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*Heterogeneity and Harmonization of the Value Added Tax:*

*A study on the EU current situation*

**Supervisor**

Ch. Prof. Francesca Zantomio

**Graduand**

Stefano Manin

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## **List of Acronyms and Abbreviations**

|       |   |
|-------|---|
| AT    | Austria   |
| BE    | Belgium   |
| BG    | Bulgaria  |
| B2B   | Business to Business                                  |
| B2C   | Business to Consumer                                  |
| CY    | Cyprus  |
| CZ    | Czech Republic  |
| DE    | Germany   |
| DK    | Denmark   |
| EE    | Estonia   |
| EL    | Greece  |
| ES    | Spain   |
| EU    | European Union  |
| EU-28 | Current Member States of the European Union           |
| FI    | Finland   |
| FR    | France  |
| GDP   | Gross Domestic Product                                |
| HU    | Hungary   |
| IE    | Ireland   |
| IT    | Italy   |
| LT    | Lithuania   |
| LU    | Luxembourg  |
| LV    | Latvia  |
| MT    | Malta   |
| NA    | National Accounts                                     |
| NL    | Netherlands   |
| OECD  | Organisation for Economic Cooperation and Development |
| PL    | Poland  |
| PT    | Portugal  |

RO Romania  
SE Sweden  
SI Slovenia  
SK Slovakia  
UK United Kingdom  
VAT Value Added Tax  
VATTL VAT Total Tax Liability  
VRR VAT Ratio Revenue  
VIES: VAT Information Exchange System



## **Introduction**

In the contemporary era of business and cultural internalization, goods and services are increasingly sold across states' borders. Because of this phenomenon, indirect taxation, and in particular consumption tax is becoming an important and growing instrument to collect revenues for tax authorities. National and International organizations must be more and more aware of the strategic role of indirect tax in the fiscal sector.

In particular this work, aims at investigating the purpose, the reasons and the problems related with the application of the most important indirect tax, the Value Added Tax, VAT.

Considering the last updated information available, published by World and European Institutions, the VAT is become one of the most important tax in collecting revenues. VAT is nowadays adopted in more than 160 countries all over the world with a big exception for USA.

The main goals of this thesis is to analyse the ongoing implementation, harmonization and modernization of the VAT tax, focusing on the harmonization process in the EU contest, the relevance of the VAT in terms of revenue collection and analysing the drawbacks caused by its implementation.

In the beginning of 2017 the EU Commission displayed the results of the EU-28 revenues gathered from consumption taxes as a percentage of total taxations, showing a growing trend, from 28.5% in 2014 to 28.7% in 2015. Data displayed, show a positive and constantly growing trend since its implementation in 1948.

The main purpose of the VAT is to impose a "broad-based tax" that affect not only the final consumption of private individuals, but also different subjects that operate "non-business activities.

From the legal prospective the VAT is fundamentally a transaction tax. VAT is gathered by firms through a staged mechanism, but since the moment that it is a consumption tax, its burden does not stay on the business side, apart when commodities are acquired for private reasons.

A focus on the adoption of the VAT rates in the EU area is done by comparing data about the use of statutory, reduced, zero rating and exemption of the VAT.

The thesis will try to define if there is a common pattern in the application of the VAT rates, displaying the main theories supporting the imposition of a common VAT rate in EU affecting all the consumptions despite the use of reduced VAT rates. The first two chapters are two sections that helps readers to familiarize with the VAT characteristics getting closer to the main topics exposed on chapter three.

Section one is focusing on the main difference between direct and indirect taxes concentrating the attention on the purpose of these typology of taxes. Moreover, it is explained the main characteristics of the VAT and the main reasons in favour of its application.

Chapter second is devoted to analysing the VAT as an instrument to collect revenues in the European Union community displaying the most updated data. Successively, are explained the main problems of its application, focusing in the administrative and compliance costs and in the most important VAT gap problem.

To conclude, chapter three is dedicated to display the main theories in favour of the adoption of a uniform VAT rate instead of the use of lower VAT rates covering important macroeconomics aspects involved.

This chapter aims at answering to the most frequent questions that can raise when focusing on the EU's VAT rates and in particular if there is a common pattern in the policies implementing lower VAT rates between EU's Member States.

Data concerning the various VAT rates imposed among EU Member States and data regarding the application of reduced VAT rates to certain categories of goods and services are displayed, aiming to provide readers an understanding, if the reality replicates the same level of harmonisation reached on the legislation level. After having analysed the cost of the implementation of lower VAT rates, the third chapter dedicates a brief focus to another relevant question regarding the existence or not of an optimal standard VAT rate that maximize the benefits and reduce at minimum the drawbacks of its application.

# Chapter 1: The VAT

## *1.1 The differentiations between Direct and Indirect Taxes*

Respecting the OECD nomenclature, taxes can be classified as: “Taxes on income, taxes on profits and capital gains, social security contributions; taxes on payroll and workforce; taxes on property and taxes on goods and services” (Is et al., 2016).

Viewing these categories more generally, these taxes can be classified among direct and indirect taxes. Certainly, are classifications that are varied and are still subject to variations during the time (Michael, Peter, and Eleonor 2009).

For the purpose of this thesis, it is relevant to highlight what typology of tax imposition may be used, for which purposed they should be applied and which type of direct taxation can be contrasted to VAT that is the tax objective of this study.

Direct taxation method is marked by the assumption that the “subject to be taxed and the final taxpayer is the same” (Englisch 2009). Indirect taxation method is supposed to “shift the tax to be paid from the taxable person to a second subject in the price of goods supplied or services conveyed by the first of the two mentioned to the second one, who consequently becomes the final taxpayer” (Englisch 2009). The distinction should then be based on “Whether the person who actually pays the money over to the tax collecting authority suffers a corresponding reduction in his income. If he does, then, in the traditional language, impact and incidence are on the same person and the tax is direct; if the tax weight is shifted and the real income of someone else is affected (i.e. impact and incidence are on different people) then the tax is indirect” (John Stuart Mill 2006). Again, “ taxes on wages, profit, interests, rents, royalties, and all other forms of income, and taxes on the ownership of real property” are considered direct taxes and in contrast, indirect taxes are considered “ sales, excise, turnover, value added, franchise, stamp, transfer, inventory and equipment taxes, border taxes and all taxes other than direct taxes and import charges” (WTO organization 2015).

We know that, the economic theory of tax shifting is not applicable exclusively to indirect taxes, indeed it is applicable to direct taxes too. “Under certain circumstances, direct taxes may be partially shifted to other subjects such for instance the consumers, the employers and to the employees, through the increase-in-price-mechanism” (Sentsova 2009). In addition, it is recognised that the differentiation resides essentially on the idea of the legislator and the legal features of the tax, keeping in mind that there are no certainty that indirect tax is every time shifted, nor that direct taxes are always borne by the taxable subject (Michael, Peter, and Eleonor 2009).

Direct taxation method usually is handled by tax authorities to affect a wide range of hypothetical manifestation of taxpaying capacity attributed to the subject to be taxed: current income, home property, estate duty, fringe benefits, dwellings, capital gains are all typologies of manifestations that could be associated with a direct tax (Michael, Peter, and Eleonor 2009). Direct taxes are generally considered an appropriate redistribute tool, in the hypothesis they cannot be transferred to other subjects and that they are commensured to direct taxpaying capacity's indexes of the individual, they can be properly used for redistributing goals with progressive levying with or without exemptions for low incomes (Michael, Peter, and Eleonor).

On the contrary, indirect taxes are based on indirect indexes and for their nature, less directly connected with the contributively capacity of individuals and not depending from the quality and quantity of income perceived, because levied equally on taxpayers, they are considered to be regressive (Michael, Peter, and Eleonor 2009). They are imposed prevalently on consumers and, they heavy more on lower income households, due to their consumption propensity, in the hypothesis that the consumption propensity is lower with the increment of the income. The regressive trend of indirect taxes is amplified if imposed on primary goods that represent a high percentage of the consumption of both, rich and poorer (Michael, Peter, and Eleonor 2009).

Together, direct and indirect taxation form the so called, tributary pressure.

To make the readers of this work, more comfortable with indirect and direct taxes, here below are summarized the most important one.

Table 0.1: List of the most important direct and indirect taxations

**Types of Direct taxes:**

- Income tax: Is a typology of tax affecting individuals on the income perceived during the year.
- Corporate tax: Is a typology of tax affecting corporations' earnings
- Wealth tax: This type of tax is paid not on income when it is perceived, but on the patrimony held by a person or a family as for instance dwellings, fields, boats, real estates and so on.

**Types of Indirect taxes:**

- Sales tax: Is a typology of tax applied on consumers by the vendors at the point of sales
- Excise duty: Is a type of tax imposed on a list of goods such as cigarettes, alcohol, gasoline. Recently, various governments have imposed fees on industries polluting the environment.
- Custom duty: Is a tax due on importation by the authorities to protect domestic industries and raise State revenues.
- Value Added Tax: Is a general, broadly based consumption tax assessed on the value added to goods and services.
- Other taxes on products and on production.

Source: OECD 2014

As easily understandable from the table, basically, every taxes or fees levied by the authorities at the manufacturing or production level or to the customers of determined goods and services are indirect taxes.

Contrary to the past, economists and experts are inclined to become less severe about the relevance of the separation between direct and indirect taxes even if, it is far from

being unimportant, indeed such distinction, has disciplinary consequences for States Members of organisation like the European Union (Michael, Peter, and Eleonor 2009).

In the following part, there will be treated the progressivity topic of Direct and Indirect taxes; the purpose of Personal Income Tax and the purpose of VAT/GST tax analysing common aspects and the main differences. A big focus will be done on the operation of the VAT, analysing how does it works and the basic principles of its application in the EU transactions. A focus will be done on the reasons that support the credibility and the large utilization of the VAT tax on the current economy, trying to provide an understanding of which are the techniques and the main tools used to calculate its performance. Before starting to treat these topics, it results necessary highlight the main characteristics and purposes that a tax system should have.

## ***1.2 Purpose of a tax system***

Starting from the beginning, a topic of fundamental relevance is to define the features that a good tax system should include

Obviously, answering to this question is not so straightaway, because no impartial response can be provided due to the multiplicity of variables that should be considered in assessing this topic. The literature helps us to identify multiple purposes that a tax system should satisfies and moreover, proposes a range of criteria which can be considered to asses a taxation system (Michael, Peter, and Eleonor 2009).

First, all taxes have the aim to raise revenues for the treasury. Obviously, define the optimal slice of the public sector is always under debating, but the awareness of the presence of public organizations and of the inescapable role they fulfil in society has been largely recognised (Musgrave, R. 1989).

A feature, highlighted in large part of taxation studies, is that the imposition of taxes must modify the efficient allocation of the available resources in the economy in the minimal possible manner. In addition to the main characteristics of collecting resources in an ideally efficient manner, the taxation system may provide a fair “distribution of the tax

burden” and should even be utilized to find a solution for a not equal distribution of endowments and incomes (Musgrave, R. 1989).

A tax legislation should be equitable and based on the notion that each taxpayer should contribute his or her fair share to the cost of government. Horizontal and Vertical equity are the two traditional dimensions to which the concept of equity is declined (Michael, Peter, and Eleonor 2009).

Regarding the horizontal equity, the principle states that, individuals in similar situations should be handled similarly by the tax system paying equal amount of taxes; on the other hand, vertical equity principle, treats people with different resources paying different amounts of taxes (Mirrlees et al. 2010).

Identify the essential basic rules behind the levy of a tax with the aim to assess its purpose, it is not easy at all (Michael, Peter, and Eleonor 2009).

Firstly, two categories of taxes may be selected: on the one part, there will be taxes with revenue generating goals focusing on “internal economic goal” such as raising revenues; on the other hand certain taxes aim to reach “external economic goals” such as policies to protect environment from pollution, reach social and healthy goals serving as disincentive tools to certain behaviours as for instance the excises imposed on alcohol aiming to regulate the consumption of spirits beverages among the population (Michael, Peter, and Eleonor 2009).

The major part of economists concludes that a tax system, to be equitable, should be progressive meaning that effective average tax rates, should increase with income, resulting in richer people paying a higher part of their income in taxes than do lower wages people (Mirrlees et al. 2011b).

In contrast, a tax system with fix average tax rate, independently from the income perceived, is considered a proportional tax system. Regressive tax systems, are tax systems in which effective average tax rates fall with income (Mirrlees et al. 2011b).

Efficiency, and in specific, the avoidance of distortions and excess burden, are the main challenges of the modern optimal taxation theory, that are predominant on the recent tributary and public finance literature. Afterward, a basic rule of equal treatment which is tying upon the legislator, will demand the induction of tax laws according to the principles of tax fairness and tax equity (Mirrlees et al. 2011b).

### ***1.3 Progressivity of direct and indirect taxes***

The progressivity of the tax system is “linked with the concept of equity” and the redistributive function of taxes (Brennan and Buchanan 1980).

The key role of direct taxation, mainly personal income taxation, in the redistributive processes is generally accepted (Nerudová and Siroky’ 2009). Income taxes and more generally direct taxes tend to be progressive taxes, indeed their progressivity is ensured by the progressive tax rates applied, by the existence of non-taxable amounts, deductible amounts and tax sales. Thanks, the utilisation of deductions and allowances, the progressivity of a tax can be ensured also in the case of a flat tax (Michael, Peter, and Eleonor 2009). Obviously if deductions, tax credits and allowances are included in the personal income tax, there will be a gap between the effective tax rate and the nominal rate resulting in a tax with the progressive characteristics (Nerudová and Siroky’ 2009).

Focusing on indirect taxes, the topic of progressivity looks to be more complicated than the case of direct taxes.

The consumption tax falls equally on households to which the tax is the substantial part of expenses, as well as on the households to which the tax is an unimportant part of the expenses (Nerudová and Siroky’ 2009). The equal taxation of goods and services influences negatively the functioning of the market mechanism only minimally, but does not enable the redistributive function of the taxes to be used (Michael, Peter, and Eleonor 2009).

VAT and other indirect taxes have shown to affect some households with a regressive influence. This fact is the consequence of the structure of the expenses, or by the ratio of the taxed goods on the total expenditures of households. Indirect taxes seem to satisfy in better conditions the neutrality character that a tax system should embrace (Michael, Peter, and Eleonor 2009).



## ***1.4 The purpose of PIT***

Among Direct taxes, the Personal Income Tax is the most debated tax since the moment that is the most important in terms of revenues collection and in term of ability to modify, incentivising or discouraging, certain behaviours on particular moments in the economy cycle (Michael, Peter, and Eleonor 2009).

To provide an idea of the importance of this tax on the budget of a country it should be considered that on average, OECD countries gathered about 34% of their total tax revenues from taxes on income and profits on 2016 (OECD 2017).

The ability to pay principle, is the theoretical principle that receive consensus between practitioners and tax lawyers stating that the main purpose of a personal income tax is to tax individuals in accordance with their taxpaying ability (Michael, Peter, and Eleonor 2009).

The ability to pay can be measured in terms “of income, wealth, and expenditure” (Joachim English 2009). Even though there are many different arguments put forward to establish the “ethical basis of this standard as a principle of tax justice”, it is suggested that the most relevant one is rooted in consideration of social policy: “by assigning the tax burden according to the portion of individual income disposable for taxation or on grounds of individual benefits received in public services, the ability to pay principle calls on the solidarity of all citizens and forms one of the pillars of the redistribution of wealth in the modern welfare state” (Joachim English 2009). The ability to pay of an individual in the application of a PIT is the income (Joachim English 2009).

Regardless of the tax system in use, the horizontal equity may be imposed to individual esteemed to be similar and for sure, this depend from how much the tax system is neutral. The ability-to pay principle allows authorities to redistribute income and wealth. On other hand, a relevant approach to evaluate the principle of vertical equity is the sacrifice theory (Michael, Peter, and Eleonor 2009).

The equal sacrifice theory is another reasoning that economists are studying with the aim to give reason to taxation according to the capacity to pay. “The base of this theory is that individual with high income should perceive the same sacrifice as an individual with lower income. This principle looks like to support equal rights under another point of view

than the principle exposed before: Taxpayer that perceive different income are imposed a different tax burden not because they do not have the same taxpaying capacity, but because the individual perception of the sacrifice should be the same” (Peyton Young H. 1990).

The basic idea is that a tax system should impose the same sacrifice on the taxpayers whose individual utility is reduced by the tax imposition.

Since the moment that the utility is not measurable, income is usually taken as a proxy (Godar and Truger 2017).

Another relevant criterion to the issue of equity is the “Benefit Theory”. It is advised that taxpayers should be taxed “in line with their demand for public services” (Musgrave, R. 1989).

This should give a good reason for regressive or progressive tax trend determined by who benefits most from public spending (Prest 1979). Moreover, this principle may be imposed in the way of fees or user charges for specific types of public expenditures. Within the use of PIT, the fair share is not related to the use of a person makes of public services provided by the authorities but only on individual’s ability to pay.

In general, the effect of levying a PIT is not neutral. “As the intent of a PIT is often to bring about changes, not only in the distribution of income, but also individual’s decisions, it will usually distort market’s decisions and it creates that intentionally” (Helmels 2009).

### ***1.5 The purpose of VAT/GST: a broad-based tax on final consumption***

Even if there are numerous differences in the mechanism to which VAT is applied, it can be determined, by its purpose and its particular tax collection procedure (OECD 2016).

The overall purpose of the VAT is to apply a “broad-based tax” that affect not only the final consumption of private individuals, but also various subjects that operate “non-business activities” (Helmels 2009).

From the legal prospective the VAT is fundamentally a transaction tax. VAT is gathered by firms through a staged mechanism, but since the moment that it is a

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consumption tax, its burden does not stay on the business side, apart when commodities are “purchased for private reasons by their owners or employees” (Ebrill et al 2001). However, the economic impact of the burden of the VAT can lie, in different proportion on firms and consumers considering that the effective incidence of the VAT is not only defined by its nature but is affected also by the economic situation; of the elasticity of the demand and of the quantity of offer, among other factors of the market (Ebrill et al 2001).

A fundamental concept recognised for more than one century by economists is “the characteristic of the European-style VAT as a tax on consumption expenditure” (Beram 2010).

The general purpose of VAT may be illustrated as follow:

“The Value Added Tax is intended to tax personal consumption comprehensively, neutrally and efficiently.” (Pomp and Oldman 1998).

The concept of equity of the VAT is not linked to the ability to pay of an individual, but on levying and thus paying the similar or equal tax for similar or same goods. Two persons with equal consumptions will have the same tax burden of VAT, despite that, their income could be totally different.

All in all, the VAT taxation is another fundamental fiscal tool to gather revenues to sustain the costs of governments, but based on different basis: consumption instead of income.

To evaluate additional features as for instance the distributional influence of VAT must be considered the rates framework and how VAT operates.

Here below is given an overview of the main other consumption taxes.

Table 0.2: Definition of taxes on consumption

|   |
|---|
| D.211 Value added type taxes                                      |
| D.212 Taxes and duties on imports excluding VAT                   |
| D.214 Taxes on products except VAT and import duties less         |
| D.214B Stamp taxes  |
| D.214C Taxes on financial and capital transactions                |
| D.214K Export duties and monetary compensatory amounts on exports |
| From D.29 Others taxes on production:                             |
| D.29D Taxes on international transactions                         |
| D.29F Taxes on pollution  |
| D.29G Under-compensation of VAT (flat rate system)                |
| From D.59 Other current taxes:                                    |
| D59B Poll taxes   |
| D59C Expenditure taxes  |
| D59D Payments by households for licenses                          |

Source: Eu commission

## ***1.6 Difference in purpose of PIT and VAT***

Since the important roles the two taxes play in the economy and in the political contest, it is important to have a clear understanding not of the main differences among them.

Under PIT taxation, the “equal treatment among taxpayers is reached by utilizing the ability to pay” as its fundamental principle and by utilising income as an “index to define the correct share” which an individual should participate to the authorities’ costs (Michael, Peter, and Eleonor 2009).

With the variation of PIT, governments incentive or disincentive some behaviours, the ones that create negative externalities to the society, resulting in different tax burden on taxpayers with similar ability to pay. To consider that, the usage of PIT often modifies “market decisions and competition” (Michael, Peter, and Eleonor 2009).

On the other side, VAT reach equal treatment among taxpayers by considering the consumption as index to define the fair share which taxpayers should contribute to the governments expenditures(Michael, Peter, and Eleonor 2009). However, similarly to the PIT, also the VAT, is used by authorities to incentive or disincentive some behaviours (Michael, Peter, and Eleonor 2009).

Differently from the PIT, the VAT is an “impersonal tax” and does not take into consideration “individual characteristics other that the consumption configuration of a person” (Michael, Peter, and Eleonor 2009).

However, the PIT of a Member State must be in accordance with the EC Treaty, specifically with the fundamental freedoms and the provision on state aids influencing the potential for Member States to introduce tax incentives (Michael, Peter, and Eleonor 2009).

Differences among the application of the two typologies of taxes are present also in the application of the Directives emended by the EU, indeed, the EC Treaty do not impose strict limits to the use of PIT to reach some goals, but governments have just to consider the general limits, instead, in the case of the VAT, the sixth Directive defines rigid constraints to be adopted by the Member States (Michael, Peter, and Eleonor 2009). Indeed, PIT Acts are not harmonized within the EU.

Understanding the purpose of the VAT is a fundamental point to assess the policies adopted by policy thinkers in each country, but have a clear idea of how the VAT works is another key element, that readers should know.

