already subject to reduced rates on 1 January 1991. These countries are authorized to continue applying reduced rates instead of the standard rate, as long as they are not less than 12% (European Commission).

Referring to the beginning of 2019, parking rates are applied in 5 European countries: Belgium, Ireland, Luxembourg, Portugal and Austria. The following outlines the countries which, still apply a “parking rate”: Belgium, Ireland, Luxembourg, Portugal and Austria. Some goods and services are subject to parking rate", as follows:

In Belgium 12%:

- Certain energy products such as: black coal, uncharred petroleum coke used as fuel.
- Certain tires and inner tubes for agricultural tractors and machinery, excluding tires and inner tubes for forestry tractors and pedestrian-controlled tractors.

In Luxembourg, the parking rate of 14% applies to:

- Wines of fresh grapes with 13% vol. or less (fortified wines, sparkling wines and so-called liqueur wines excluded).
- Fuels: solid mineral fuel, mineral oils and wood intended for use as fuel, with the exception of wood for heating (firewood).
- Printed advertising material, commercial catalogues and the like; tourist publications.

In Portugal, the parking rate of 13% applies to: Wine, diesel for the agriculture, agricultural tools and utensils, mobile silos, tractors, pumps and other machinery designed exclusively or mainly for the purpose of agriculture, cattle breeding or forestry. It can be noted that "parking" rates are mainly applied for categories of wines, fuels, energy products and agriculture sector. Although the "parking rate" was intended to be eliminated gradually, so far, this has not happened in all countries.

The authors Alain Charlet and Jeffrey Owens opine that the scope of the reduced VAT rates in Europe was the desire to alleviate the tax on goods and services that forms a larger share of expenditures of the poorest households.

All EU countries make use for operating with reduced rates alongside the standard rate. Table nr. 1 gives a global view of the VAT rates applied in European countries in January 2019. In order to show the impact of the different VAT rates on the budget revenue the table also illustrates the differences in VAT revenue and its share of GDP across EU Member States from 2017 to 2018.

Table nr. 1: List of VAT rates applied in the Member States (in %), January 2019

Member States	**Standard Rate**	**Reduced Rate**	**Super-reduced Rate**	**Parking Rate**	**VAT Revenue 2017***	**VAT Revenue 2018***
Belgium	21	6 / 12	-	12	6.8	6.9
Bulgaria	20	9	-	-	9.0	9.1
Czech Republic	21	10 / 15	-	-	7.7	7.7
Denmark	25	-	-	-	9.5	9.8
Germany	19	7	-	-	6.9	7
Estonia	20	9	-	-	6.9	9
Ireland	23	9 / 13.5	4.8	13.5	4.5	4.4
Greece	24	6 / 13	-	-	8.1	8.3
Spain	21	10	4	-	6.5	6.6
France	20	5.5 / 10	2.1	-	7.1	7.2
Croatia	25	5 / 13	-	-	13.2	13.5
Italy	22	5 / 10	4	-	6.3	6.2
Cyprus	19	5 / 9	-	-	9.5	9.9
Latvia	21	12	-	-	8.0	8.4
Lithuania	21	5 / 9	-	-	7.8	7.8
Luxembourg	17	8	3	14	6.3	6.2
Hungary	27	5 / 18	-	-	9.5	9.7
Malta	18	5 / 7	-	-	7.2	7.5
Netherlands	21	9	-	-	6.8	6.8
Austria	20	10 / 13	-	13	7.7	7.6
Poland	23	5 / 8	-	-	7.8	8.1
Portugal	23	6 / 13	-	13	8.6	8.8
Romania	19	5 / 9	-	-	6.2	6.4
Slovenia	22	9.5	-	-	8.1	8.2
Slovakia	20	10	-	-	7.0	7.0
Finland	24	10 /14	-	-	9.1	9.1
Sweden	25	6 / 12	-	-	9.3	9.2
United Kingdom	20	5	-	-	6.8	7.0
EU 28 standard rate	21.5					

Note: *as % of GDP

Source: own calculations and data processed based on Eurostat and Taxud (2019)

Firstly, we can conclude that the so-called reduced rates are used almost in all the countries, excepting Denmark. In most countries, the rates are in the range of 2-6 percent or 12 percentage points above the agreed minimum level of 15 percent for the standard rate. The so-called “super” reduced rates are found in five countries (rates in range of 2,1 – 4,8 percent). More than that, many countries apply zero-rating but typically for very small segments of the VAT base.