## 1.7 How VAT Works

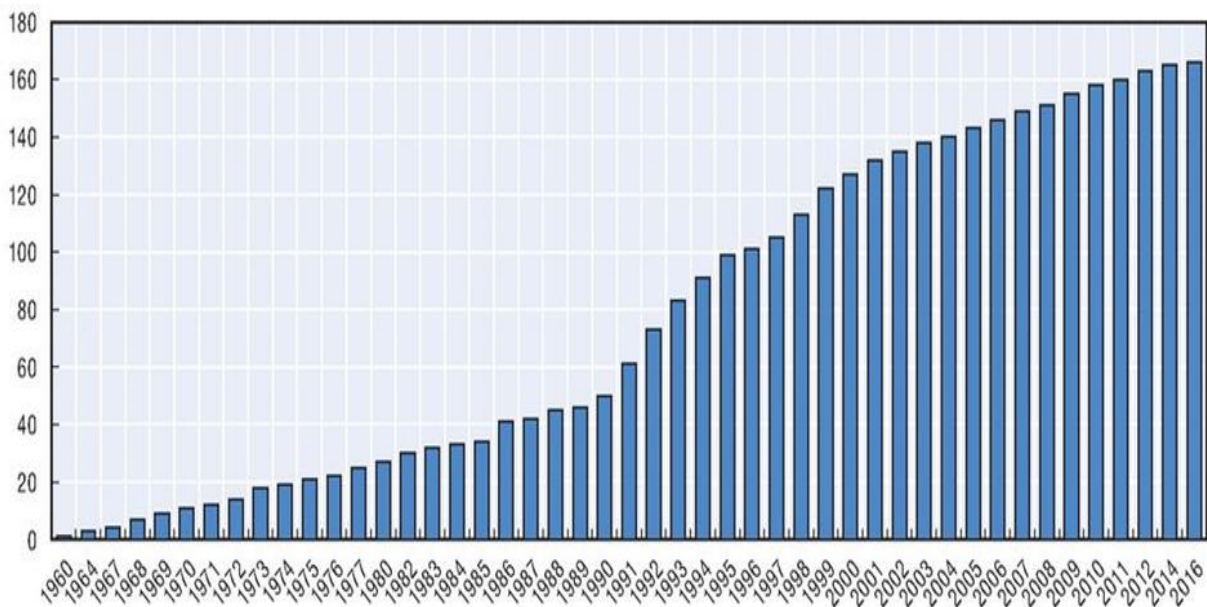
VAT is a crucial financial tool in the EU and national level's programs.

In the writing of Siemens (1920), a German entrepreneur, there are the first traces of the idea of the value-added taxation (Tuan Minh Le 2003).

Sixty year ago, the VAT term was still known only in few States in the world. There are various opinions as to the origin of the VAT, but seems that the first country using it was France in 1948 (OECD 2016). The spread of the VAT began with few innovator States in 1960; indeed, in the beginning of 90's, only around 80 states had imposed it in all the world. By 2008, more them 136 states had applied a VAT in its tax systems (OECD 2016).

Nowadays, VAT is utilized in more than 160 countries worldwide and it is required as necessary to enter in the European Union.

Figure 0.1: Number of countries having implemented a VAT 1960-2016



Source: OECD 2017

Consequences of the VAT development have been the necessity to increase the interaction among countries and “the rise of risks of double taxation and the risk of

unintended non-taxation” in the case of non-collaboration among VAT systems (OECD 2016).

Businesses and people providing economic activities supplying services and goods to third parties, are required to charge its customers the VAT and to register it, as required by local authorities. Successively, the VAT mechanism, consents to registered dealers to deduct the tax imposed on their inputs (Mirrlees et al. 2011a).

Both, theory and practice stated that to be efficient, VAT should be consumption-based, broad-based, and calculated through to the retail stage. Effectively it is imposed on the difference between the sales and production inputs of a firm (Alan A. Tait 1988).

Output VAT and Input VAT are two different classifications of the VAT that fall under two different requirements (Michael, Peter, and Eleonor 2009). Dealers demanding deduction of VAT paid on inputs have a motivation to guarantee that their suppliers release an output VAT invoice to avoid paying both parties’ VAT liabilities (Alan A. Tait 1988).

Similarly, to a retail sales tax, VAT is generally believed as a consumption tax, indeed it taxes only final consumption without affecting the production decisions. One substantial difference among VAT and a retail sale is that the retail sales tax is gathered at once upon the final sale (Alan A. Tait 1988).

In theory only the final consumers are taxed; resellers are not charged if they are not the final consumers. The retail sales tax is imposed to all the purchasers that do not provide a “resale certificate” or other exemption certificate. The base of imposition of the tax is the sales price (Alan A. Tait 1988).

The final goal of the VAT and of the retail sales tax should be the same; indeed, they tax the consumption expenditure, but in the real economy, there are many differences due firstly, for the different process to collect the taxes; in the case of the retail sales tax the higher the rate the more pressure is placed on the retailer (OECD 2016).

Moreover, a single point resale tax, shows to be efficient at relatively low rates, but when the rates go up there are an increment in the administration costs (Alan A. Tait 1988). On the other case, splitting VAT liability along all links of the supply chains consents, in case of evasion, to collect the VAT calculated on the total value of the product except for the tax imposed on the value added calculated in the part of the supply chain evaded (Alan A. Tait 1988).

Assorted studies, have displayed the connection between VAT performance and the economy stage of development. “The revenue gains from VAT are likely to be higher in an economy with higher level of per capita income, lower share of agriculture, and higher level of literacy” (Tuan Minh Le 2003)

The staged gathering process, through which tax is gathered from firms, only on their margin added at each stage of production and distribution, covers the VAT of that characteristic to be neutral and not cumulative, independently from the nature of the product, the typology of distribution and the way to sell it (Ebrill et al., 2001).

In those cases, to which the VAT payed on inputs in a period, is higher of the value of the VAT gathered on outputs, there is an excess of VAT credit that the business can claim (Ebrill et al., 2001). This is the case for exporters companies, that operating under the destination principle, do not impose the VAT on its outputs (VAT free) and for those businesses whose purchases are bigger than their sales on a certain period. Whereby, it is important to ensure that the VAT apparatus supplies for an effective treatment of the excess VAT payed, to forbid that the VAT modifies the equilibrium of these businesses. Meanwhile it is of fundamental importance to avoid the opportunities of fraud and corruptions that in these cases can rise. Therefore, an efficacy and efficient audit program is advised to be implemented (Ebrill et al., 2001).

### ***1.7.1 VAT and international Trade: the destination principle***

The overarching goal of the VAT to affect only final consumption and its collecting staged process, make the bases for the core VAT principles bearing on international trade.

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The main topic regarding the application and collection of the VAT in the international contest, is related to the question if the tax should be applied following the origin or destination jurisdiction.

In the case of destination principle, “the tax is totally imposed on the final consumption that takes place within the taxing jurisdiction”, otherwise under the origin principle the VAT is imposed in the “different jurisdictions where the value is added” (OECD 2014a)

Within the destination principle, the VAT imposition reaches the neutrality in international contest (Scandroglio, n.d.). The destination principle expects to “exempt exports with refund of input VAT payed” (free of VAT) and imports are taxed with the same VAT rate as domestic trading (Scandroglio, n.d.).

“The overall tax imposed on a supply is determined by the rules applicable in the jurisdiction of its consumption and thus all revenue arise to the jurisdiction where the supply to the final consumer” happen (Scandroglio, n.d.).

Within the origin principle the VAT tax is imposed by following each jurisdiction on the value created within each border country. This principle expects that exports being taxed at the same basis and at “the same rate as domestic supplies, while importing jurisdictions would give a credit against their own VAT for the hypothetical tax that would have been paid at the importing jurisdiction’s own rate” (OECD 2014a).

Within this principle, the VAT revenues are divided among jurisdictions where the value is created running counter to the principal characteristics of the VAT as a tax on consumption. In addition, with the application of numerous rates where the margin is created, the origin principle may affect the economic or geographical frameworks of the value chain damaging the neutrality in the international trade contest (OECD 2014a).

Taking into consideration these motivations, an ample consensus that the destination principle with revenue deposited to the state of importation “where the final consumption takes place. Under the origin principle, these revenues are shared amongst jurisdictions where value is added. By imposing tax at the various rates applicable in the jurisdictions where value is added, the origin principle could influence the economic or geographical structure of the value chain and undermine neutrality in international trade. For these reasons, there is widespread consensus that the destination principle, with revenue accruing

to the country, where final consumption occurs, is preferable to the origin principle from both a theoretical and practical standpoint (OECD 2014a).

The utilization of the destination principle carries, unfortunately, some troubles. First, as noted before, the destination principle expects that exports are exempted, meaning that goods and services move free of tax in cross-border trade involving possible frauds (The Council of the European Union 2006).

Second, even if the biggest part of the laws currently in force support the destination principle, by taxing supplies of goods and services based on the jurisdiction where consumption occurs, in practice this is not so straightforward since the application is diverse across countries with the possibility to occur in double-taxation or unintended non-taxation with the rise of difficulty and precariousness for firms and tax administrations (Scandroglio, n.d.)

### ***1.7.1.1 Application of the destination principle to the cross-border trade in goods***

Staying focused on the VAT purpose, the word “goods” broadly signifies “tangible property”(OECD 2017).

The supply of goods is in theory subject to VAT in the jurisdiction where the good is situated at the moment of the dealing. In the case to which the deal includes goods being transferred from one country jurisdiction to another one, the exported goods are usually “free of VAT” in the origin’s country, while on imports are applied the same VAT rate applied to domestic goods in the importing country (Scandroglio, n.d.). The possibility to deduct the VAT imposed during the importation phase, in the same mechanism as input tax deduction on a domestic supply, guarantees neutrality and minimizes distortions (OECD 2015). Members of the European Union, can exempt the importation of a little value goods, considering that the administrative costs to handle this goods in the system would cost more than the revenue gained for those transactions. The transactions of goods that do not exceed the value of €10 should be exempted and for the transactions, whose

value exceed €10, can confer an exemption for imported goods, if and only if the value does not exceed €22 (OECD 2016). These exemptions are in the EU contest are not applied to Tobacco, tobacco's products and alcoholic items (OECD 2016). In the current reality to which the digital economy is growing year by year, the exemptions of low value importations of goods are becoming a polemical topic (OECD 2016).

Here below is provided an example to clarify how the destination principle works.

Table 0.3: Application of the destination principle

## Example

State A sells a good to country B at a cost of \$200. State B elaborates the good and sells it to the final client at \$500 (value added of 200 is created in A, and \$300 is generated in B). Both prices are exclusive of VAT.

Case 1: The VAT rates are 10 percent in A (exporting state) and 5 percent in B (importing state).

Considering the case of the origin principle, the VAT gathered in A is:  $10\% \times 200 = \$20$ , and the VAT gathered in B is  $5\% \times 500$  minus the refund of  $5\% \times 200 = \$15$ . Thus, the total VAT, effective at the final sales point, would be \$35 (i.e., \$20 is collected in A, and an additional \$15 is collected in B). Alternatively, the whole VAT burden is regarded as the sum of the VAT on the value added in A and the VAT on the value added in B at the rates applicable in the respective states:  $\text{total tax revenues} = 10\% \times 200 + 5\% \times (500 - 200) = \$35$ . On the other hand, under the destination principle, the tax is applied at the final sales at the rate imposed in the last sale jurisdiction (B, in this case):  $5\% \times 500 = \$25$ , which is lower than the VAT under the origin principle. The difference is due to the fact that under the origin principle, part of the tax burden induced by the higher rate in the exporting state (state A) adds up to the total effective tax burden on the final sales in the importing state (state B).

Case 2: VAT rates are 5 percent in A and 10 percent in B.

Under the origin principle: Tax in A =  $5\% \times 200 = \$10$ ; and tax in B =  $10\% \times 500 - 10\% \times 200 = \$30$ . Total effective tax at the final sales would be:  $\$10$  (collected in A) +  $\$30$  (collected in B) =  $\$40$ .

Under the destination principle, the total effective VAT would be:  $10\% \times 500 = \$50$ , higher than under the origin principle—this is true, because under the origin principle, part of the

Source: (OECD 2014a)

### ***1.7.1.2 Application of the destination principle to the cross-border trade in service and intangibles***

In many States, the VAT regulation tends to define a “service” as “anything that is not otherwise defined” and consequently defining a “supply of services” as “anything other than a supply of goods” (OECD 2016). During this thesis, when will be referred to services, will be included also the concept of “intangibles”(OECD 2016).

Define the elements that must be considered in the VAT imposition on services and intangible is challenging and complicated since the moment that, a wide range of considerations must be done in determining the place of taxation of services, “the place of performance of the service, the place of establishment or actual location of the supplier, the residence or the actual location of the consumer, and the location of tangible property for whose services connected with it”(OECD 2014a).

Within the EU, selecting the “place of supply” and consequently the place of taxation, is connected to the status of the customer getting the service and the type of the service supplied (Krinis 2016) . The taxation of VAT on supplies among Business to Business for both supplies within the EU and with customers located outside EU occurs at the customer’s place of establishment applying in both cases, the destination principle (OECD 2016).

Regarding the supplies of service between Business and final consumers, they are still taxed at the supplier’s place of establishment, and this is not a will to impose the “origin principle” to Business to Consumer (B2C) supplies, but it derives from the historical application of the VAT on services that in the past were difficult to provide at a distance to final consumers and that usually they were consumed in the same place of their provision (OECD 2016).

However, in the case of services linked with immovable property; cultural, artistic, sporting, scientific, educational entertainment and for B2C electronically supplied services they are taxed where the consumption is likely to take place that in most cases is where the customer resides(OECD 2016).

With the aim to reduce compliance by non-EU suppliers, it was created the so called “Mini One Stop Shop” that is a web portal, that consents to these suppliers to register themselves in only one Member State and to deposit the VAT due in all the EU Members States where their customers are established (“Mini One Stop” 2015). It will be a task of competence of the State to which the operators are registered to distribute to the various Members States the VAT due (“Mini One Stop” 2015).

### ***1.7.2 Why adopt the VAT?***

Various elements have pushed the popularity of the VAT, for instance, the administrative and economy projection can be considered two good reasons to consider VAT as an efficient way to tax consumption since the moment that revenues are gathered during the chain of production (Copenhagen Economics 2007a).

Many EU Members and vary countries in the world have introduced the VAT taxation because their existent tax framework was unsatisfying financial aims, under both, economic or efficiency perspectives (Tuan Minh Le 2003).

The discontents fall widely into one or even all the four following reasons:

1. The original sales taxes were inefficient (Tuan Minh Le 2003);
2. A custom union requires discriminatory border taxes to be abolished (Tuan Minh Le 2003);
3. A reduction in other taxation is sought (Tuan Minh Le 2003);
4. The evolution of the tax system has not kept pace with the development of the economy (Tuan Minh Le 2003).

In addition, the adoption of VAT often serves as incentive, especially for not-developed countries, for modifying and renew the tax system and tax administration in general, as for instance by spreading the self-assessment process that is characteristic of the VAT to income and possibly to various taxes (Norregaard, J., & Khan 2007).

Keen and Lockwood in 2010 highlighted that, the International Monetary Fund, plays a crucial role in incentivising the states, participating in the non-crisis program, to adopt the VAT(Keen and Lockwood 2010).

Additionally, the easiest sales tax is one that impact with a straight percentage all the business turnover. Passing from one subject to another along the supply chain (from the manufacture to the retail store) until the final customer, the product is taxed many times rising the phenomenon known as Cascade Tax or Tax on Tax problem, involving countries to change from it to VAT tax form. “The tax is imposed on every stage of the production-distribution chain (Tuan Minh Le 2003). The tax base at any single stage includes the sales value of the goods plus the tax charged accumulatively in previous stages.” (Tuan Minh Le 2003).

Some countries tried to introduce a single-stage tax on manufacturers, wholesalers, or retailers because designed to avoid the cascading effect with no excessive administrative costs (Tuan Minh Le 2003). However, this solution displayed many problems. For instance, in countries such as Australia, Belgium, Mexico, Luxembourg, Austria, United Kingdom, Morocco, New Zealand, to which the single-stage tax was used or still used, there problem of cascading was not totally solved (Keen and Lockwood 2010) .

The phenomenon of cascading, occurs every time a taxable good is formed using taxable inputs. Even retail sales taxes, by including in their definition of taxable sales, the sales of certain kinds of producer goods that can also be used as consumer goods, may produce cascading (Keen and Lockwood 2010).To avoid the high tax rate, taxpayers are incentivized to artificially lower the price at the taxed level and rising the price at the subsequent untaxed level. “Cascading taxes cannot be reclaimed by the purchaser, so that the tax component of the price of goods becomes larger and larger the more stages there are between producer and consumer with obvious distortionary effects as between highly integrated enterprises and other enterprises” (Bardopoulos 2015). A good example to make clearer the effects of the cascading effects in the real economy to explain how business try to avoid single-stage taxes, it should be necessary to highlight what is known as “the Canadian Example”.

Since the moment that in a manufacturer sale the tax liability can differ sharply according to the source of the inputs and the amount of integration between manufacturing,

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wholesale, and retail stages, Canadian businesses reduced their tax liabilities by setting up related, but separate, distribution companies (A. Tait 1989). This meant the mark-up of the distribution company did not enter the tax base. The consequences were an imposition of a set of laws that instead of clarifying the regulation, made the economy more complex and uncertainties (A. Tait 1989).

Consequently, the rise of this type of issues, made authorities more inclined to switching from sales taxes to VAT.

Alternatively to the imposition of the VAT tax, the phenomenon known as “ring”, was used by authorities with the aim to avoid cascading phenomenon (Economic, Affairs, and Economy 2014). It allows manufacturers registered as taxpayers to acquire tax free, locally produced goods or imported goods used as inputs, permitting registered traders to sale tax free, but taxing sales with no registered subject (outside the ring) (Tait 1988). This method creates some troubles for registered business because at each deal they should verify the existence and the truth of the registration creating confusion and compliances (Alan A. Tait 1988).

When the EU was initially founded, the six Members States were adopting various typology of indirect taxation, most them where cascade taxes (A. Tait 1988). Obviously, to reach a uniform efficient single EU market, a transparent and impartial tax system was needed (A. Tait 1988). To simplify the entire system and to make a base for a uniform tax system among EU area, the VAT was considered the right tool to be adopted. In 1962, it has been emended the suggestion that all Member States should have shifted from their original tax system to the VAT system (A. Tait 1988).

“Opponents to the VAT usually argue that the VAT is more complex to administer than other types of consumption taxation, and the complexity, naturally leads to higher collection costs (defined as the combined compliance costs from the taxpayer side, and administrative costs from the tax authority). However, as described, the taxes replaced by the VAT in developing countries, were generally far from being simple in their design and riddled with narrow base, multiple rates, and numerous exemptions. Researches shown that, the administration and compliance costs under a single-stage tax and a VAT, extended to the same level in the production-distribution chain, do not differ significantly” (Tuan Minh Le 2003).



Studies, display that, States with an important level of agricultural sector development and economy openness are less incentivized to apply the VAT (De La Feria 2014). These findings are not totally surprising: agriculture is famous to be “hard to tax” within every tax system and on the other side, cross-border trade supplies a tempting and a reachable alternative base (De La Feria 2014). Surprisingly states with low past revenue to GDP ratios, even if they should have the needs to raise tax revenues, they seem to be less incline to adopt the VAT tax (De La Feria 2014).

### **1.7.3      *Three alternatives in value added tax calculation***

The crucial characteristic of the VAT tax, that is the characteristic from which it takes its name, is that it is gathered through a staged mechanism on “value added at each step of the production and distribution chain” (Royal Malasian Custom 2013). Every firms in the supply chain participate to the control and to the collection of the VAT, depositing the amount of tax calculated on its value added (OECD 2016). Businesses gather VAT on the value of their output from their clients and depositing to the authorities the difference among the VAT gathered on their outputs less the VAT calculate on its inputs. There are three main methods for operating the staged gathering mechanism (Tuan Minh Le 2003).

#### **1.7.3.1      *The additional method***

With this first method, tax liability is the result of the tax rate multiplied by the value added described as the sum of wages, interests and profits. Therefore, if  $x_1$  and  $x_2$  are the rates on wages and profit each in order, then the tax liability will result from the sum of  $(t_1 * \text{wages})$  and  $(t_2 * \text{profits})$ .

This method seems to be politically difficult to sell to people, as taxpayers would nothing more view the Value Added Tax as a supplementary level of tax burden on top of personal and corporate income taxes (Tuan Minh Le 2003). Using this method of calculation, results that theoretically, VAT could be used to substitute personal income tax

and corporate income tax (McLure and Charles E 1986). Distortions and unfairness may occur, and correct border tax adjustments should be not reachable (Schenk and Oldman 2001).

### ***1.7.3.2 The subtraction method***

Japan is the only country using the credit-subtraction VAT method that is not based on invoices (Tuan Minh Le 2003).

“The tax liability at any stage is equal to the tax rate multiplied by the tax base or value added measured as the difference between the values of outputs and inputs” (Tuan Minh Le 2003). The subtraction method VAT is esteemed to be “account-bases”, as it is calculated from the firms’ books and records report (Tuan Minh Le 2003).

### ***1.7.3.3 The invoice based credit method***

This method is the most used on VAT calculation. It has been used in all the States except in Japan (Tuan Minh Le 2003). Using this method, a business at any level of “the production-distribution chain applies to its clients the VAT on its outputs, presenting the tax to the treasury, and then demanding for the VAT” payed in it inputs purchased in previous moments (Tuan Minh Le 2003). Given  $x_1$  and  $x_2$  as the tax rates on inputs and outputs each in order, then the tax liability is the result between the difference of  $(x_1 \cdot \text{inputs})$  and  $(x_2 \cdot \text{outputs})$ .