Secondly, it should be noted that in the general picture of the EU Member States, Romania is among the top 5 countries with the lowest standard VAT rates, together with Germany and Cyprus (all three with the same VAT rate of 19%). From top to down, Hungary it is the country with the highest VAT standard rate (27%), followed by Sweden, Denmark and Croatia (all 25%). Luxembourg (17%) and Malta (18%) are the country with lowest standard rates.

The only EU country which does not apply reduced rate at all, it is Denmark, though a zero rate applies to newspapers. So, Denmark's standard rate covered and still covers almost all taxable expenditure. It is noticable the VAT Revenue trended from 2017 to 2018 in most Member States, excepting countries such as: Estonia, Lithuania, Italy, Finland, Sweden, Austria, Ireland and Luxembourg. In 2018, in Croatia the VAT made up the biggest share of GDP, 13,5 %, whereas Ireland had the lowest share with 4,4 %.

We can say that the principle of the Laffer curve applies to Cyprus, given the low tax rates and the fact that VAT Revenue as % from GDP registered an increase of 0.44%, in 2018 compared to the previous year, representing the most high percentage of Member States. In part, this was due to legislative changes that came into force in Cyprus in 2018: "Per article 2 of the VAT amending Law 60(I)/2018, 9% VAT is imposed on provision of services and supply of goods by retirement homes, provided those transactions are not exempted". (Taxation trends in the European Union Data for the EU Member States 2019).

In Hungary, where the maximum VAT rate is registered (27%), in 2018 have entered into force a series of reductions of VAT rates for certain products and services: from 18% to 5% on restaurant meals and on internet access; from 27% to 5% on fish and on Braille-displays and printers. We can remark that the VAT rates were reduced by the same percentage in totally distinct economic sectors. These reductions in reduced VAT rates may be examples of good practice for other member countries, with the target of stimulating consumption in certain sectors, in order to achieve a higher standard of living.

4. A comparative view between developed and less developed countries

Văcărel (2007) emphasizes that direct taxes are specific to developed countries, although some differences are known and less developed countries or emerging countries focus more on indirect taxes than direct taxes. However, this option should be correlated with income and wealth of the physical or juridical persons. Thus, in poorly developed countries, direct taxes will be less performant comparing with developed countries. Therefore, emerging states will choose rather the indirect taxation than direct taxation.

Looking to emphasize the differences between emerging and developed countries, we included in the analysis emerging countries, like Romania, Hungary, Bulgaria and Poland, which are economically similar and the United Kingdom and Germany. The data collected are related to the year 2017.

Table no. 2: Emerging countries vs. Developed countries

Member States	Indirect taxes*	Direct taxes*	Social contributions*	Average VAT Rate	Average VAT Rates UE	VAT Revenue 2017*	VAT Revenue 2018*
Bulgaria	15,14	6,01	8,40	14,50	14,11	9,03	9,10
Germany	10,74	13,04	15,30	13,00		6,91	7,00
Hungary	18,16	7,42	12,70	16,67		9,45	9,70
Poland	13,97	7,35	12,90	12,00		7,78	8,10

Member States	Indirect taxes*	Direct taxes*	Social contributions*	Average VAT Rate	Average VAT Rates UE	VAT Revenue 2017*	VAT Revenue 2018*
Romania	10,37	6,08	8,50	11,00		6,21	6,40
United Kingdom	13,06	14,50	6,50	12,50		6,80	7,00