The net tax paid at a level of production or distribution is calculated on the value added by each firm at that stage. At the end of a period, the firm compute its tax liability by doing the difference among the cumulative amount of VAT payed on its input purchased invoices and the total amount of VAT charged on its sales invoices (Tuan Minh Le 2003).

### ***1.7.3.4 Which VAT computation is the best used?***

The most common value added tax computation in use in EU's area, is the credit - invoice method VAT, constantly mentioned to as European-style VAT due to its well established utilization in this area during the years (Schenk 1989).

This category of VAT is favored over the subtraction method VAT for several considerations:

- the credit-invoice method VAT owns various benefices compared to the subtraction method that can be ascribed to its required reporting of VAT on invoices produced at each stage of production and distribution. This item furnishes a powerful audit path and, limiting the input credits only to registered firms, make the credit-invoice technique less open to evasion than the subtraction method, which is calculated using gross accounts with no itemization by (Beram 2010);

- the credit invoice method VAT can more easily be “calculated closer to the time of the transaction, as it is calculated without resorting to the compilation of summary accounts. It is more practical because it can be calculated on a more frequent basis than the subtraction method” (Beram 2010);

- Thanks to its computation and to the reporting method at each stage of the production and supply chain, it is more adaptable “be tailored or fine-tuned through the use of various devices such as multiple tax rates or exemptions for certain goods and services. Adjustments for the subtraction method VAT computation cannot be as easily or efficiently accomplished due to its comparative lack of documentation. For instance, it does not have the same flexibility to adjust for regressivity by applying reduced rates to purchases of “essential” consumer goods” (Beram 2010);

- “The credit-invoice method VAT is more transparent and visible than the subtraction method VAT, as the tax is separately stated on invoices provided to the end-consumer, where the purchaser can see it” (Beram 2010). The credit method VAT gives a more stable, reliable source of revenue since this VAT affect the final consumer imposing the tax on firms' inputs and it is viewed as transaction-based, rather than firm-based (Beram 2010). Thus, it perceived less incline to attract political pressure for preferential tax treatment by firms, and business areas supplying some goods or

services. More political pressure could be raised with the subtraction method VAT with the aim to reach special tax rates (Beram 2010);

- The credit-invoice method VAT can be more easily “imposed as a destination based tax on individual purchase in a neutral fashion as it is more simply border adjustable compared to the subtraction technique” (Beram 2010). A consequence, is that it could be calibrated in a better way, to make good and services produced inside Eu more competitive outside the union (Beram 2010).

The credit-invoice method VAT imposes the tax on State’s consumption instead on country’s production resulting in lower distortion consequences in both sides, production and consumption (Beram 2010);

- “The credit-invoice method clearly adds the VAT to the price of the good or service, so it can simply exclude the tax from the export by applying a tax rate of zero and allow a credit for tax levied on production inputs.

Its more extensive recordkeeping makes it easier to both determine the tax to be rebated on purchased inputs and whether reported exports reconcile with actual exports. This is because the credit-invoice method requires businesses to keep track of transactions, which the subtraction method relies on sales and purchase information at a more aggregate level” (Beram 2010);

- With the subtraction VAT method, “Border-adjustability is more problematic with the subtraction method. If the value-added tax rate at each of the pre-export stages is not the same, it would be difficult for the exporting country to determine the correct amount of VAT to allow as an export rebate” (Beram 2010).

As already mentioned, a taxable firm can require the refund of the VAT on its inputs if, and only if, the claim is provided with the purchase invoices. For this reason, it is in origin described as “self-enforcing”(Jorge Martinez-Vazquez Richard M. Bird 2010).

With a single VAT rate, the subtraction method could be preferred to the invoice-credit method but, from the moment that in the EU area there are different VAT rates, the invoice-credit method has been adopted.

Here below is provided the example to explain the main differences between the two methodologies and is done a focus on the main various VAT bases to consider in the imposition of VAT.

**Example:**

In the Hypothesis that, a firm buy only one type of input (I) subject to a tax rate of  $t_i$  and produces two types of outputs subject to various rates of  $t_1$  and  $t_2$ , respectively. To rightly decide the refund of the tax on inputs to the firm, the tax administration must know how the absorption of the inputs (I) into the two types of outputs. Disorganized information, and monitoring issues make the subtraction method practically difficult to adopt. On the other side, considering the invoice-based credit method, the VAT on outputs and inputs is, assessed and gathered separately, and the refunds are credited based on the invoice on input purchased. As the tax base does not require to be strictly calculated, the system handles a multiple rate structure more efficiently than does, the subtraction method. An extra benefit of the invoice-based credit mechanism is that it requires firms to retain invoices and hence self improves the general record keeping practice. “Self-policing” a desired character of the VAT, is specifically related to the invoice-based credit VAT

Source: (Tuan Minh Le 2003).

### ***1.7.4 Different type of VAT base***

The types of VAT are classified based on the different treatments of capital goods of a business. In assessing the typologies of VAT bases, it is of fundamental relevance understand if the input tax paid for capital good is considered or not (Tuan Minh Le 2003).

#### ***1.7.4.1 GNP Type (product typed)***

With the GNP type, capital goods purchased by a business from other companies are not deductible from the tax base in the year of the acquisition. Moreover, it does not give the possibility to deduct the depreciation from the tax base in the following years (Tuan Minh Le 2003). Tax is imposed on the consumption and gross investment. Gross

domestic product is the tax base of this tax base type. The GNP typology imposes tax on all final goods and services not considering intermediate goods (Tuan Minh Le 2003). “The advantage of this type of the VAT is that the base is relatively large. The big disadvantage is, however, that the investment items will bear the full tax burden. Net national product type (Income-typed) This type of the VAT excludes from the base the value of intermediate inputs and depreciation” (Tuan Minh Le 2003).

#### ***1.7.4.2 Net national product type (Income typed)***

The Net national product type do not include in the base the “value of the intermediate inputs and depreciations” (Tuan Minh Le 2003). With this type, the base results like a base under the income taxation. This type of VAT base includes capital goods bought from other companies in the tax base in the year of purchase. It excludes depreciation from the tax base in the following years (Tuan Minh Le 2003).

#### ***1.7.4.3 Consumption Type***

As defined under consumption typology, the base is like the one in retail sales taxation. Capital goods, bought from other companies in the year of the acquisition, are not included in the tax base, on the other hand, depreciation is not deductible in the following years. Rarely “countries allow for immediate and full credit of the tax charged on capital goods, indeed they generally limit the credit to the level of the VAT chargeable on output and allow the remaining credit to be carried forward to offset the tax in later periods (for example, this is a widespread practice in Latin America). On the other hand, some countries selectively grant immediate exemption of the VAT on the purchases of capital goods as part of an overall package of fiscal incentives to priority industries” (Tuan Minh Le 2003).

At this point, two relevant considerations must be done:

First, since products and income type VAT involve cascading phenomenon, these types of VAT are not considered production-efficient. “Income-typed VAT allows for

partial and delayed refunds of tax: investment items, therefore, bear partial tax burden in present value terms” (Tuan Minh Le 2003). Moreover, the GNP or income tax base is broader than base of the pure consumption-typed VAT and is not usually adopted in practice (China and Brazil are specially cases, which impose the GNP-typed VAT; China adopt the GNP-based VAT at state level). On the other side, the pure consumption base, would lighten production from tax levying and thus “makes the VAT more production-efficient. In addition, as a general consumption tax, the consumption-typed VAT does not distort the investment and saving behaviours” (Tuan Minh Le 2003).

### ***1.8 VAT calculation and performance measures***

VAT is adopted almost in every region of the world and has become a relevant elements of revenue apparatus. Here a question may raise: How efficient is the VAT?

The evaluation of the VAT performance is not so straightforward, some characteristics are common to most VATs, some other relevant characteristics of VAT frame (rates, exemptions, zero rate etc) vary significantly from state to state as the performance of the VAT imposition. As expected, VAT ability to raise revenues varies importantly between states (OECD, 2017).

Three ratios to evaluate the VAT performance are suggested by experts and literature:

1. VAT Revenue Ratio or C-efficiency evaluation;
2. VAT Efficiency Ratio;
3. VAT Gross Collection Ratio (OECD, 2017).

One of the most used ratio to calculate the VAT performance is the VAT revenue ratio that gives an indicator that includes the effect of loss of revenues because of exemptions and reduced rates, fraud, evasion and tax planning (OECD, 2017).

The VRR ratio must be considered carefully and it may help in evaluating the performance of the VAT system in collecting revenue and improving the system where needed. This estimation provides a first indication of the effect of exemption and reduced

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rates on the collection of VAT revenues. The ratio gives a value of the gap between the VAT revenue gathered and the amount of VAT revenue that would ideally be collected if VAT was imposed at the standard rate to the whole tax base in “pure” VAT regime and with no loss in revenue:

- $VRR=(VR/(B*r))$

*To which: VR = actual VAT revenues; B= potential tax base and r= standard VAT rate (OECD, 2017)*

The difficulties raise on evaluating and defining the potential tax base since the moment that there are no common criteria in evaluating it (OECD 2017). The potential VAT base embrace all the supplies of commodities, services and intangibles carried by firms or other entity operating as a business to final customers. In the real economy, various VAT apparatus apply VAT taxation not only on final consumers, but also on different subjects that are involved in non-business operations or in VAT exempt activities (OECD 2017).

Since the moment that there is no standard evaluation of the ideal VAT base for the EU Member States and for the OECD countries, the final consumption expenditure is taken as a value considering that its value is calculated following the standard international norms (OECD 2017). This takes into consideration the consumption by households, non-profit organizations and general government including some items that are not even considered in the tax base in any EU Member States (OECD 2016). “Given the differences between final consumption expenditure as measured in the national accounts and the VAT base, one can take the view that the VAT is a general tax on consumption and that this implies that its revenues should be compared with those that would be raised if it were applied to the national account definition of consumption, its natural base. Alternatively, an adjustment of the national accounts measures of consumption to bring it closer to a typical VAT base would allow for a better interpretation of a country’s VRR as it would better reflect the revenue impact of deviations from a generally accepted VAT base” (OECD 2016).

This problem has some influences in the way to which countries should interpret the VRR: not as objective value but as an estimation. Moreover, the VRR ratio could be affected by the economic cycle and the economic situation in general (OECD 2014b).



The other three measures evaluate the performance as the ratio of actual VAT gathered in the state to the ideal revenues that should be gathered from imposing the standard VAT rate to, relatively, three potential tax bases: Gross Domestic Product GDP, overall consumption expenditure, private consumption expenditure (Martinez-Vazquez and Bird 2010).

- VAT Efficiency Ratio:  $\frac{VAT\ Revenue\ Collection}{(Standard\ VAT\ Rate * GDP)}$
- VAT Gross Collection Ratio:  $\frac{VAT\ Revenue\ Collection}{Standard\ VAT\ Rate * Private\ Consumption\ Expenditure}$

A VAT with no exemptions, a single rate, and total compliance should result in efficiency ratios of close to 100% (IMF 2010).

In the real economy, most of VATs are distant from this ideal value and consequently the measures are not close to the actual tax base on which the VAT falls. Considering that the VAT Gross measure does not include investments and most public consumption from the VAT base, this ratio should be the closer measure to this goal (IMF 2010). Moreover, the adoption of the standard VAT rate to calculate the potential revenues does not consider the presence of multiple rates higher or lower the standard VAT; exemptions and zero-rating supplies. The performance of the VAT depends thus, from political decisions made to calculate the VAT base (IMF 2010). In addition, the current revenues collected depend from the level to which the potential VAT base is reached, that is consequence of two factors: the level of tax compliance and the efficiency and efficacy of the tax administration (IMF 2010). Even if in this work are not deeply treated the values of this measures, from a study carried by the International Monetary Fund is emerged that in almost every state, the revenue performance of VAT can be improved (IMF 2010). These improvements could be reached by reinforcing the VAT in developed states by modifying VAT system, while developing nations should stress the process to improve tax administration and compliance (Bird and Gendron 2007). Again, in the case of third-world

countries seem that they have adopted the VAT tax without having the capacities to administer it (Ebril et al. 2001).

In the following chapter, it will be given an overview of the scope and application of the VAT in the EU-28 area, treating the harmonization process and the steps the EU commission is making to removes the main obstacles to reach a common framework. It will be displays the main VAT rates in force in the EU area allowing a comparison among each Member State. It focuses on the main problems related to its application and on the main actions the EU Commission is taking to tackle the VAT revenue loss.

## **Chapter 2: The VAT in the EU Contest**

This chapter begins giving an overview of VAT relevance in gathering revenues for the EU area. The 2.2 part of the chapter then, introduces the administrative and compliance costs connected with the VAT imposition touching briefly the non-compliance costs. Finally, section 2.3 lays the ground-work for understanding the VAT gap problem and quantify its burden in the collection of revenues. A series of EU measures implemented to contrast the revenue loss are presented.

### ***2.1 Vat as a source of revenues***

Even if various goals as equity and efficiency are the main elements that tax policy makers should keep into consideration, revenue goals should come firstly. The fast expansion of the VAT indicates that it is considered as a good tax instrument to collect revenues. As the president's Advisory Panel on Federal Tax Reform said, the VAT can be a real "money machine" (President's Advisory Panel on Federal Tax Reform 2005).

Anyway, it is difficult to extrapolate the real incidence in raising revenues of the imposition of the VAT, because most of the time, the introduction of the VAT is linked with other changes in the tax policy, tax administration and of other components that make difficult to understand the real effect due to the VAT adoption (Martinez-Vazquez and Bird 2010)

In the beginning of 2017 the EU Commission displayed the results of the EU-28 revenues gathered from consumption taxes as a percentage of total taxations, showing a positive trend, from 28.5% in 2014 to 28.7% in 2015.

The Value Added Tax (VAT) is considered to be one of the most relevant sources of revenue for all the European Member States and it has become the main consumption tax in terms of geographical extensions (Martinez-Vazquez and Bird 2010).

The EU's total revenue from the VAT own resource (including balances from previous years of EUR 181.9million) was EUR18087million (12.4% of total revenue) in 2015 (European Commission 2016).

Data for the EU-28 in 2014 displays that, the average VAT to GDP ratio is around 7% supplying, on average 17.5% of the overall tax revenue (European Commission 2016).

These figures are heterogeneously spreaded among States: data vary from 13.7% of Italy to 19.9% of UK. As the IMF stated: The VAT is already a key source of government revenue in over 120 countries. More than 4 billion people, more than 70 % of the world's population, now live in countries with a VAT, and it gathers about \$18 trillion in tax revenue, around one-quarter of all government revenue (Ebrill et al 2001).

As can be easily understandable, the heterogeneity of the data among states could be caused by numerous factors:

Firstly, states select the formulation of tax revenues, showing that those with a lower level of VAT utilisation make a more spread use of income taxes.

Secondly, differences may be caused by a relevant heterogeneity of VAT rates frameworks. Considering that, the use of a uniform rate is linked with a declining expenditure to income ratio, it gives rise to a regressive impact of consumption taxes with respect to income; multiple VAT rates are most of the time imposed with the clear goal of making this tax less regressive.

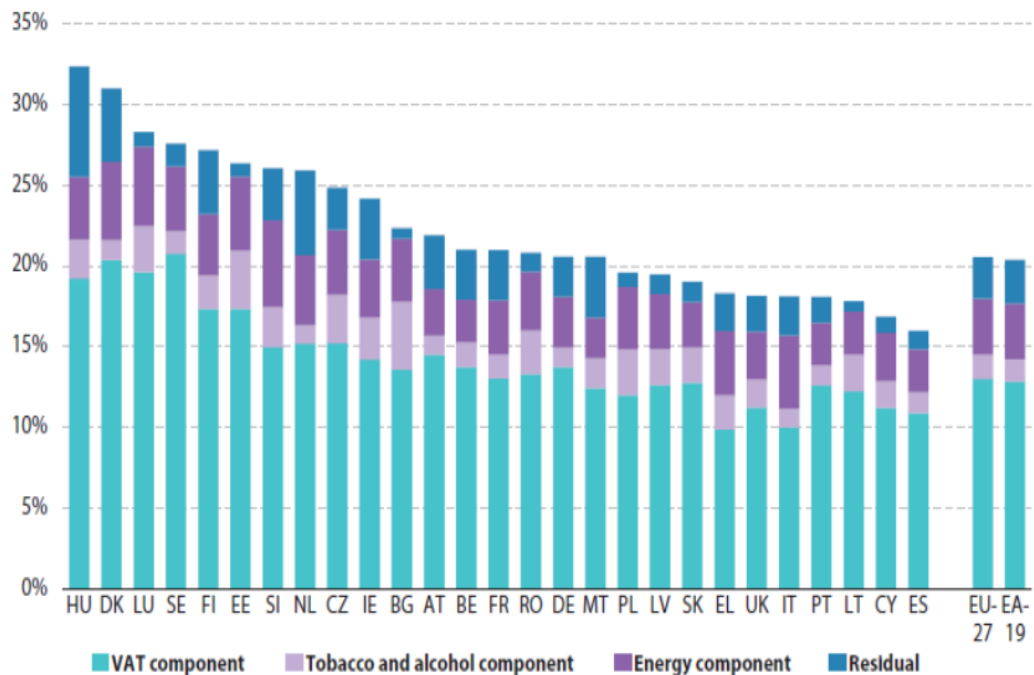
Moreover, the rate levels and the several types of good and services affected by the reduced VAT rates could vary along states, relying on their attitude to equity and on the way the consumption of primary goods are spread among households across the income scale.

Define how well VAT works is a topic of relevance, as VAT is esteemed as a method for the achievement of fiscal harmonization across Europe. In the other direction, if VAT works well, it has to be analysed if it is the right tax to impose to gather greater revenue (Martinez-Vazquez and Bird 2010).

Since the moment that the EU VAT is implemented in an area with various characteristics, and many variables must be kept in consideration in its implementation; VAT is subjected to many variations. Moreover, the character of business is advanced, International trade and the globalization phenomenon has increased importantly, and

internal barriers to the economic trading are being abolished. The technology advancement has modified both how taxes can be imposed and the feature of what is to be taxed.

Figure 0.1: Decomposition of the ITR on consumption 2015(%)



Source: DG Taxation and Customs Union, based on Eurostat data

Fragmented policy responses have been actuated over the last decades with the aim to improve the ability to operate of the VAT system, adapting it to the ongoing process of the business environment, but many relevant issues are left over even if the European Commission is continuously working on more understandable reforms, with the goal to build a EU VAT system simpler, more efficacy, efficient and more “business-friendly”(Martinez-Vazquez and Bird 2010).

## ***2.2 Administrative costs, Compliance & Non-compliance costs of VAT***

Many efforts are being done during these years to create a valuable literature able to classify, define, and quantify the costs of complying with taxation and laws in general terms. In this section will be done a focus on the issues and costs observed when dealing with VAT imposition in EU contest.

To understand which are the costs associated with the VAT application it is important to have a clear understanding of which features shape the concept of tax burden.

Modern taxation systems have dictated a relevant burden on taxpayers, and especially on lower business taxpayers. That burden traditionally can be represented as including three elements:

- Starting from the beginning, “there are the taxes themselves” (Studies Institute for Fiscal Studies 2011);
- In list, there are the efficiency costs “involving tax-induced market distortions” (Studies Institute for Fiscal Studies 2011);
  - To conclude, there are the operating costs of the tax system that can be explained as all those costs that the authorities must sustain (ultimately supported by taxpayers) of administering and gathering the taxes (traditionally known as “administrative costs”), and the costs spent by taxpayers in complying or not complying with their tax commitments (traditionally known as “compliance costs) (Studies Institute for Fiscal Studies 2011)

Albeit administrative and compliance costs are theoretically separated, these categories display a certain number of common elements as for instance the fact that the level of regulations has consequences on the level of taxpayers’ burden and on the authority’s efforts to apply them correctly (exclusions, exemptions, deductions, zero ratings, various VAT rates). Administrative and compliance costs are determined by a relevant range of elements, containing the complexity of the tax, features of the tax base, “structure of tax rates, frequency of reform, and organisation and efficiency of the tax authority” (Studies Institute for Fiscal Studies 2011). A good tax systems should then keep

the imposition of taxes in the simplest possible manner, but this ideal situation it is not reachable any times and for this reason, most of the times tax authorities supply “help and guidance increases administration costs, but reduces compliance costs.”(Studies Institute for Fiscal Studies 2011). In the following table, are displayed the main elements that contribute to the raise of compliance and administrative costs.

Figure 0.2 Compliance and Administrative costs

| Compliance and Administrative Costs   |  |
|---|--|
| Operating costs= Administrative +Compliance Costs   |  |
| A. Administrative (or “enforcement”) public sector costs  |  |
| <hr/> <ol style="list-style-type: none"> <li>1. Budgetary costs of revenue department(s)</li> <li>2. Cost incurred by other departments in providing information</li> <li>3. Judiciary and other costs related to dispute resolution</li> <li>4. Interest costs (of “loans” extended by legal lags in collection)</li> </ol>  |  |
| B. Compliance costs incurred by private sector  |  |
| <hr/> <ol style="list-style-type: none"> <li>1. Direct costs incurred by taxpayers or “taxpayer costs” (Time, labour costs, Expert advice, other)               <ol style="list-style-type: none"> <li>(a) In complying with legal obligations (involuntary or unavoidable costs)</li> <li>(b) In tax planning and attempting to evade(voluntary or unavoidable costs)</li> <li>(c) Psychic costs ( stress, anxiety, frustration)</li> </ol> </li> <li>2. Costs incurred by other parties (information providers, voluntary helpers)</li> </ol> <hr/> |  |
| C. Possibly offsetting compliance “benefits” to private sector  |  |
| <hr/> <ol style="list-style-type: none"> <li>1. Management benefits (from improved accounting required for tax purposes)</li> <li>2. Cash flow benefits (the private sector side of A.4)</li> </ol> <hr/>   |  |
| D. Net compliance costs = B-C ( in addition, some costs may be reduced to the extent they are tax deductible  |  |

Source: Sandford, Godwin and Hardwick, 1989

Other most relevant elements, not displayed in the table, shaping the level of administration costs can be reassumed as:

- The request of the procedure for supplementary “documentation, registration and handling cross border dealings” (Studies Institute for Fiscal Studies 2011).
- The nature of transaction, Business to Business or Business to Consumer, and the size of deals (Studies Institute for Fiscal Studies 2011);
- The complexity to examine “self-assesd” information; the dimension and typology of connections among formal and informal sectors; “border-effects” on information movements; largeness of e-invoicing and the job covered by the tax experts (Studies Institute for Fiscal Studies 2011).

As for the administration costs, identify which are the factors influencing the measurement of compliance costs it is not easy as it could appear. But literature identify major factors that contribute to form the compliance costs as follow:

- The costs in term of labour’s time, spent by business people to understand and to cope with VAT rules, obligations and registration procedures.
- The costs that businesses must pay for the assistance of tax professionals in handling the procedures (complete reporting information, payments obligations on time)
- All the indirect costs that are needed to handle with the tax/VAT obligations

Additionally, multiple VAT rates, zero ratings, exemptions and all the complementary shades following VAT imposition, dictate to registered subjects, to handle with more difficult accounting and reporting obligations. Beside it, taxpayers face additional burdens when dealing with subjects located both intra-EU and outside EU since they must deal with the additional requirements that EU-country importers may require and impose to dealers to keep a distinct accounting code and recording system (Studies Institute for Fiscal Studies 2011).

Administrative and compliance costs are not the only to be considered, in fact when dealing with taxes, the collecting authorities must deal with the non-compliance costs that are quantities of revenue lost because “of tax fraud, tax avoidance and inadequate tax collection systems, but also due to bankruptcies, financial insolvencies or miscalculations” (Studies Institute for Fiscal Studies 2011). The following instance will treat one of the most



important topic considered in developing the financial VAT strategy of the European Union: the VAT gap

### ***2.3 The VAT gap problem***

Deals among Business to Business and between Business to Consumer may lead to non-compliant behaviours. Frequently, the phenomenon of tax evasion in B2B relationships is connected to sectors of the value chain where there is no the possibility to fully deduct the VAT and the business is in the situation of a final consumer (Institute for Fiscal Studies 2011).

Define the term VAT evasion in never been easy, and it is still difficult define it, since the term evasion is related to the interpretation assigned to it, by each country's administrators or depending from the context of utilisation. (Institute for Fiscal Studies 2011).

Usually, evasion refer to the actions of intentional under-estimation of taxable operations, but it can also be referred to the non-declaration of taxable deals related to legal and black market operations (Institute for Fiscal Studies 2011).

VAT fraud, on other side, is defined as an “event related to the VAT system that usually results in a fraudulent deduction/claim of input VAT and non-payment of output VAT” (Studies Institute for Fiscal Studies 2011).

Often, multiple Eu rules and VAT regulations are considered one of the principal elements of the compliance and enforcement environments that make easier the rising of fraud. These embrace:

1-parametric problems “on base, rates, exemptions, zero rating, registration and return filing thresholds, refunding VAT specific rules and the existence of parallel small taxpayer's regimes ” (Institute for Fiscal Studies 2011);

2-two general EU principles that affect VAT fraud: “the intra-European single market in force since 1993, and the application of the subsidiarity principle to tax administration which generates a second layer of differentiation in the actual application of the laws”(Institute for Fiscal Studies 2011).

The abolition of the internal frontiers and legislations in favour of the free-movement of persons and goods, break the local VAT chain on exported goods to other member States.

Consequently, this creates a VAT collection loss in exporting countries and leaves destination countries totally subject to the behaviour of the taxpayer importing the goods ” (Institute for Fiscal Studies 2011).

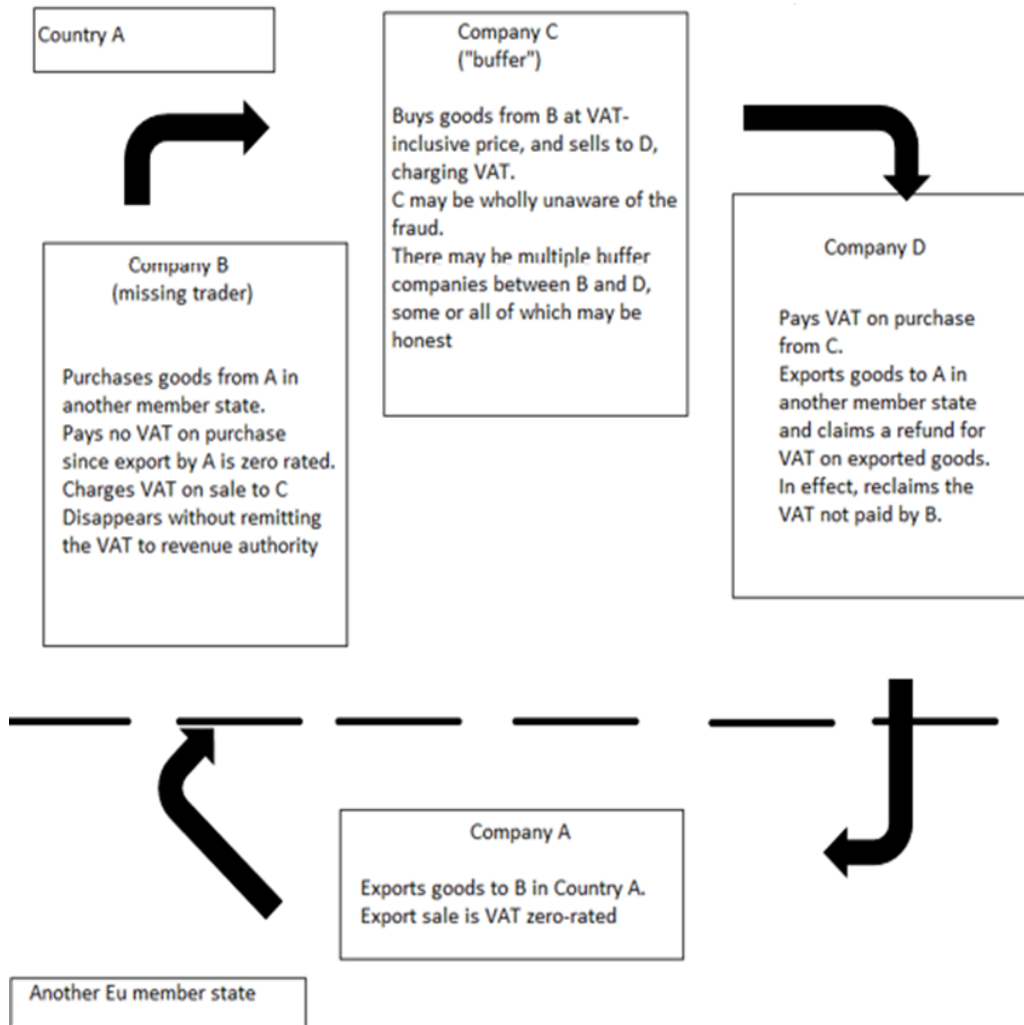
Exist various typologies of VAT fraud, and in general the most known fraud is the MTIC, “Missing Trader Intra-Community” fraud or Carousel fraud, that is characterized by the presence of two main factors: “the defaulting trader, and as second element, the presence of the good being traded that is the object that allows the fraud to be perpetrated” (Fiscalis Tax Gap Project Group 2016).

The Carousel fraud in the years, displayed a specific scheme, that include various businesses selling goods or services, imported without paying VAT from a supplier firm in another EU State Member, to each other on a domestic market.

One of the firms in the chain, often the one that imported the commodities, does not pay the VAT to the authorities meanwhile imposing it to the following customer, consequently perpetrate fraud and disappearing immediately with no trace of the deal (missing trader) (Studies Institute for Fiscal Studies 2011).

The State to which the consumption occurred has no possibilities to collect the VAT on that, and the other businesses in the chain pay the VAT due and reclaiming it where needed. The existence and the flow of the product among the chain is not even expected. The fraud continues its ongoing process when the final customer re-sells the goods to the first supplier, that in the case of cross-border transaction is again exempted.

Figure 0.3: Carousel Fraud Scheme



Source: (Studies Institute for Fiscal Studies 2011)

As reported during a EU Commission meeting, the “Missing Trader Intra-Community (MTIC) VAT fraud is a large-scale organised criminal attack on the EU VAT system. The most serious form of the fraud – known as carousel fraud – involves a series of contrived transactions within and beyond the EU, with the aim of creating large unpaid VAT liabilities and fraudulent VAT repayment claims.”(Studies Institute for Fiscal Studies 2011).

The European Commission is focusing and dedicating a significant quantity of resources to tackle the VAT associated fraudulent activities in the EU area. In the brief time, improvements on administrative collaboration among tax authorities is a fundamental

priority in contrasting VAT fraud, that means increasing the exchanges of data/information among tax administrations and improving communication between business and tax authorities as well as among tax authorities of each Member States.

EU Commission is working to create circumstances to enhance the exchange, sharing and analysis of relevant information with the aim to conduct joint audits, meanwhile safeguarding data protection and the principles of sovereignty, subsidiarity, proportionality and the proper operational of the internal market (Fiscalis Tax Gap Project Group 2016).

The final goal of the EU Commission in the brief time policy, remains decrease the responsibility of VAT for businesses, to incentive growth and employment and the simplification of cross border e-commerce transactions.

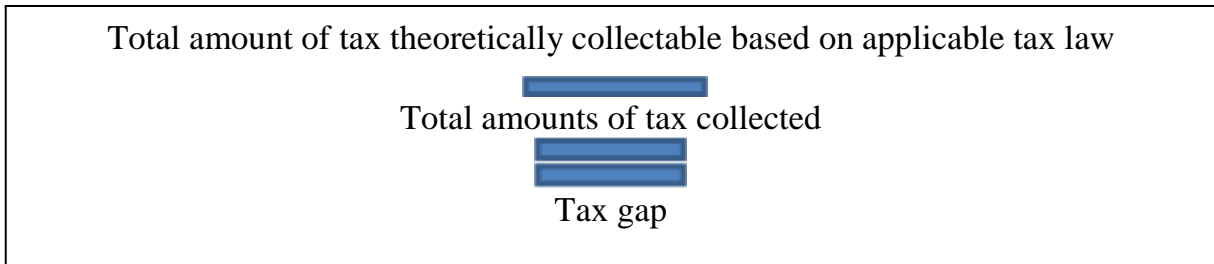
Considering that, the effective and efficient collection of taxes is a fulcrum of a fair taxation apparatus, taxes frauds create revenue loss on Member states finances leading to an excessive tax burden on the righteous taxpayers and additionally create distortion to the economy of a country and for these reasons they must be minimized. Consequently, taxes avoidance and VAT frauds are keystones in the policies of EU Commission.

Unfortunately, as history teaches, the imposition of taxes coexists with a percentage of revenue being lost. In general terms, revenue loss can be defined as the potential quantity of tax liability calculated but not totally laid down in a specific period.

Tax gap evaluations and particularly VAT gap are approximated indicators of revenue loss which are constantly monitored by Member states to avoid distortions, but as said, they are estimations and for this reason their reliability and usefulness is related to the methodologies and to the data used to prepare them.

Having a clear understanding of the entity of tax gap is one of the first step to tackling potential issues of tax collection. Based on various researches on numerous factors of tax compliance, the capacity and the readiness to pay taxes is fervently affected by the economic cycle.

From the Taxpayer point of view, the avoidance of taxes can be related to voluntary actions, tax frauds, tax evasions or, on the other hand caused by negligent omissions and insolvencies. From governments point of view the correctness of this indicators is useful for tax administration and the improvement of tax policy.



Tax gap can be defined as the difference among the total quantity of tax theoretically collectable based on utilisable tax laws (VTTL, VAT Total Tax Liability) and the total value of tax gathered in a specific period.

As explained in the first part of this chapter, households are the final consumers and they cannot reclaim the VAT paid on the acquisitions of goods and services and the VAT paid by them will be the final (Fiscalis Tax Gap Project Group 2016).

In addition to households, there are also other economics actors that cannot deducts entirely the VAT on their purchases as for instance “general governmental institutions and business without the right to fully deduct the VAT paid” (Fiscalis Tax Gap Project Group 2016).

All the final VAT must be considered in the estimation of VAT gap to congruously estimate the total amounts of VAT theoretically collectable and thus the VAT missing (gap) (Fiscalis Tax Gap Project Group 2016).

Figure 0.4 Definition of VAT gap in absolute and in percentage terms

$$\text{VAT gap} = (\text{total amounts of VAT theoretically collectable based on the applicable tax law}) - (\text{total amounts of VAT collected})$$

$$\text{VAT gap}(\%) = \frac{\text{VAT gap}}{\text{total amounts of VAT theoretically collectable based on the applicble tax law}}$$

Source: (Fiscalis Tax Gap Project Group 2016)

It is relevant to understand that the above VAT gap formula captures more than only deliberate non-compliance by taxpayers and that each formula estimation must be understood based on the specific data used for the calculation. Among various techniques to estimate VAT gap, Top-down and bottom-up approaches are the most used and known among experts.

In the top-down technique of VAT gap estimation, the difference is normally calculated using national accounts data. To estimate the potential VAT collectible, essentially, two main methodologies must be utilized: the “consumption based method” and the “production based method”(Fiscalis Tax Gap Project Group 2016).

Considering the “consumption based method” the theoretically taxable final consumption constitutes the potential VAT base that is calculated by using national accounts data on final purchases and on intermediate consumption for exempt provisions. To estimate the potential VAT collectible, the theoretically VAT base is multiplied by the pertinent effective VAT rate. This method is also known as “demand based method”(Fiscalis Tax Gap Project Group 2016).

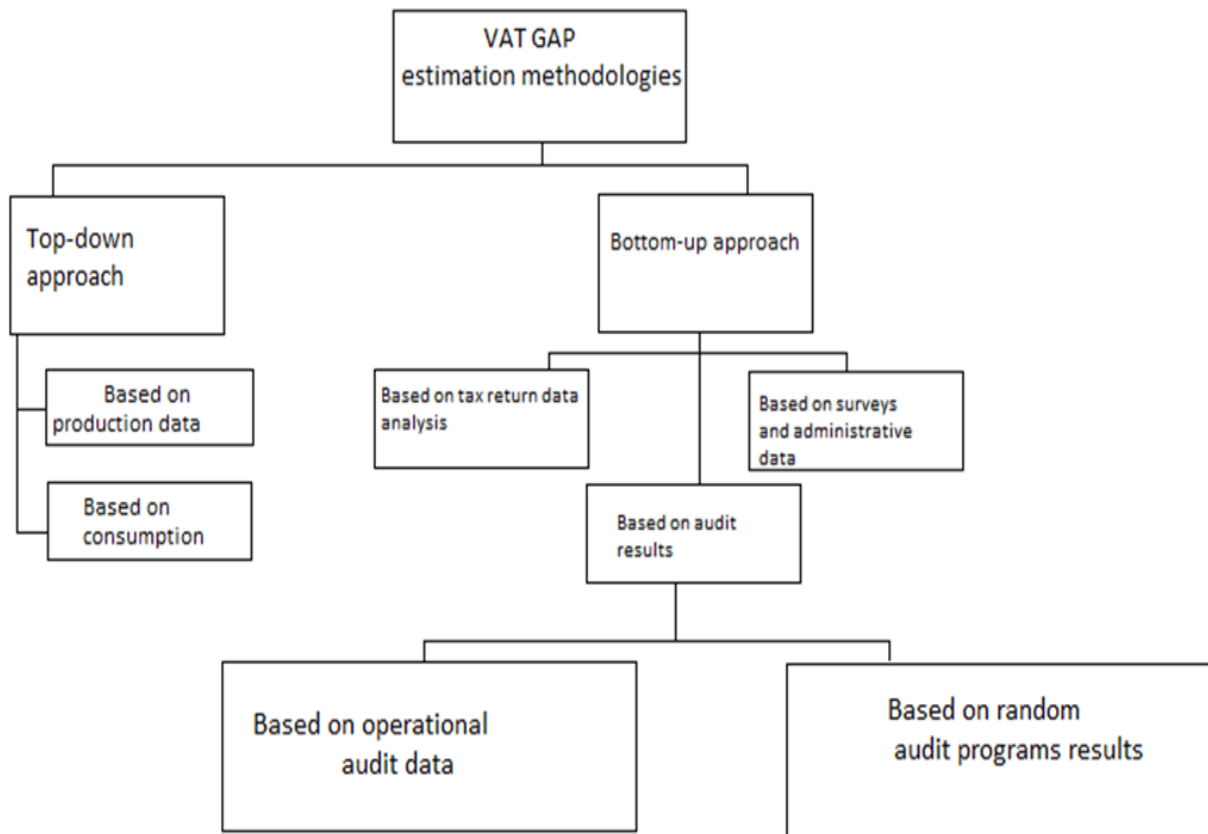
Referring now to the “production based method”, the ideal VAT base is assessed using the value added by firms, with the support of national accounts data. The final amounts of VAT potentially collectible are calculated referring to the difference among the VAT due on taxable output per each sector and the quantity of input VAT reclaimable per sector. This method is also known as “supply based method” or even “value added method”(Fiscalis Tax Gap Project Group 2016).

The top-down technique, to estimate the VAT gap, underline the greatest value of the gap. The presumptions behind this method is that the national accounts macro-economic values include all the taxable consumptions. Despite this, due to the difficulty to calculate the exact value of “non-observed” economy and to include in the national accounts, the real entity of VAT loss, could be different by the VAT gap calculated (Fiscalis Tax Gap Project Group 2016).

Referring to the bottom-up technique of VAT gap calculation, the difference of VAT is calculated with the utilisation of micro-level data that is collected by the tax administration and successively extrapolated”. This latter operation can be very intricate and the safest estimation requires a random sample of tax audits, rather than risk-based

audits to reduce sampling errors and narrow confidence intervals (Fiscalis Tax Gap Project Group 2016). Define the VAT evasion and fraud extrapolating casual sample for Business to Consumer evasion is very expensive, and for Business to Business evasion/fraud is complicated. For these reasons, the bottom-up method could not provide a complete judgement of VAT revenue loss due to evasion and fraud. In numerous situations, a mix of the two VAT gap estimations techniques is used (Fiscalis Tax Gap Project Group 2016).

Figure 0.5 VAT gap methodologies



Source:(Fiscalis Tax Gap Project Group 2016)

The final aim to quantify the VAT gap can vary significantly: there can be the aim to identify and quantify the branches through which VAT evasion takes place; forecasting the effects of a possible reform or to evaluate the effect of a reform on the VAT evasion. To reach these goals, a clear understanding of which are the purposes and the aims of the estimations should be kept in mind when selecting the VAT gap methodology to be used.

In the following part of this thesis are presented the estimations of the VAT GAP calculated for the 2014 year summarized by the EU Commission and reported in the “Study and Reports on the VAT Gap in the EU-28 Member States:2016 Final Report”.

The year 2014-2015 have shown significant changes in tax enforcement and monitoring actions, “as for instance anti-smuggling measures, electronic reporting functionalities, limitations on cash transactions and the extension of lists of goods applicable to the reverse VAT charge mechanism” (Center for Social and Economic Research 2016).

These changes provided by EU policies are still being implemented in the VAT regimes of Member States (Center for Social and Economic Research 2016).

The positive signals of economy recovery during 2014, stable VAT regimes and the enforcement of laws against VAT fraud, involved in a good situation to restrict the VAT gap in Eu member States compared to previous years (Center for Social and Economic Research 2016).