*Note: * as % of GDP*
Source: own calculations and data processed based on Eurostat and Taxud (2019)

According to Table no. 2, we can state the value added tax is more important in the emerging countries comparing to developed countries. In 2017, the highest percentage of indirect taxes compared to direct taxes is observed in Hungary and Bulgaria, followed by Poland and Romania. Contrary to the situation of 2017, for Romania, the year 2018 was "the first year when the share of indirect taxes in tax revenue is exceeded by the income from social contributions". Yet, indirect taxes still remain an important component of tax revenues in Romania. The fiscal relaxation measures over the last four years that led, in 2017, to the reduction of the standard VAT rate from 24% in 2015 to 19%, simultaneously with the extension of reduced VAT rates contributed significantly closing the gap between Romania and the EU average, compared with the period 2010-2015. (Fiscal Council Annual Report 2018).

The comparative analysis shows that VAT revenues had a trending in 2018 compared to 2017, in both developed and emerging countries. The VAT revenues increased the most in in Poland, where the VAT standard rate is 23% and the average VAT rate is 12%, below the EU average rate, respectively in Hungary, where the average VAT rate is 16.67% above the EU average rate. The lowest increases were recorded in Bulgaria and Germany.

The increase of VAT revenues in Poland, an emerging country, may be due, in part, to changes in VAT legislation that entered into force at the beginning of 2018, as follows: increasing the VAT rate on specific products (i.e. certain hygienic or pharmaceutical articles) from 8 % to 23 %; extension of the scope of taxable persons obliged to submit a unified format (the Single Audit File for VAT - JPK) to the tax authority by electronic means on a monthly basis. JPK is a set of information on purchases /sales for the period in question facilitating audit checks (Taxation Trends in the European Union 2019).

5. Conclusions

As per the data published by the European Commission (Taxud 2019) the EU-28 average standard rate was 21.5 % at the start of 2019, the same as in 2018 and 2017. No Member States had changed their standard VAT rates in January 2019. It would appear that rates have been very stable since 2014, following a period of hikes between 2009 and 2013. From top to bottom, Hungary it is the country with the highest VAT standard rate (27 %), followed by Sweden, Denmark and Croatia (all 25%). Luxembourg (17%) and Malta (18%) are the country with lowest standard rates.

Reduced VAT rates have remained ~~at~~ the same level at the beginning of 2019, however, majority of the Member States, legislative measures have entered into force amending the list of goods and services for which reduced rates or zero rates can be applied.

We can consider the VAT rate system is the central pillar of tax measures and from this pillar would emerge fiscal outcomes to support smart, sustainable and inclusive economic growth with the target of providing premises for the consolidation of a strong, proactive state and a balanced society in each Member State. An example of branch tax would be that reducing the VAT rate for certain products is a measure of increasing equity, by improving income distribution or by making certain goods more accessible to all, which could lead to a lower fiscal risk.

From the comparative analysis, it is confirmed that Member States may adopt their own tax system, provided it complies with EU rules. Therefore, it is notable that direct taxes are specific more to developed countries, while less developed countries or emerging countries focus more on indirect taxes than direct taxes, with the same goal to obtain the highest incomes to ensure a higher standard of living.

The reasons because Member States are highly interested in reduced VAT rates are different. Some countries want to incease employment, while others want to promote specific products to boost the population" health or cultural awareness. Others, in the same time, are interested in favouring underprivileged groups. Many of these arguments are concluding the concept that society's welfare will increase by decreasing the VAT rates.

According to the study regarding the reduced VAT rates applied in the members of the European Union elaborated in 2007 by Copenhagen Economics, the decision of a Member State to use reduced VAT rates in a specific sector is taken simultaneously with the decision to give up tax revenue, ruling out the possibility of tax revenue from higher sales it may compensate the loss of tax revenue per sold item.

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