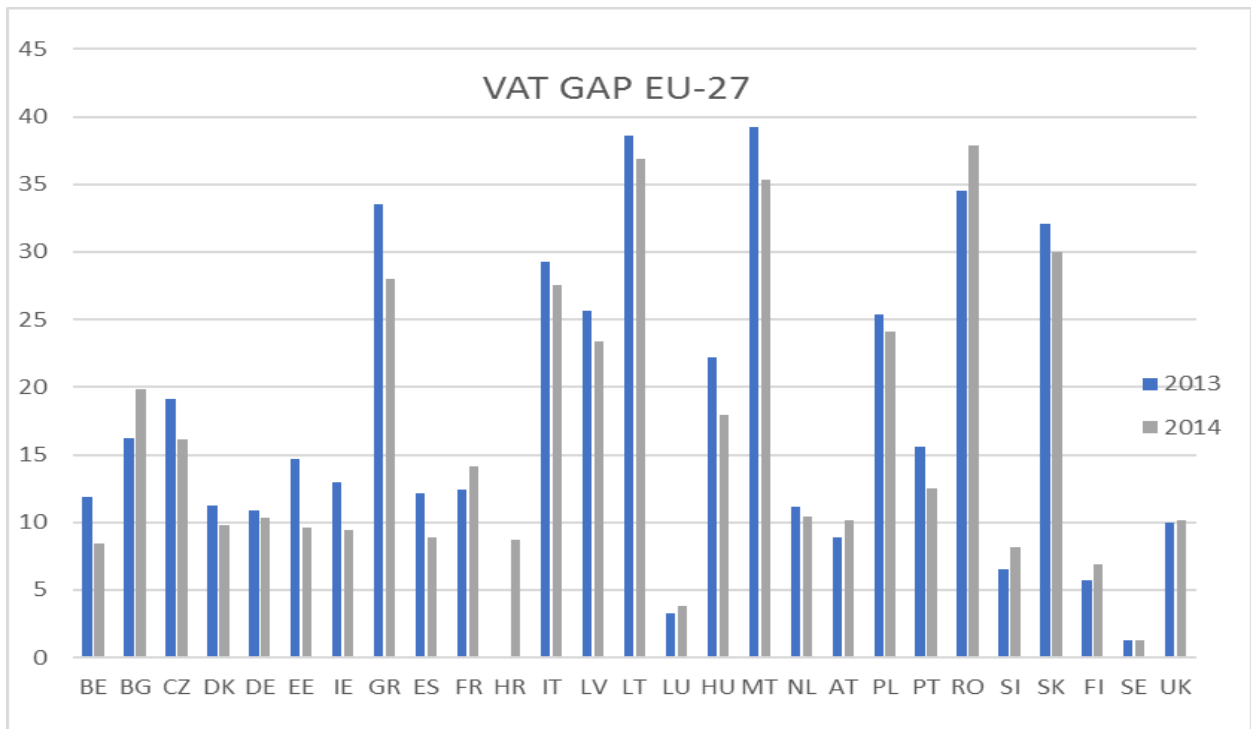
In 2014, the VAT gap touched the amount of €159.5 bn in the EU-27 zone. The VTTL amounted to 1.136.3 billion euro and the revenue was 976.9 billion euro. Expressed as a percent of VTTL, the gap reached 14.06% (Center for Social and Economic Research 2016). Thus, since 2011 the VAT gap showed its first decrease of 2.5 billion euro compared to 2013, whereas of 0.69 percentage point of the ratio of the Gap and the VTTL. Evidently, the biggest slice of VAT is evaded in the shadow economy transactions that are not registered, followed by frauds based on decreasing the amount of taxable sales or modifying the claims for VAT payed on inputs% (Center for Social and Economic Research 2016).

The application of reduced VAT rates difficultly helps to decrease the “shadow economy fraud”, considering that it remains more convenient to evade the connected income tax. The biggest part of VAT fraud comes from the domestic economy and from



cross-border trade linked with the missing trader intra-community (MTIC) fraud (Studies Institute for Fiscal Studies 2011).

Figure 0.6 VAT GAP EU-27



Source: (European Commission 2016d)

As we can notice from figure 2.8 the smallest VAT gaps have been calculated in Sweden (1.24%), Luxembourg (3.80%), and Finland (6.92%)

Reversely, the biggest data about VAT gaps have been observed in Romania (38%), Lithuania (36%) and Malta (35%).

Calculation made on the EU-27 Member States (Cyprus excluded) displayed a VAT gap of about 11% based on national account reports.

In absolute terms, the highest VAT gap of about 37€ billion was recorded in Italy while Luxembourg had the lowest of €147 million (Center for Social and Economic Research 2016) Source (Remeur Cécile 2015)

Figure 0.7 VAT Gap Estimates, 2013-2014 (EUR million)

| Country     | 2013     |         |         |             | 2014     |         |         |             | VAT GAP change (pp) |
|-------------|----------|---------|---------|-------------|----------|---------|---------|-------------|---------------------|
|             | Revenues | VTTL    | VAT Gap | VAT Gap (%) | Revenues | VTTL    | VAT Gap | VAT Gap (%) |                     |
| BE          | 27250    | 30923   | 3673    | 11,88       | 27518    | 30037   | 2519    | 8,39        | -3,49               |
| BG          | 3898     | 4653    | 755     | 16,23       | 3799     | 4739    | 940     | 19,83       | 3,6                 |
| CZ          | 11694    | 14455   | 2761    | 19,1        | 11602    | 13835   | 2233    | 16,14       | -2,96               |
| DK          | 24321    | 27409   | 3088    | 11,27       | 24985    | 27694   | 2709    | 9,78        | -1,49               |
| DE          | 197005   | 221107  | 24102   | 10,9        | 203081   | 226570  | 23489   | 10,37       | -0,53               |
| EE          | 1558     | 1826    | 268     | 14,67       | 1711     | 1892    | 181     | 9,58        | -5,09               |
| IE          | 10372    | 11913   | 1541    | 12,94       | 11496    | 12691   | 1195    | 9,42        | -3,52               |
| GR          | 12593    | 18940   | 6347    | 33,51       | 12676    | 17602   | 4926    | 27,99       | -5,52               |
| ES          | 61126    | 69589   | 8463    | 12,16       | 63756    | 69970   | 6214    | 8,88        | -3,28               |
| FR          | 144301   | 164791  | 20490   | 12,43       | 148129   | 172606  | 24477   | 14,18       | 1,75                |
| HR          | /        | /       | /       | /           | 5368     | 5878    | 510     | 8,67        | /                   |
| IT          | 93921    | 132796  | 38875   | 29,27       | 96897    | 133752  | 36855   | 27,55       | -1,72               |
| LV          | 1690     | 2275    | 584     | 25,69       | 1787     | 2334    | 547     | 23,42       | -2,27               |
| LT          | 2611     | 4253    | 1642    | 38,61       | 2764     | 4377    | 1612    | 36,84       | -1,77               |
| LU          | 3415     | 3532    | 116     | 3,29        | 3725     | 3872    | 147     | 3,8         | 0,51                |
| HU          | 9073     | 11668   | 2595    | 22,24       | 9754     | 11888   | 2134    | 17,95       | -4,29               |
| MT          | 582      | 958     | 375     | 39,2        | 642      | 993     | 351     | 35,32       | -3,88               |
| NL          | 42424    | 47731   | 5307    | 11,12       | 42708    | 47664   | 4956    | 10,4        | -0,72               |
| AT          | 24953    | 27399   | 2446    | 8,93        | 25445    | 28327   | 2882    | 10,17       | 1,24                |
| PL          | 27780    | 37227   | 9447    | 25,38       | 29317    | 38618   | 9301    | 24,08       | -1,3                |
| PT          | 13710    | 16236   | 2526    | 15,56       | 14672    | 16766   | 2093    | 12,49       | -3,07               |
| RO          | 11913    | 18186   | 6272    | 34,49       | 11650    | 18757   | 7107    | 37,89       | 3,4                 |
| SI          | 3045     | 3260    | 214     | 6,57        | 3154     | 3433    | 280     | 8,14        | 1,57                |
| SK          | 4696     | 6914    | 2218    | 32,08       | 5021     | 7169    | 2148    | 29,97       | -2,11               |
| FI          | 18888    | 20028   | 1140    | 5,69        | 18948    | 20357   | 1409    | 6,92        | 1,23                |
| SE          | 39048    | 39540   | 492     | 1,24        | 38846    | 39334   | 489     | 1,24        | 0                   |
| UK          | 142227   | 157932  | 15705   | 9,94        | 157428   | 175184  | 17756   | 10,14       | 0,2                 |
| Total EU-27 | 934094   | 1094837 | 161442  | 14,75       | 971511   | 1130461 | 158950  | 14,06       | -0,69               |
| Total EU-27 |          |         |         |             | 976879   | 1136339 | 159460  | 14,03       |                     |
| Median      |          |         |         | 13,81       |          |         |         | 10,4        |                     |

\*Eu-28 without Croatia and Cyprus

\*Eu-28 without Cyprus

Source (Remeur Cécile 2015)

As already anticipated in this work, VAT is one of the most important sources of revenue for EU Member States and a slice of the VAT gathered by each Member flows into the EU budget. As result, contrasting VAT revenue loss is an important and fundamental point for the EU budget policy to guarantee the fair taxation and consequently the fair competitions in the market among firms.

The VAT systems all around the world are becoming more complex and internationally connected. Even if the EU VAT system since the beginning has been a reference point by other countries, the actual EU VAT laws for cross border transactions are recognized for their complexity and susceptibility to fraud.

In other words, the current VAT system presents a level of VAT gap that is not sustainable anymore and for this reason the Action on VAT aims to act on three fronts:

1. Improving the administrative cooperation among Member States (European Commission 2016a);
2. Achieving better level of “voluntary compliance” and in general, enhancing the performance of the European tax administration (European Commission 2016a);
3. Renew the approaches to tax collection following the needs of the e-commerce growth(European Commission 2016a).

The raise of trade among nations and new “business models” supported by technological advancements speed up the urgency on VAT apparatus(European Commission 2016c).

Considering that the VAT system is susceptible to fraud there is a huge necessity for “simplification, efficacy and efficiency administrative collaboration” among Member States to avoid and anticipate effectively VAT evasion and fraud behaviours. The aims of EU Commission are to prevent and contrast fraud without enhancing the already complex VAT system(European Commission 2016c).

The EU Commission worked and it is still working on more fronts in order to increase conventional compliance responses for legitimate business and trying to contrast the VAT fraud as for instance:

- The Eurofisc network: “is a mechanism provided for Member States to enhance their administrative cooperation in combating organized VAT fraud and especially carousel fraud. EUROFISC allows for quick and targeted sharing of information between all Member States on fraudulent activities.”. It was adopted on 10 November 2010 (European Commission 2010b) and
- The not mandatory and not permanent application of anti-fraud actions provided by the “Quick Reaction Mechanism” to stop the raising VAT fraud phenomenon and encourage domestic Reverse Charge Mechanism as instrument to avoid VAT fraud (European Commission 2016c).

Member States are rising the development of new strategies to tackle the losses and in 2016 the EU Commission subscribed a VAT reform containing about 20 techniques to tackle the gap, embracing also the strengthen of the administrative co-operation among EU Members States, the automatization to access to important data; the developing of anti-fraud strategies and techniques to tackle fraud in the e-commerce sector in order to establish interactions with third States and with the EOCED to “establish an international system of administrative cooperation”(European Commission 2016).

Actions to contrast VAT fraud need to hit the right equilibrium, by securing the VAT revenues while decreasing or keeping stable the burden on businesses. There is also a necessity to have a high level of cooperation among Member States and between business and tax administrations (European Commission 2016c).

All the action should be taken by respecting and enhancing relevant principles and taxpayer/tax authorities’ rights intrinsic in the VAT apparatus as below: “

- Legal Certainty (European Commission 2016c);
- Neutrality (European Commission 2016c);
- Proportionality (European Commission 2016c);
- Transparency” (European Commission 2016c).

Already in 2010, in the Green Paper the EU Commission explained the “Reverse Charge” method “i.e. making the customer responsible for paying the VAT, rather than the seller. The Green Paper try to obtain opinions from stakeholders on different methods/actions that can help to protect and contrast fraud, “such as cross-border reverse-charge or taxing intra-EU supplies” (European Commission 2010a).

Moreover, it introduce the possibility to find out new method of gathering VAT, “which would guarantee Member States to get the VAT that they are due, prevent fraud and provide more legal certainty to businesses”(European Commission 2010a).

The Reverse Charge method is one of the most important strategy being developed to counter the VAT gap and to modify the way to gather the tax in the Business to Business supplies in the domestic market, on a certain range of commodities often subject to fraud as for instance: “mobile phones; tablets & pc, integrated circuit devices, gas and electricity, telecommunication services, construction industry, semi-finished metal”(European Court of Auditors 2015).

This regulation may be extended to all the typologies of supplies in the event of brutal increment of VAT fraud (EU Commission 2016).

The EU commission allows to Members States to introduce for a defined period the reverse charge mechanism on specific lists of provisions (European Court of Auditors 2015).

Within this method, the supplier emits an invoice without applying the VAT due on the sale amount, citing the law that expect the application of the reverse charge mechanism, and the customer pays only the value of the goods and services purchased (European Court of Auditors 2015).

The customer would have to integrate the invoice received from the supplier with the VAT rate applicable to that operation registering the document on the emitted invoices register and contemporary on the purchases register with the aim to make the VAT taxation neutral (European Court of Auditors 2015).

This tackles the possibility in force to the taxpayer to claim the VAT payed on inputs that was not previously deposited to the tax authorities during the distribution chain. However, the use of this mechanism should be limited to avoid to the VAT to become a sales tax with the connected weaknesses(European Court of Auditors 2015).

Another similar but not equal system to tackle the VAT gap in the domestic market could be the so called “split payment mechanism” that expect the seller to charge the VAT on its invoice for the domestic supplies, but the obligation to deposit the VAT or part of it stay on the customer side (Commission 2010). This method displays similar characteristics of the reverse charge mechanism but avoid some complexity in terms of invoicing and compliance (European Commission 2016d).

In the ongoing process of the harmonization process, on 7 April 2016, the EU Commission published an Action Plan on VAT proposing various new key points that should be implemented during 2017 and 2018 with the aim to modernise the actual EU VAT systems, support jobs, economic growth, investments and competitiveness with the aim to establish a VAT system that is able to follow the needs of the 21<sup>st</sup> century(European Commission 2016a).

The VAT action Plan supplies well-defined tendencies in the direction of a solid single European VAT area with the aim to reach the definitive VAT system for cross-border transactions (European Commission 2014).

Thanks the introduction of this document, more aspects of the VAT will be analysed, as for instance the specific rules in force for Small Enterprises (SMEs) and the different VAT rates that can be imposed by Member States. A series of the actions resulting from the Action Plan have already been introduced and implemented by the European Commission, while some others are on the path to be approved.

As expected by the Action Plan, public consultation processes have been or will be started embracing:

- Basic rules for implementing a single EU VAT apparatus;
- Rapid actions to be implemented to contrast VAT fraud;
- Provide Member States more flexibility in applying VAT rates in specified cases and update the framework for VAT rates;
- Make more easy VAT laws for e-commerce in the global set of the Digital Single Market (DSM) strategy and for a huge VAT package to simplify the SMEs life.

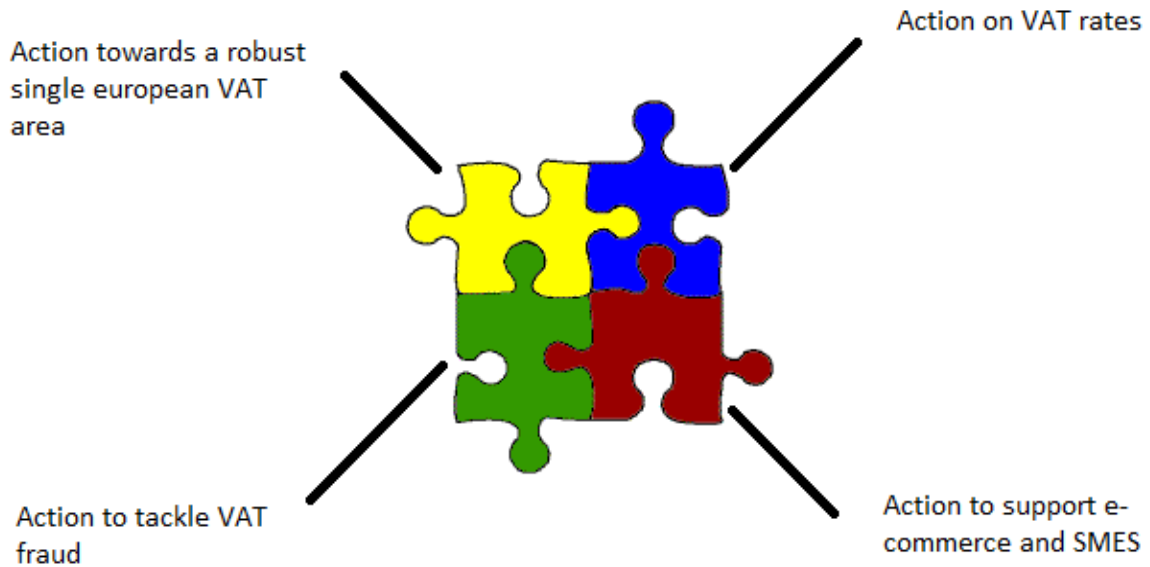
The VAT Action plan establishes a list of urgent actions to contrast the VAT gap and update and modernising the VAT apparatus to the digital economy and the emergent needs of the Small Medium Enterprises (SMEs). These actions aim to create a VAT EU area that help to build a deeper and fairer single market.

As known, the construction of a common VAT apparatus is a key elements of Europe's single market. The actual VAT system that was originally thought as transitional system, is not able to keep the rhythm of the economy in the 21th century and it results fragmented, complicated, showing weaknesses in contrasting frauds (European Commission 2016a).

Consequently, it can be easily understood that, the current system needs urgent actions that will adjust the weakness identify as follow:

- The current VAT system shows the necessity to be simplified. Businesses and in particular SMEs face high compliance costs specially in the cross-border transactions(EU Commission 2016);
- It must have the ability to contrast the increasing fraud phenomenon. “The cross-border fraud in cross-border transactions accounts for EUR 50 billion each year”(EU Commission 2016);
- It displays some efficient gaps(EU Commission 2016);
- An important level of credibility must be created: reliability among Businesses and tax administrations, and between EU tax administrations(EU Commission 2016).

Figure 0.8 VAT Action Plan objectives



Source: (European Commission 2016)

Additional particulars, are defined in the VAT Action Plan:

1. A future stable EU VAT apparatus for cross-border deals to decrease the possibility for fraud:

The VAT system, as implemented nowadays is complex and costly for EU Member States and for those firms that operate with cross-border e-commerce, indeed on 1<sup>st</sup> December 2016, the Eu commission adopted a package of proposals to modernise the VAT for cross border e-commerce which will:

- Reduce the complexity of cross-border trade (European Commission 2016b);
- Contrast the VAT fraud (European Commission 2016b);



- Support fair competition for EU firms (European Commission 2016b); and
- Guarantee equal treatment for online publications (European Commission 2016b).

The VAT directive is nowadays obsolete, especially regarding the taxation of technological products (European Commission 2016a). The EU needs a reform giving to Member States more freedom to take tax policy decisions. On the other side, provide Member State of the power to set VAT rates would involve in some disadvantages as for instance it may create an erosion of VAT revenues and tax base. In addition, the complexity of the system would rise creating legal uncertainty. s.

The EU commission is planning to present a legislative proposal to put in place a “definitive VAT system” (EU Commission 2016).

The new VAT system once totally implemented, will strengthen the destination principle, meaning that the suppliers of goods will collect the VAT from their clients also in the cross-border transactions. This should relief the VAT apparatus from frauds for about 40 billion each year (European Commission 2014). In a VAT system, that will involve the extension of the destination principle on cross-border transaction among B2B becomes very relevant, that every set of national laws are simple and to the widest extent possible rely on harmonised product classes. Moreover, an EU-broad web portal will be imposed to guarantee an easy VAT gathering process for firms.

## 2. More freedom for Member States to select their own rates strategy

The VAT Directive, sets out general rules allowing Member States the possibility to decide some VAT rates. However, these rules do not keep into account the ongoing evolution of the technology (European Commission 2017b). For instance, e-books and electronic publications do not benefit of the possibility to be taxed at reduced rates as it is possible for physical books and newspapers. In addition, such rules have been implemented over 20 years ago with the goal to reach a definitive VAT system based on the origin principle (European Commission 2017b).

As seen in these years, the VAT system has adopted a path involving the use of the destination principle more and more but the laws on VAT rates have never been adapted to reflect this mentality. “It was decided in 2011 to abandon the objective of introducing the origin-based VAT system in favour of a destination-based one, according to which the VAT applicable is the one where the buyer is located (so that the same tax rate is paid by all sellers)” (European Commission 2017a).

The evaluation of a less centralised system basically rely on political decisions. Exist various possible sub-possibilities at technical level to reach this aim that are not in contradictory. They only embody two distinct degree in the flexibility that could be given to Member States (European Commission 2017b).

*Case 1: Extension and regular review of the list of goods and services eligible for reduced rates*

Within this option, the minimum standard VAT at 15% should be kept.

The index of goods and services that may take advantages from the imposition of lower VAT rates be modified taking into consideration the passage to the definitive system and then at constant periods of time, considering political priorities (European Commission 2016a). The EU commission with the collaboration of Member States, may evaluate if the changes may involve any risk to the effectiveness of the single market or variation in competition (European Commission 2016a). “Under this option all currently existing reduced rates, including derogations, legally applied in Member States would be maintained and could be included in the list of optional reduced rates available to all Member States, ensuring equal treatment.”(European Commission 2016a)

*Case 2: Elimination of the list*

The grandest method that would provide Member State more freedom in rate-decision power could be eliminate the list and permit them to decide the quantity of reduced rates and their level(European Commission 2016a).

This option would eliminate the list of goods and services that can take advantage from lower rates. This would require protection to prevent fraud, contrast not fair competition inside the Single Market and may enhance compliance costs for firms. The liberty to decide VAT rates could be thus followed by various basic rules framing the cases in which lower rate could be imposed (European Commission 2016a).

To avoid not fair tax competition in cross-border shopping, a potential answer to the problem would be to protect against imposition of lower rates to high-value items and services, especially on items capable of being transported easily (European Commission 2016a).

With this option would be possible to keep the current applicable zero and reduced rates, but the minimum standard rate of 15% would be cancelled (European Commission 2016a)

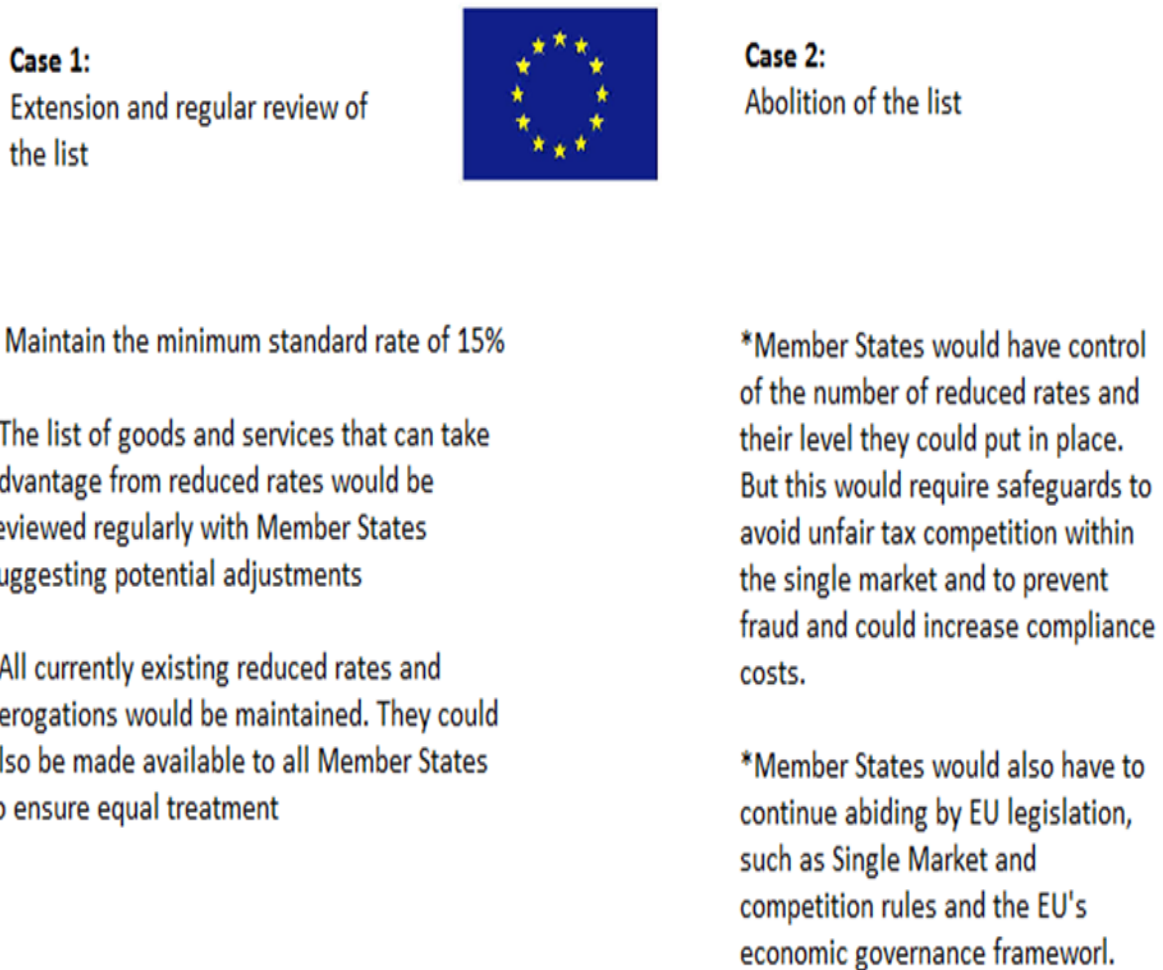
Various motives incentive to adopt the second option of cancelling the statutory VAT rate at a minimum of 15% and to cancelling the list of goods and services that can be affected by the reduced rate, because this would attribute more elasticity and advantages to the economy compared to the first option and the actual apparatus of VAT.

The second option should provide more freedom on the number of reduced rates and their level supplying more flexibility on the goods and services movements (LFMI 2017).

The elimination of the minimum VAT rate could give the opportunities to decrease the whole tax burden (LFMI 2017).

Within the actual laws, Member States should establish a minimum statutory VAT rate of 15%. For EU countries that impose a low level of exemption and/or lower VAT rates are inclined to maintain a single tax rate for the majority part of the classes of goods and services with the aim to prevent market distortions. Thus, their VAT charge is comparatively elevated (LFMI 2017).

Figure 0.9 Tackling Intra-Community VAT fraud



Source: EU commission 2016

### 3. Encouragement for e-commerce and Small Medium Enterprises (SMEs)

The digitalisation process effects on economic models in general, supporting transactional activities, both inside Eu and with countries extra-EU (Remeur Cècile 2015).

The distinction among the digital and the conventional economy is nowadays unclear. Some have claimed for special tax regime for online corporations, but somebody else called for a more complete and general adaptation of the tax system to the evolution of the economy (Remeur Cècile 2015). In other terms, “There should not be a special tax

regime for digital companies, rather general rules should be applied or adapted, so that digital companies are treated in the same way as others” (Remeur Cécile 2015).

This new economy-era impose to the tax system various challenges, especially in corporate taxation.

To consider that, the actual VAT apparatus for international e-commerce is difficult and expensive for Member States and business. It is estimated that the average costs per year of supplying goods to other EU Member States is about 8000 euros(Raponi, n.d.).

EU Commission underlines the necessity for “simplification, transparency and stability not only to avoid dangerous shopping (tax planning), but to build conditions to support the growth of the economy contrasting avoidance and evasion opportunities” (Fiscalis Tax Gap Project Group 2016). To make the VAT system able to contrast and to monitor the new VAT loss problems arising with the technology advancement, since 2015, on transactions connected to telecommunications services (Tv, broadcasting services and electronically supplied services) is imposed the destination principle that means that tax should be paid to the Member State in which goods and services are destined (European Commission 2015).

Both, the VAT Digital Single Market Package and the Action plan on VAT were subscribed by the EU commission with the aim to renew the VAT rules on e-commerce activities that is part of the overall process to reach a Digital Single Market Strategy.

In general terms, Small Medium Enterprises support a higher proportion of VAT compliance costs compared to big firms and this is the consequence of the VAT fragmented system. The adoption of these strategies would facilitate the operations of the SMEs creating an environment that will push them on cross-border transactions.

#### 4. VAT rates

Actual VAT rates regulations are obsolete and they have not followed the path of the evolution of the society and economy. Adapting the VAT rules is not easy since the moment that the unanimity among Members is required (Council of the European Council 2016).

The European Court of Auditors underlined the fact that, the methods to increase the administrative cooperation among tax authorities are not still being totally explored and more efforts should be put in place to create a common framework able to push the European Union to an upper level of communication, organization, and common analysis of data (European Court of Auditors 2015).

Contrasting organised crime systems and VAT fraud on imports, involves eliminating the barriers to effective cooperation among tax authorities and customs, and within law enforcement entities and financial institutions at national and EU level (European Court of Auditors 2015).

The Eu commission is working also on the front with non-EU States' organisations with the aim to extend the EU system of collaboration to non-EU States ensuring better performance on e-commerce taxation (European Court of Auditors 2015).

New methods to tax collection should be embraced, “among others: new reporting tools, new auditing tools, defining new roles for certain market” intermediaries(European Commission 2016a).

The aim to reach a single market must pass through contrasting the VAT fraud and a strong single European VAT area may treat cross-border operations in the same way as domestic B2B transactions.

In the following chapter, it will be given an overview of the scope and application of the VAT in the EU-28 area, treating the harmonization process and the steps the EU commission is making to removes the main obstacles to reach a common framework. It will be displays the main VAT rates in force in the EU area allowing a comparison among each Member State. It focuses on the main problems related to its application and on the main actions the EU Commission is taking to tackle the VAT revenue loss.

## **Chapter 3: Patterns of Reduced VAT Rates in the European Union**

Chapter 1 of this study, provided a general introduction of the main characteristics and purpose of the VAT focusing on the main reasons in favour of adopting the VAT tax.

In chapter 2 have been analysed the importance of the VAT for the EU budget identifying also the problems related to its impositions. The first parts have been introduced with the aim to provide readers a general understanding of the general aims at the base of the actions of the EU Commission towards VAT.

Now, Chapter 3, will analyse the main steps reached in the harmonization process passing successively on the practical part, analysing and observing how the EU Member States adopt the disposals of the EU commission regarding the VAT tax, trying to identify if there is a common pattern among EU in the application of statutory VAT, reduced rates, exemption and zero rating.

### ***3.1 The Harmonization Process: the main steps***

In a legal framework, dating back since the EEC treaty in 1957, it was imposed under Article 99 that the Commission should have carried actions to harmonize the legislation of Member States in the field of indirect taxes, (turnover taxes, excise duties and other forms of indirect taxation), so “can be harmonized in the interest of the common market” (Peci and Morina 2017).

This signified that, the completion of the aim of “commercial exchange of merchandises, services, the liberty of movement of persons and capital” should have been achieved only adopting relevant steps on the harmonization of the tax apparatus. (Peci and Morina 2017).

The first movement through harmonising the VAT apparatus of Member States, was introduced in the first part of 1960s. The first examination on the topic of harmonization is

considered the study of ECC Commission, carried in 1962 for the homogenization of the turnover tax with the name of “The ECC Reports on tax Harmonization”.

Due to the important level of variety and complexity, the path to implement the proposal on the harmonisation process slowed down, and in 1967, the Council with some modifications presented:

- First Directive on the harmonization of legislation in member states on turnover Taxes (Peci and Morina 2017); and
- Second Directive on “the harmonization of legislation in member states on turnover taxes, structure and procedures of applying the common VAT systems” (Peci and Morina 2017).

These two directives consented to begin the VAT impositions as a new form of tax by substituting output tax and consumption tax, applied in the EU Member States.

The Directives settled only general rules giving the freedom to Members States to set up their own rates structures, including the number and level of rates.

Yet, it has been the sixth VAT Directive (77/388/EEC), introduced on 17 May 1977, which signed a crucial point in the creation of EU VAT legislation, since the moment that authorities decided collective criteria to define the VAT base in all Member States. Originally the sixth Directive were concentrated on the VAT base instead of VAT rates (Copenhagen Economics 2007a). Article 28(2) permitted Member States to keep “reduced rates and exemptions [...] which were still imposed on 31 December 1975 and which granted the requirements written in the last indent of Article 17 of the second Council directive of 11 April 1967. Art. 17 treats exemptions kept for “clearly defined social reasons and for the benefit of the final consumer.” (Copenhagen Economics 2007a). Therefore, all Member States, were permitted to continue to apply its zero rates, on condition they accommodate these criteria. The accord on harmonising the VAT rates found various slowdown and was postponed, again, to a later period.

During the first part of 1985, EU Commission introduced the so called “White Paper” containing various dispositions for reaching the process of establishing the Internal Market by 1992 (European Commission 2006).



The White Papers contained a series of rules regarding also the VAT within the EU area. Was expected by Members States to reach a level of “approximation” within VAT subject, with the aim to reach a real internal market and make some steps forward common legislations on tax rates (Peci and Morina 2017). Within these new disposables, the European Union moved in the direction of setting common rules to decide the number and the level of rates.

The harmonization process never stopped and in 1987, the EU Commission presented a proposal for a new VAT rate framework supporting the aims of the White Paper. This new framework expected three fundamental principles: the presence of only two rates, goods and services obligatorily distributed among them, the freedom of Member States to adopt reduced rate and zero-rating. The times were not yet ripe for the aims and the disposals of the 1987 proposal, and in the following years the EU Commission admitted that some points of the 1987 proposal were slowing down the prospect to reach an accord (Copenhagen Economics 2007a).

During the last part of 1989, the intention to establish a transitional period was proposed by the EU Commission. The basic rules to which the “transitional VAT system” was originally based were:

- The adoption of a minimum statutory VAT rate,
- The presence of one reduced rate set in a range from 4% to 9%;
- The possibility to keep the zero-rate imposition for a narrowed number of products (Copenhagen Economics 2007a).

These alternatives disposals were more achievable by Member States compared to the previous ones but still much ambitious to be totally reached.

After following meetings, the EU Commission reached an agreement that led to the approval of the Council Directive 92/77/EEC of 19 October 1992, known as the “Approximation of VAT Rates Directive”.

To summarize, all the States Members:

- Must impose a standard VAT rate of 15% or higher than it, starting from January 1993;

- Have the possibility to impose one or two reduced rates, “but no lower than 5% to specific goods, expected in Annex H of the Directive” (Copenhagen Economics 2007a);
- Can maintain the imposition of any lower rates “lower than 5%, with also zero rates to items not listed in Annex III, already in force on 1 January 1991 for all the length of the transitional period, supposing the agreement with Community legislation” (Copenhagen Economics 2007a).

The transitional framework, embracing the provisional disposals on VAT rates displayed before, was ideally thought to be in force for a period of four years starting from 1 January 1993. This limit was initially imposed with the aim that, the European Commission would have proposed, by the end of 1994, disposals to implement a definitive VAT regime based on origin principle by 1997. Regrettably, the EU Commission, was not able to set up a plan until the summer of 1996, where a work programme was announced for the implementation of the definitive VAT system. The destiny of the program was already written, indeed Members States failed to reach an accord to the disposal, embracing the imposition of a fixed range for set up statutory VAT rate. This expected a minimum rate of 15% and a maximum rate of 25% but, Member States were not able to reach an agreement on the maximum level (Copenhagen Economics 2007a). Therefore, the proposal was accepted but the final document did not contain reference to the maximum level of standard VAT rate.

A little step over, was reached with the 1996 proposal, but was clear that Member States were still far from reaching a level of harmonisation that would have allowed to reach an accord for the introduction of a definitive VAT framework.

The reasons behind the increasing level and quantity of rates differentiation since 1992 has been the tentative to contrast the “black market” on some labour intensive services, as for instance hairdressing and window cleaning (European Commission 2010c).

In 2003, the EU Commission elaborated a proposal with the aim to “review and rationalise the use of reduced rates” expecting an obligatory list of products and services which may be subjected to reduced rates (Copenhagen Economics 2007a). That proposal, was definitively approved in 2006, but with a significant cost: the attention was no longer

on rationalisation of lower rates, but rather on the expansion of the not permanent rates regulations within the VAT Directive, as well as on the expansion of the list of products to which reduced rates could be imposed.

As previously explained, it is easily comprehensible that even if the disposals regulating the rates frameworks have been subject to various amendments since the presentation of the Approximation of VAT Rate Directive, “the situation has changed little and the level of harmonisation of VAT rates has remained modest” (De la Feira 2014).

Nowadays, the rates frameworks within the sixth VAT Directive is multiple-rate apparatus, expecting for a statutory rate and one or two lower rates and:

- The statutory rate cannot be lower than 15% (Article 97 of the VAT Directive) (Council of the European Union 2006);
- EU countries could adopt at maximum two reduced VAT rates to supplies of goods/services described in Annex III, accepting labour-intensive services, but not on those cases where they are electronically provided (Article 98 of the VAT Directive);
- Depending to specific conditions, lower VAT rates could also be adopted to supplies of natural gas and electricity services. (Article 102 of the Common VAT System Directive), imports of works of art, collectors’ items and antiques and some provisions of works of art (Article 103 of the VAT Directive)
- Until the entry into force of the definitive VAT system, EU countries could continue, respecting specific conditions, imposing different special actions regarding the imposition of lower rates, including: adoption of reduced rates lower than the authorised 5% minimum; “maintenance of reduced rates for goods or services not covered by Annex III; or application of an additional reduced rate, known as the “parking rate”, no lower than 12% (Articles 109 to 122 of the VAT Directive)” (De la Feria 2014)and,
- Additionally, various EU countries have been permitted to temporarily impose lower rates to certain transactions (Articles 123 to 130 of the VAT Directive), and particular rules to given EU regions (Articles 104 and 105 of the VAT Directive)(De la Feria 2014).

The Directive takes care about the structure for defining EU VAT's: the goal; region of supply, VAT percentages; taxable amount; VAT exemptions; compliance procedures; taxable subjects; and other special procedures, but provide Member States an important level of decision to set up their own rates framework (Copenhagen Economics 2007a).

As easily understandable, the power to decide of Member States involved in VAT structures highly discrepant, highly differentiated and highly complex even if a huge amount of efforts, time and resources have been invested by EU community(De la Feria 2014).

The harmonization process signed another important step at the end of 2010, when EU Commission printed a document known as "Green Paper on the future of VAT", requiring for opinions on the way the tax could be made less complex and consolidated in the EU area. (EU Commission 2010). The Commission claimed that there were many deficiencies in the current VAT apparatus which block the Internal Market workability, raise pressure for businesses and block Member States from taking advantages of the real potential of this imposition.

"While fundamental idea behind VAT is to have a broad-based, globally applied consumption tax, the wide and divergent use of reduced rates and exemptions by Member States means that only part of final consumption is being taxed at the standard rate. Moreover, inconsistencies in the application of reduced VAT rates also lead to distortions of competition within the Internal Market. Finally, the current VAT system is relatively vulnerable to fraud and a significant part of the VAT is lost this way" (EU Commission 2010).

In the following communication, one year later, the EU commission established that, to continue the harmonization process, all Member States should have followed some important steps that expected to:

- Eliminate all the reduced VAT rates that slow down the workability of the internal market;

- Eliminate all the lower rates on goods and services for which consumption is affected by other EU disposals;
- Tax Similar goods and services with the same VAT rate (De La Feria 2014).

At the end of 2012 the Eu commission started some public consultations, and with not surprise, most of the respondents were against the cancellation of lower VAT rates or contrarily claiming for their spreading.

Again, some other respondents argued that, no more harmonisation should have taken place, allowing Member States the freedom to adopt

After having introduced the main steps that signed the VAT harmonization process among EU since its beginning, this work focus on the current situation of Member States in the VAT field, trying to provide readers an understanding of how the disposals here anticipated have been implemented in the national legislations.

A focus on the VAT rates current imposed, the use of reduced VAT rate and the imposition of zero and exemption is done, highlighting data and trying to provide a logic on the use of them by Member States to reach certain financial, economic and social goals.

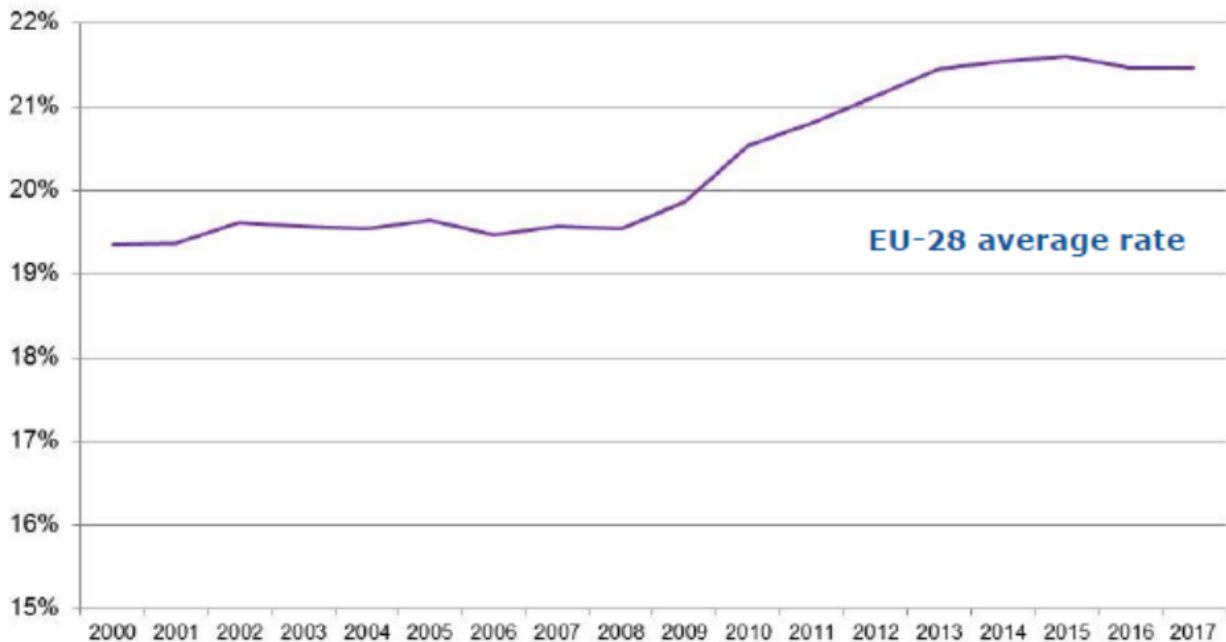
### **3.2 *Standard Rates, Reduced rates, Zero rates and Exemptions***

Currently, the VAT average standard rate in EU is about 21.46%, the same as in 2016 with Hungary imposing a standard VAT of 27% followed by Croatia, Sweden and Denmark imposing a standard VAT rate of 25%. The lowest VAT standard rate are in Malta with 18% and in Luxembourg with 17% (Gastaldi 2017).

The chart here below, represents the VAT rates trend from 2000 to 2016, showing that Member States enhanced the reliability on VAT tending to increase the imposition of it, increasing year by year the percentage rates imposed (European Commission 2009). A point that merit to be treated in depth, is the different strategies adopted by EU Member States during the economic crisis to contrast the economy depression phase.

Some states increased the value of their standard rate, while the left-over part of countries have increased the imposition and the number of their lower tax rates.

Figure 0.1 EU-28 average rate



Source: European Commission, 2017

After a period of relative stability, between 1996 and 2008, the average standard rate of VAT started to rise again after 2008.

In the worst period of the economic crisis (2008-2014), there was an important reduction in tax revenue since the moment that several factors had a key role in this negative trend, as for instance: the decrement in commodities prices and the increasing evasion and fraud behaviours.

Within this situation, many EU Members States had the necessity to improve the budget deficit and to reduce public expenditures. Many of them have enhanced the VAT % rates following and supporting the authorities' needs to collect more revenues to contrast the negative trend of the national debt.

States usually are reluctant to increase direct taxes because, the reduction of income and consequently households' expenditures may stress the depression of the economy (Mara 2014). As a consequence, modify indirect taxes and thus the VAT imposition resulted the less harmful solution to enforce revenue collection affecting consumptions at the less harmful manner (Mara 2014). This tendency largely relies "on the traditional economic perspective that consumption taxes are relatively more efficient as a revenue source, are less distortive, and that incentive growth and employment"(De la Feria 2014). Therefore, in various EU countries, VAT is the principal source of national revenue: in 2009, it accounted for 21% of the tax revenues of EU countries, and increase of 12% since 1995.

With the "decision" to adopt the VAT as a instrument to face the effects of the economic and financial crisis, EU countries had also the possibility to decide among the increase of rates or spread the tax base to increase the collection of revenue. As table 3.1 displays all EU countries increased VAT rates, and some of them widened the VAT base.

To consider that, these actions needed to be implemented carefully, evaluating the microeconomic and macroeconomic because, the rise of VAT rates is generally followed by an increment in prices of goods and services and in a period where there was no increase in nominal wages, the increment in prices would have signified decreasing the real income on consumers consequently, compressing expenditures(De la Feria 2014).

In general, twenty-three of the twenty-eight EU countries, modified their VAT rate structures during this period. In general terms, the increment of the VAT rates displayed bigger budgetary effects than the actions to tight the base, shifting goods and services from reduced to intermediate rate, or vice versa. (European Commission 2010c).

Table 0.1 Variation in VAT rates percentage during the economic crisis of (2008-2014)

| <b>CHANGES IN VAT RATES IN THE PERIOD 2008-2014</b> |                                  |                                  |                                 |
|---|----------------------------------|----------------------------------|---------------------------------|
| <b>INCREASE OF RATE LEVELS/TAX BASE</b>             |                                  |                                  |                                 |
| <b>Member State</b>                                 | <b>Increase In Standard Rate</b> | <b>Increase in Reduced rates</b> | <b>Base Broadening Measures</b> |
| Bulgaria  | /                                | 7% to 9%                         |                                 |
| Croatia   | 23% to 25%                       | 10% to 13%                       | Yes                             |
| Cyprus  | 15% to 19%                       | /                                |                                 |
| Czech Republic                                      | 19% to 21%                       | 9% to 15%                        |                                 |
| Estonia   | 18% to 20%                       | 5% to 9%                         |                                 |
| Finland   | 22% to 24%                       | 8% to 10%                        |                                 |
| France  | 19% to 20%                       | 7% to 10%                        |                                 |
| Greece  | 19% to 23%                       | 4,5% to 6,5%                     |                                 |
| Hungary   | 20% to 27%                       | 15% to 18                        | yes                             |
| Ireland   | 21% to 23%                       | /                                | yes                             |
| Italy   | 20% to 22%                       | /                                | yes                             |
| Latvia  | 18% to 21%                       | 5% to 12%                        |                                 |
| Lithuania   | 18% to 21%                       | /                                | Yes                             |
| Luxembourg  | 15% to 17%                       | /                                | yes                             |
| Malta   | /                                | /                                | yes                             |
| Netherlands   | 19% to 21%                       |                                  |                                 |
| Poland  | 22% to 23%                       | 3% to 7%                         |                                 |
|   |                                  | 5% to 8%                         |                                 |
| Portugal  | 20% to 23%                       | 5% to 6%                         | yes                             |
|   |                                  | 12% to 13%                       |                                 |
| Romania   | 19% to 24%                       | /                                | yes                             |
| Slovakia  | 19% to 20%                       | /                                |                                 |
| Slovenia  | 20% to 22%                       | 8,5% to 9,5%                     |                                 |
| Spain   | 16% to 21%                       | 7% to 10%                        | yes                             |
| UK  | 17,5 to 20%                      | /                                |                                 |

Source:(De la Feria 2014)

The negative trend of the VAT standard rate increment from 2009 seems to have stopped. Only Greece (from 23% to 24%) and Romania (from 20% to 19%) during this year, 2017, have adjusted their standard VAT rates (European Commission 2017a).



Table 0.2 displays the list of the current VAT percentage rates in force across the EU (%)

| Member State   | Code | Super-Reduced Rate | Reduced Rate | Standard rate | Parking Rate | Zero Rate in place? |
|----------------|------|--------------------|--------------|---------------|--------------|---------------------|
| Belgium        | BE   | /                  | 6/12         | 21            | 12           | Yes                 |
| Bulgaria       | BG   | /                  | 9            | 20            |              | yes                 |
| Czech Republic | CZ   | /                  | 10/15        | 21            |              | yes                 |
| Denmark        | DK   | /                  | /            | 25            |              | Yes                 |
| Germany        | DE   | /                  | 7            | 19            |              | yes                 |
| Estonia        | EE   | /                  | 9            | 20            |              | yes                 |
| Ireland        | IE   | 4,8                | 9/13,5       | 23            | 13,5         | yes                 |
| Greece         | EL   | /                  | 6/13         | 24            |              | yes                 |
| Spain          | ES   | 4                  | 10           | 21            |              | yes                 |
| France         | FR   | 2,1                | 5,5/10       | 20            |              | yes                 |
| Croatia        | HR   | /                  | 5/13         | 25            |              | yes                 |
| Italy          | IT   | 4                  | 5/10         | 22            |              | yes                 |
| Cyprus         | CY   | /                  | 5/9          | 19            |              | no                  |
| Latvia         | LV   | /                  | 12           | 21            |              | yes                 |
| Lithuania      | LT   | /                  | 5/9          | 21            |              | yes                 |
| Luxembourg     | LU   | 3                  | 8            | 17            | 14           | yes                 |
| Hungary        | HU   | /                  | 5/18         | 27            |              | yes                 |
| Malta          | MT   | /                  | 5/7          | 18            |              | yes                 |
| Netherlands    | NL   | /                  | 6            | 21            |              | yes                 |
| Austria        | AT   | /                  | 10/13        | 20            | 13           | yes                 |
| Poland         | PL   | /                  | 5/8          | 23            |              | yes                 |
| Portugal       | PT   | /                  | 6/13         | 23            | 13           | yes                 |
| Romania        | RO   | /                  | 5/9          | 19            |              | yes                 |
| Slovenia       | SI   | /                  | 9,5          | 22            |              | yes                 |
| Slovakia       | SK   | /                  | 10           | 20            |              | yes                 |
| Finland        | FI   | /                  | 10/14        | 24            |              | yes                 |
| Sweden         | SE   | /                  | 6/12         | 25            |              | yes                 |
| United Kingdom | UK   | /                  | 5            | 20            |              | yes                 |

Source: European commission 2017

The increment in VAT rates not necessarily affect prices in the brief time, indeed firms with no a relevant position in the market, operating in an intense competition environment with a very elastic demand would try to keep the demand unvaried by accepting a reduction of their profits.

Most of the times, however, the increase of VAT rates has a compressing impact involving in a reduction on consumption as happened during the crisis 2009-2014.

The above table shows the current VAT rates situation in EU, displaying a significative level of differentiation among Member States in the standard VAT level.

The first point that should stand out is the fact that Denmark is the only EU country that does not impose at least one reduced VAT rate and that four EU countries (Ireland, Spain, France, Italy) impose also a super-reduced VAT rate on specific goods and services (Rungholm 2017). Zero-rating is imposing in all the EU Member States except for Cyprus. Belgium, Estonia, Luxembourg, Austria and Portugal impose also VAT parking rates. Additionally, various reduced percentage rates are imposed showing a not clear pattern on their application.

Understanding the pattern of reduction and exemption is not so straightforward, considering that the scope of their usage can vary consistently among EU countries, primarily due to different evaluations of the clauses contained on the VAT legislation and because of varied “options for taxation” (art.137 of the sixth Directive) of financial services and transaction involving immovable property (Borselli and Chiri 2011). The burden of tax not collected can be quantified by multiplying the price of commodities and services by the gap among the standard and the reduced VAT rate. Quantify the burden of the cost of exemptions and supplies that are outside the goals of VAT is more complicated: “in respect of “labour-intensive” services, the burden of hidden VAT is almost negligible, whereas, in respect of “capital-intensive” services (such as the letting of residential property), the burden of hidden VAT may be considerable” (Borselli and Chiri 2011)

In most of the Members States, lower VAT rates are imposed to “primary-goods” as for instance food, heating, transport and exemptions mostly imposed to “merit goods”, as for instance health assistance and education.

In reaching distributional and social goals, policymakers could try to adjust the regressive nature of VAT by imposing lower rates to commodities and services that are forecasted to be purchased by poorer income individuals (Borselli and Chiri 2011).

Again, lower VAT rates, are used for environmental causes, as a motivation for “eco-friendly” creations (European Commission 2009). Financial services are often exempted, due the fact that is complicated to determine the taxable base for VAT purposes.

### **3.2.2      *VAT exemption***

Commodities built with the use of exempted goods or services as inputs, are totally part of the VAT system. The producer cannot reclaim a credit for the VAT already paid in its inputs because it was VAT exempted and obviously, no VAT voice are shown on his purchases (Mirrlees et al. 2011a). Exempted firms do not need to register with the tax authority neither have records for VAT, laying to a simplification of the administration procedures.

A very important feature of exemptions in the VAT system is that, it normally does not give total alleviation from the burden tax indeed, “the effective rate of VAT on the final product is determined by the proportion of total value added before the exempt link of the supply chain” (Mirrlees et al. 2011a).

Generally, even if the effective VAT results lower than the standard rate normally imposed, exemption is far from the effects of a reduced rate of VAT.

Exemptions are considered one of the biggest weak point of VAT in EU because it breaks the taxation chain involving distortions to the production pattern and inducing cascading problems. Additionally, the use of exemptions increases the demand from other firms to become exempt themselves (self-supply) leading to the erosion of the tax base (Tuan Minh Le 2003).

The presence of VAT exemptions, lower productivity and output, decreasing the ability to compete of most part of the important firms located in Europe (Institute for Advanced Studies 2013).

Even if there are many drawbacks, exemption practices are normally used in the real economy. Exemptions are imposed in all those activities that are outside the objective of VAT, such as much part of the public-sector activities, classified as not being a business, and to those legal unregistered VAT dealers that de facto are considered exempted. In vary cases, exemption covers more than just traditional items as for instance educational, financial. and health services presented in the VAT Directive, articles 131 to 137 (Mirrlees et al. 2011a).

Exemption is used by Member States for equity reasons giving tax relief for merit goods or for items utilized by the poorest considering the positive externalities created from the consumption of certain goods and services (Mirrlees et al. 2011a).

In practice, the application of zero VAT rate is particularly complex and it requires administrative, audit and refund policies particularly expensive compared to exemption that is even easier to apply than the differentiation VAT rates. Under the political prospective it is more easily saleable to the public (Mirrlees et al. 2011a).

Often, exemption is taken into consideration as a valuable alternative for the VAT policy thinking, even if, it is hard and challenging calculate its effectiveness. For instance, to reduce effectively the tax imposition on the equity ground by using exemption, it is needed to applicate the exemption at the final stage, where poor people purchase the goods, otherwise if this is not correctly applied, the tax burden could be also higher than in no exemption applications, due to the cascading effect.

When a firm utilizes and produces both, exempted and taxable goods, the exemption could create undesirable technical problem in compliance and administration field.

To conclude, for traders producing both, exempted and not exempted commodities, exemptions can result in enhancing administration and compliance costs through the necessity to distribute input VAT among taxable and not taxable outputs. Exemptions generate various efficiency and effectiveness issues tending to reduce the integrity and sustainability of a VAT framework.

### 3.2.3 *Zero Rates*

The term “zero-rating” is used to describe the application of zero VAT rate to a class of specific goods and services, also called in general term “VAT free”.

In the case of sales with zero VAT rate, the seller business can reclaim the input VAT previously “paid on its purchased and the universal practice is to zero-rate exports and fully subject all imports to the VAT” rates (Mirrlees et al. 2011a) .

Netherlands was the first State to introduce the zero VAT rate in its tax system (Alan A. Tait,1988).

The European Commission (2014) evidences some topics against the application of the zero VAT rate:

- 1- As the Article 28(2) of the sixth Directive states, the application of zero VAT rate is justified if authorities aim to rise benefits in favour of the final consumer that means that zero VAT rate cannot be applied on intermediate commodities (Alan A. Tait,1988);
- 2- When a Zero VAT rate is correctly applied to goods and services in a member State will cause that consumers of other States claim the same benefit, leading to a reduction and a disruption of the tax base (Alan A. Tait,1988);
- 3- The application of Zero VAT rate creates distortions (Alan A. Tait,1988);
- 4- The imposition of zero VAT rate enhance the administrative costs only to compensate creditors (Alan A. Tait,1988).
- 5- Better results can be achieved by more direct transfers.

Considering both, tax administration and revenue loss, the imposition of zero VAT rate is more expensive than the application of exemption VAT rate.

Obviously, the application of the Zero VAT rate does not create only disadvantages, but it creates a good slice of benefits here below explained.

First, there are impositions of zero rate VAT that may be designed to improve, rightly or wrongly, the progressivity of the VAT.

Second, there are goods and services of merit, that they may deserve to be tax free.

Ultimately, “some goods and services are just too difficult to tax administratively it is common sense not to try to tax them as for instance education, health, water, books and culture” (Alan A. Tait 1988).

The VAT Directive allows a range of dispensations to the fundamental rules. For most Members states has been permitted to deviate from the basic rules for a temporary interval of time, to give States progressively the possibility to adequate their laws with the EU’s VAT directive.

This derogation allows them to maintain “special rates”, below 5%, (including 0% rates) and reduced rates for commodities going beyond those specified in the Directive (Institute for Advanced Studies 2013).

Where Member States were imposing a super-reduced or zero rate to several goods, listed or not listed in Annex III before January 1991, they can extend the use of them assuring that, those admissions were permitted and “adopted for clearly defined social reasons and for the benefit of the final consumer” (Article 110 of the VAT Directive) (European Commission 2015).

Literatures suggest that, zero VAT rate, should be adopted in those cases in which governments would like to guarantee that a good or service is free of VAT (Nerudová and Siroky’ 2009).

The use of zero rates, therefore, can be a tool to eliminate the unfairness inherent the VAT system even if it has, been proven that, this form of assistance to the poor, is an ineffective means of attempting to redistribute wealth (Michael, Peter, and Eleonor 2009).

Aiming to make clearer the real level and the use of VAT rates by national authorities, here below are compared all the reduce VAT percentages applied in each EU countries to the categories of goods and services contained in Annex III of VAT Directive 2006/112/EC.

From the data displayed, the reader can easily catch that even if there is a certain level of harmonization, the current situation is far from being homogenic.

As shown in the tables, these regulations provide limitations on member state’s possibility to impose zero and reduced rates, and especially to bring in new ones but, within these limits imposed, national authorities continue to select which of the allowed goods and services can take advantage of the reduced rates and at what rates, and have the power

to decide in evaluating which commodities are considered to be included in the list of Annex III (European Commission 2006).

Table 0.3 Application of reduced VAT rates by the member states to the categories of goods and services contained in Annex III of VAT Directive 2006/112/EC

| Category  | BE | BG | CZ | DK | DE | EE | IE   | EL | ES | FR  | HR  | IT | CY  | UK |
|---|----|----|----|----|----|----|------|----|----|-----|-----|----|-----|----|
| Foodstuffs  |    |    |    |    |    |    | 0    | 13 | 4  | 2,1 | 5   | 4  | 5   | 0  |
|   |    |    |    |    |    |    | 4,8  |    |    | 5,5 |     |    |     |    |
|   | 6  |    | 10 | 25 | 7  |    | 9    |    |    | 10  | 13  | 5  |     |    |
|   | 12 | 20 | 15 |    |    |    | 13,5 | 24 | 10 | 20  | 25  | 10 | 19  |    |
| 21  |    |    |    |    | 19 | 20 | 23   |    |    |     |     |    |     | 20 |
| Water supplies  |    |    |    |    |    |    | ex   | ex | 10 | 5,5 | 13  | 10 | 5   | 0  |
|   | 6  | 20 | 15 | 25 | 7  | 20 | 23   | 13 |    |     | 25  |    |     |    |
| Pharmaceutical products                                 |    |    |    |    |    |    |      | 6  | 4  | 2,1 | 5   | 10 | 5   | 0  |
|   | 6  |    | 10 | 25 | 19 |    | 0    | 13 | 10 | 5,5 |     |    |     |    |
|   | 21 | 20 | 15 |    |    | 9  | 23   | 24 | 21 | 10  |     | 22 |     |    |
|   |    |    |    |    |    |    |      |    |    | 20  | 25  |    |     | 20 |
| Medical equipment for disables                          | 6  | 20 | 15 | 25 | 7  | 9  | 0    | 13 | 4  | 5,5 | 5   | 4  | 5   | 0  |
|   | 21 |    |    |    |    |    | 23   | 24 | 10 |     | 25  | 22 |     | 5  |
| Children's car seats                                    | 21 | 20 | 15 | 25 | 19 | 20 | 13,5 | 24 | 21 | 20  | 25  | 22 | 5   | 5  |
| Transport of passengers                                 | 6  | 20 | 15 | ex | 7  | 20 |      | 24 | 10 | 10  |     |    |     | 0  |
|   | 0  |    | 0  | 25 | 19 | 0  | ex   |    |    |     | 25  | 10 | 5   |    |
|   |    |    |    |    |    |    |      |    |    |     |     | ex | 9   |    |
| Books   | 6  | 20 | 10 | 25 | 7  | 9  | 0    | 6  | 4  | 5,5 | 5   | 4  | 5   | 0  |
|   | 21 |    | 15 |    |    |    |      | 24 | 21 | 20  |     | 22 |     |    |
| Books on other physical means of support                |    | 20 |    |    | 7  | 20 | 23   | 24 | 4  | 5,5 | 5   | 4  | 19  | 0  |
|   | 21 |    | 21 | 25 | 19 |    |      |    |    | 20  |     | 22 |     | 20 |
| Newspapers  | 0  | 20 | 10 | 0  |    | 9  |      | 6  | 4  | 2,1 | 5   | 4  | 5   |    |
|   | 6  |    |    |    | 7  |    | 9    |    | 21 | 20  | 13  |    |     | 0  |
|   | 21 |    |    | 25 |    |    |      | 24 |    |     | 25  |    |     |    |
| Periodicals   | 0  | 20 |    | 25 | 7  |    |      | 6  | 4  | 2,1 | 5   | 4  | 5   | 0  |
|   | 6  |    | 10 |    |    | 9  | 9    |    | 21 | 20  | 13  |    |     |    |
|   | 21 |    |    |    |    |    |      | 24 |    |     | 25  | 22 |     |    |
| Admission to cultural services (shows, cinema, Theatre) | ex | ex | 15 | 25 | 7  |    | ex   | 24 | ex | 2,1 | 5   | 10 | ex  | 20 |
|   | 6  | 20 |    | ex | ex | 20 | 9    | 6  | 21 | 5,5 | 25  | 25 | 5   |    |
|   |    |    |    |    |    |    |      |    |    | 10  |     |    |     |    |
|   |    |    |    |    |    |    |      |    |    | 20  |     |    |     |    |
| Admission to amusement parks                            | 6  | 20 | 15 | 25 | 19 | 20 | 9    | 24 | 21 | 10  |     | 22 | 5   | 20 |
|   | 21 |    |    |    |    |    |      |    |    | 20  | 25  |    |     |    |
| Pay TV/ cable tv  |    | 20 | ex | 25 | 19 | 20 | 23   | ex | 21 | 10  | ex  | 22 | 19  | 20 |
|   |    |    | 21 |    |    |    |      | 24 |    |     | 25  |    |     |    |
| TV licence  | /  |    | ex |    | ex | 20 | ex   | /  | 21 | 2,1 |     | 4  | N/A | ex |
|   |    | 20 | 21 | 25 |    |    |      |    |    |     | N/A |    |     |    |

Source: (European Commission 2017c)

Table 0.4 Application of reduced VAT rates by the member states to the categories of goods and services contained in Annex III of VAT Directive 2006/112/EC

| Category  | BE | BG | CZ | DK | DE | EE | IE   | EL | ES | FR  | HR | IT | CY | UK |
|---|----|----|----|----|----|----|------|----|----|-----|----|----|----|----|
| Writers, composers etc.   | 6  |    | 15 |    | 7  | 20 |      | 24 | 21 | 10  | ex | ex | 5  |    |
|   | 21 | 20 |    | ex |    |    | 23   |    |    |     | 25 | 22 |    | 20 |
|   | ex |    |    |    |    |    |      |    |    |     |    |    |    |    |
| Social housing  |    | 20 | 15 | 25 | 19 | 20 | 13,5 | 24 | 4  | 5,5 | 25 | 4  | 5  | 20 |
|   | 12 |    |    |    |    |    |      | ex | 10 | 10  |    |    |    | 5  |
|   | 6  |    |    |    |    |    |      |    |    | 20  |    |    |    | 0  |
| Renovation and repairing of private dwellings (*)   |    | 20 | 15 |    | 19 | 20 | 13,5 | 24 | 10 | 5,5 | 25 | 10 | 5  | 5  |
|   | 21 |    |    |    |    |    |      |    |    | 10  |    |    |    |    |
|   | 6  |    |    | 25 |    |    |      |    | 21 | 20  |    |    |    |    |
| Window cleaning and cleaning in private households  | 21 | 20 | 15 | 25 | 19 | 20 | 13,5 | 24 |    | 10  |    | 22 |    | 20 |
|   |    |    |    |    |    |    |      |    |    | 20  | 25 |    | 19 |    |
| Agricultural inputs   | 6  | 20 | 15 | 25 | 7  |    | 0    | 13 | 10 | 10  | 25 | 4  | 5  | 20 |
|   | 12 |    | 21 |    |    | 20 | 13,5 |    |    | 20  |    | 10 |    |    |
|   | 21 |    |    |    |    |    | 4,8  | 24 |    |     |    | 22 | 19 |    |
| Hotel accommodation   | 6  | 9  | 15 | 25 | 7  | 9  | 23   | 13 | 10 | 10  | 13 | 10 | 9  | 20 |
| Restaurant and catering services  | 12 | 20 | 15 | 25 | 19 | 20 | 9    | 24 | 10 | 5,5 | 25 | 10 |    | 20 |
|   |    |    | 21 |    |    |    | 9    |    |    | 10  |    |    | 9  |    |
| Admission to sporting events  | 6  |    | 15 | ex | 7  | 20 | ex   |    | 10 | 5,5 | 25 | 10 | 5  | 20 |
|   | ex | 20 |    | 25 | 19 |    |      | 24 | 21 |     |    | 22 |    |    |
| Use of sporting facilities  | 6  | 20 | 15 | ex | ex | 20 | ex   | 24 | ex | 20  | ex | 22 | 5  | 20 |
|   | ex |    |    | 25 | 19 |    |      |    | 21 |     | 25 |    |    |    |
| Social services in so far as those transactions are not exempt pursuant to Articles 132, 135 and 136 of the Directive                                     | 6  | 20 | ex |    | 7  | ex | 9    | 24 | 4  |     |    | ex | ex | ex |
|   | 21 |    | 15 | 25 |    |    |      | ex | 10 | 20  | 25 | 5  |    |    |
|   |    |    |    |    |    |    |      |    |    |     |    | 22 |    |    |
| Supplies by undertakers and cremation services  | 6  | 20 | 15 | ex | 19 | 20 |      | 24 | 21 | 20  | 25 |    | 19 | ex |
|   | 21 |    |    |    |    |    | ex   |    |    |     |    | ex | 5  |    |
| Medical and dental care in so far as those services are not exempt pursuant to point (b) to (e) of Article 132 (1) of the Directive 2006/112/EC           | 21 | 20 | ex | ex | 7  | ex | ex   | 24 | 21 | ex  | 25 |    | 5  | ex |
|   | ex | ex | 15 |    | ex |    | 13,5 | ex | ex |     |    | ex |    |    |
| Collection of domestic waste and street cleaning, other than the supply of such services by bodies referred to in Article 13 of the Directive 2006/112/EC | 21 |    | 21 | 25 | /  | 20 |      | 24 |    | 20  | 25 |    |    | 0  |
|   |    | 20 | 15 |    | 19 |    | 13,5 | /  | 10 | 10  |    | 10 | 5  | 20 |
| Minor repairing (including mending and alteration) of:  |    |    |    |    |    |    |      |    |    |     |    |    |    |    |
| Bicycles  | 6  | 20 | 21 | 25 | 19 | 20 | 13,5 | 24 | 21 | 20  | 25 | 22 | 19 | 20 |
| Shoes and leather goods   | 6  | 20 | 21 | 25 | 19 | 20 | 135  | 24 | 21 | 20  | 25 | 22 | 19 | 20 |
| Clothing and household linen  | 6  | 20 | 21 | 25 | 19 | 20 | 13,5 | 24 | 21 | 20  | 25 | 22 | 19 | 20 |
| Domestic care services (**)   |    |    |    |    | ex | 20 |      | 13 | 21 | 5,5 | 25 | ex | 19 |    |
|   | 21 | 20 | 15 | 25 | 19 |    | ex   |    |    | 10  |    |    |    | 20 |
| Hairdressing  | 21 | 20 | 21 | 25 | 19 | 20 | 9    | 24 | 21 | 20  | 25 | 22 | 5  | 20 |

Source: (European Commission 2017c)



**Table 0.5 Application of reduced VAT rates by the member states to the categories of goods and services contained in Annex III of VAT Directive 2006/112/EC**

| Category  | LV | LT | LU  | HU | MT | NL | AT | PL | PT | RO | SI  | SK | FI | SE |
|---|----|----|-----|----|----|----|----|----|----|----|-----|----|----|----|
| Foodstuffs  | 21 | 21 |     | 5  | 0  | 6  | 10 | 8  | 6  | 9  | 9,5 | 20 | 14 | 12 |
|   | 12 |    |     |    |    |    |    |    |    |    |     |    |    |    |
|   |    |    | 3   | 18 |    |    |    | 23 | 13 |    |     |    |    |    |
|   |    |    |     | 27 |    |    |    |    | 23 |    |     | 10 |    |    |
| Water supplies  | 21 | 21 |     | 27 | ex | 6  | 10 | 8  | 6  | 9  | 9,5 | 20 | 24 | 25 |
|   |    |    | 3   |    |    |    |    |    |    |    |     |    |    |    |
| Pharmaceutical products                                 | 12 | 5  |     | 5  | 0  |    | 10 | 8  | 6  |    |     |    | 10 | 25 |
|   |    |    |     |    |    | 6  |    |    |    | 9  | 9,5 | 10 |    |    |
|   |    | 21 | 3   | 27 |    | 21 |    |    |    |    |     |    |    |    |
| Medical equipment for disables                          |    |    | 17  |    |    |    |    |    | 23 |    |     |    |    | 0  |
|   | 12 | 5  | 3   | 5  | 5  | 21 | 20 | 8  | 6  | 9  | 9,5 | 10 | 24 | 25 |
| Children's car seats                                    |    |    | 17  | 27 |    |    |    |    |    |    |     |    | ex | ex |
|   | 21 | 21 | 17  | 27 | 18 | 21 | 20 | 8  | 6  | 19 | 22  | 20 | 24 | 25 |
| Transport of passengers                                 |    | 9  | ex  | 27 | 0  | ex | 10 | 8  | 6  |    | 9,5 | 0  | 10 | 6  |
|   | 12 |    |     |    |    | 6  | 13 |    |    | 19 |     | 20 |    | 0  |
|   | ex | 21 | 3   |    |    | 21 |    |    |    |    |     |    |    |    |
| Books   |    | 9  | 3   | 5  | 5  | 6  | 10 | 5  | 6  | 5  | 9,5 | 10 | 10 | 6  |
|   | 12 |    |     |    |    |    |    | 23 | 23 |    |     |    |    |    |
| Books on other physical means of support                |    | 21 | 3   | 5  | 5  | 6  | 20 | 5  | 6  |    | 9,5 | 10 | 24 | 6  |
|   | 21 |    |     |    |    |    |    | 23 | 23 | 5  |     |    |    | 25 |
| Newspapers  | 12 |    |     |    |    |    | 10 | 8  | 6  |    |     | 20 | 10 | 6  |
|   |    | 9  |     | 5  | 5  | 6  |    |    | 23 | 5  | 9,5 |    | 24 |    |
|   |    |    |     |    |    |    |    | 23 |    |    |     |    |    |    |
| Periodicals   | 12 | 9  |     | 5  | 5  | 6  | 10 | 5  | 6  |    | 9,5 | 20 | 10 | ex |
|   |    |    | 3   |    |    |    |    | 23 | 23 | 5  |     |    | 24 | 6  |
|   |    |    |     |    |    |    |    | 8  |    |    |     |    |    |    |
| Admission to cultural services (shows, cinema, Theatre) | ex | ex |     | 18 | 5  | 6  | ex | 8  | ex | 5  | 9,5 | 20 | 10 | 6  |
|   |    | 21 |     |    |    | 18 |    | 13 | 13 | 13 |     |    | ex |    |
|   | 5  |    |     |    |    |    |    |    | 23 |    |     |    |    |    |
|   |    |    | 3   |    | 27 |    |    |    |    | 19 |     |    |    |    |
| Admission to amusement parks                            | 21 | 21 |     |    | 18 | 6  | 13 | 8  | 23 |    | 9,5 | 20 |    | 25 |
|   |    |    | 3   | 27 |    |    |    |    |    | 19 |     |    | 10 |    |
| Pay TV/ cable tv  |    | 21 | 3   | ex | 18 |    | 10 | 8  | 23 | 19 | 22  | ex | 24 |    |
|   | 21 |    | 17  | 27 |    | 21 |    | 23 |    |    |     | 20 |    | 25 |
| TV licence  |    | 21 |     |    | ex | ex | 10 | 23 | 6  |    | ex  | ex |    |    |
|   | /  |    | N/A | 27 |    |    |    |    |    | 19 | 22  | 20 | 10 | ex |

Source: (European Commission 2017c)

Table 0.6 Application of reduced VAT rates by the member states to the categories of goods and services contained in Annex III of VAT Directive 2006/112/EC

| Category  | LV | LT | LU  | HU | MT | NL | AT | PL | PT | RO | SI  | SK | FI | SE |
|---|----|----|-----|----|----|----|----|----|----|----|-----|----|----|----|
| Writers, composers etc.   | ex | 21 |     |    | 18 | 6  | 20 | 8  | 23 |    | 9,5 | 20 | ex |    |
|   |    |    | 3   | 27 |    | ex |    |    | ex | 19 |     |    | 10 | 6  |
| Social housing  | 21 |    |     | 27 |    |    | 20 | 8  | ex | 5  | 9,5 |    | 24 | 25 |
|   |    |    | N/A |    | ex | 21 |    |    | 6  | 6  |     | 20 |    | ex |
| Renovation and repairing of private dwellings (*)   | 21 |    |     | 27 | 18 | 21 | 20 | 8  | 6  | 19 | 9,5 |    | 24 | 25 |
|   |    | 21 |     |    |    | 6  |    | 23 |    |    |     | 20 |    |    |
| Window cleaning and cleaning in private households  |    |    | N/A |    |    |    |    |    |    |    |     |    |    |    |
|   |    |    |     |    |    | 21 | 20 | 23 | 23 | 19 | 9,5 | 20 | 24 | 25 |
| Agricultural inputs   | 21 | 21 | 3   | 27 |    | 6  | 10 | 5  | 6  |    | 9,5 | 20 | 24 | 25 |
|   |    |    |     |    | 18 |    | 13 | 8  | 13 | 19 |     |    | 14 |    |
| Hotel accommodation   |    |    | 17  |    |    |    |    | 23 | 23 |    |     |    |    |    |
|   | 12 | 9  | 3   | 18 | 7  | 6  | 13 | 8  | 6  | 9  | 9,5 | 20 | 10 | 12 |
| Restaurant and catering services  |    | 21 |     | 18 | 18 | 6  | 13 | 8  | 13 |    | 22  | 20 | 14 | 12 |
|   | 21 |    | 17  | 27 |    |    |    |    |    | 9  | 9,5 |    |    |    |
| Admission to sporting events  |    | 21 | 3   | 27 | 18 | 6  | 13 | 8  | 23 |    | 9,5 | 20 | 10 | ex |
|   | 21 |    | ex  |    |    |    |    |    |    | 5  |     |    | ex | 6  |
| Use of sporting facilities  | 21 | 21 |     | 27 | 7  | 6  | ex | 8  | 23 |    | 9,5 | 20 | 10 | 6  |
|   |    | ex | 3   |    |    | ex |    |    | ex | 19 |     |    |    | ex |
| Social services in so far as those transactions are not exempt pursuant to Articles 132, 135 and 136 of the Directive               | ex | ex |     | ex | ex |    | ex |    | 6  |    | 22  | 20 | ex |    |
|   |    |    |     |    |    | ex | 10 | 23 | 23 | 19 | ex  | ex |    |    |
| Supplies by undertakers and cremation services  |    |    | 17  |    |    | 21 |    |    |    |    |     |    |    | 25 |
|   | 21 | 21 | 3   | 27 |    |    | 20 | 8  | ex | 19 | 9,5 | 20 | ex | ex |
| Medical and dental care in so far as those services are not exempt pursuant to point (b) to (e) of Article 132 (1) of the Directive |    |    |     | 18 | ex |    |    |    |    |    |     |    |    |    |
|   | ex | 21 | 17  | ex | ex | ex | 20 | 23 | ex |    | ex  | ex | ex | ex |
| Collection of domestic waste and street cleaning, other than the supply of such services by bodies referred to in Article 13 of     |    | ex |     |    |    | 21 |    |    | 6  | 19 |     |    |    |    |
|   | 21 | 21 | 3   | 27 | 18 | 21 | 10 |    | 6  |    | 9,5 |    | 24 | 25 |
| Minor repairing (including mending and alteration) of:  |    |    |     |    |    |    |    |    |    |    |     |    |    |    |
|   |    |    |     |    |    |    |    |    |    |    |     |    |    |    |
| Bicycles  | 21 | 21 | 8   | 27 | 5  | 6  | 20 | 8  | 6  | 19 | 9,5 | 20 | 24 | 25 |
| Shoes and leather goods   | 21 | 21 | 8   | 27 | 5  | 6  | 20 | 8  | 23 | 19 | 9,5 | 20 | 24 | 25 |
| Clothing and household linen  | 21 | 21 | 8   | 27 | 5  | 6  | 20 | 8  | 23 | 19 | 9,5 | 20 | 24 | 25 |
| Domestic care services (**)   |    |    | ex  | 27 | 5  |    | 20 | ex | 6  |    | 9,5 | 20 | 24 | 25 |
|   | 21 | 21 | 17  | ex |    | ex |    | 23 |    | 19 |     |    |    |    |
| Hairdressing  | 21 | 21 | 8   | 27 | 18 | 6  | 20 | 8  | 23 | 19 | 9,5 | 20 | 24 | 25 |

Source: (European Commission 2017c)

Even if, the imposition of lower VAT rates could in origin be a valuable tool for social objectives, these involve in distortions of competition and alteration with the levelled operability of the internal market. Concluding, the goal of the lower VAT rates could not be every time linear. For instance, EU countries could impose a lower VAT rate to books, newspapers and journals in printed form while taxing online books, journals and newspapers at the standard VAT rate.

Furthermore, levying cross-border supplies of goods and services at lower VAT rate involves compliance costs and a reduction of legal clearness for firms, especially when they are taxable in a Member State in which they are not located. Nowadays, is estimated that about 65% of the total final consumption in the EU is affected by the standard rate; in “Portugal, Ireland and Greece, the slice of the standard-rated goods and services is less than 50% of the whole consumption, meanwhile is more than 90% in Bulgaria, the Slovak Republic and Romania” (LFMI 2017). About the 26% of the whole consumption of goods and services is affected by lower VAT rates, and varies from a very low “percentage points in Baltic Member States, Romania, Bulgaria and Denmark to more than 40% of the whole consumption in Portugal, Spain, Greece, Poland. Again, around 9% of the total consumption is exempt or outside” the goals of VAT (LFMI 2017).

In Lithuania, the standard VAT is 21% but the real VAT rate is about 19.1%. the difference among the effective VAT rate and the standard VAT rate is one of the lowest in the European Union about 10% (LFMI 2017). In the recent years, the difference among reduced rates and statutory VAT rate, has tended to become larger, eroding VAT efficiency and raising distortions (European Commission 2016a). Among several factors, the inflation reason, is one reason of the stable growing of VAT revenues. For instance, Lithuania VAT revenues collected raised up from 1.8 bln. Euros in 2006 to 3 bln. Euros in 2016 (LFMI 2017).

### ***3.3 The cases for a uniform or differentiated rate of VAT: - Insights from economic theory***

Understanding the rate or the rates of VAT to impose in a country or in an organisation like the EU, is a topic of fundamental importance.

In this section, it will discuss the advantages and the drawbacks of the application of a uniform rate VAT or multiple rates VAT analysing them from the perspective of economic theory basing the arguments on the general economic reasoning. The recent literature suggests that VAT imposition should be uniform affecting all the acquisitions of goods and services with the equal uniform VAT rate, and concerns about distributional policy may be left to direct taxation and welfare incentives, meanwhile a policy in favour of the adoption of indirect taxation is recommended.

It is debated that, a uniform VAT rate should minimize the consistent administrative difficulties of define for every good and service which VAT rate to impose, it reduces the possibility of tax-thinking, moving sales from high rated to low rated sectors.

A uniform rate of VAT does not change the nature of the VAT as a consumption tax as intended as may happen with a differentiation VAT rates. Moreover, a Uniform VAT rate compared to a system with variations in VAT rates may reduce the evasion phenomenon even if it would not be wholly eliminated.

To support that said above, here below are listed numerous reasons supporting the imposition of a uniform VAT rate and various doubts about the rational for using multiple rates:

1- Dictating a uniform rate, escape the distortion of people choices among different goods and services without altering the natural wiliness of customers;

2- Low rates of VAT, as the Irish Commission on Taxation noted, do not “necessarily benefit the final consumer. In reality, traders are facing with recouping a certain amount of VAT from consumers. They adjust their prices in line with what the market would bear regardless of the rate of tax prescribed for individual items” (Alan A. Tait,1988);

3- Obviously, not only low-income people take advantage from the imposition of the lower tax rate; these various rates are a very direct tool for giving benefits to

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particular group of households. Other instruments such as income supplements, tax adjustments, transfers, or coupon schemes can be used in a better way to sustain low income households;

4- Some States support “essential” goods and services as for instance electricity, food or fuel. In this situation imposing a special rate on already reduced price make low sense (Alan A. Tait 1988);

5- Preferential treatment, originates unsatisfied traders and consumers who argue that their product is at the border line of the definition (Alan A. Tait 1988);

6- Setting hard-line definitions becomes costing a large amount of money (A. Tait 1988).

7- High VAT rates usually are imposed on goods and services that count moderately considered the whole consumption of the taxpayers. Often consumers modify their consumption pattern to avoid sumptuary rates (Alan A. Tait 1988);

8- Independently from the multiple rates selected and independently from the following variations, they infrequently reflect real variations in consumer or government preferences;

9- Researches using general equilibrium graph, demonstrated that rate differentiation lead to a relevant decrement in government gathering revenues compared to the revenues gathered with the use of equalized tax rates (Alan A. Tait 1988).

Auditors, economist and financial experts accentuate the advantages of having a uniform VAT rate, affecting all the types of goods and services provided sustaining that it is shown that having a single VAT rate reduces compliance costs compared of a varied VAT rate system, moreover it reduces the ability of tax-thinking, shifting sales from high rated to low rated sectors and it steepens the uphill slope for special interest groups seeking reduced VAT rates for their favourite sector or product (Copenhagen Economics, 2007).

Another point in favour of a uniform VAT rate is the administration costs that stay the same whatever is the rate selected.

Additionally, a uniform VAT rate does not discriminate among people due to their preferences, in fact, in the case in which households have equal preferences, that means they differ only in wage perceived, the optimal indirect taxes are uniform (Atkinson 1976).

In few words this signify that, “one can dispense with indirect taxes in total and operate only an income tax since indirect taxes at uniform proportional rate act just like an income taxation” (Atkinson 1976).

VAT differentiation rates and the use of exemptions involve in a reduction of welfare, enhancing the compliance and administration costs among businesses, that must assign input tax among exempt and taxed business deals. For a better understanding, we should just consider the case in which a firm has the possibility to reclaim the VAT on its inputs, in this case the business would reduce the cost of providing services and goods enhancing their international ability to compete with foreign firm thanks to a reduction of the price (Copenhagen Economics b).

Although to a lesser level, the widespread use of reduced rate creates difficulties. If from one side, the utilization of zero and reduced rates can be used as a financial tool to guide consumers to increase the usage of socially desirable services and goods even if they are a very limited and well-defined number, due to the structure of VAT, their usage enhances the intricacy of the entire system, creating household’s spending patterns distortions and lowering welfare (Copenhagen Economics 2007b).

Researches have highlighted a lower distributional power of a reduction of VAT rate compared with the distributional capacity for instance to a variation of an income tax, tax credit and benefits. As verify by Kay and Davis (1985) and Hemming and Kay (1981) the distributional force of eliminating zero-rate VAT can be widely offset by reducing the standard rate of income tax and increasing the tax doorway. Unvarying VAT rate streamline the politics of decision-making, building a tax system less exposed to lobbying influence and near-future political reflections (Copenhagen Economics 2007b).

Additionally, where VAT differentiations rates exist they can provoke distortions in competitions among businesses in the EU creating discriminations among firms toward self-supply and imports from the market. Politicians often think that citizens will consent to a VAT more easily if a lower VAT rate is applied to goods and services consumed in the majority part by low income people (Copenhagen Economics 2007b).

Oppositely, even if the practical advantages of using a uniform rate are well known, experts are under the theoretical perspective diffident in the direction of having a uniform VAT rate. They underline that a not wasteful VAT framework must be non-uniform

(Copenhagen Economics 2007b). Why this? The problem to consider is that every type of tax imposition tends to decrease economic welfare resulting in costs of decreasing production or reduced welfare. Consequently, an efficient tax apparatus should minimize the loss derived from the taxation. The tax system that imposes changes to consumers purchase decisions in the smallest possible manner, is a tax system that can be considered efficient. As mentioned in a report of EU commission titled “Study on reduced VAT applied to goods and services in the member of the European Union” whenever a tax is imposed on the income or on a good, it changes the demanding shape for work and for goods affected by the imposition (Copenhagen Economics 2007b). Considering that, a well and efficient taxation system should minimise the costs of taxation reducing at the minimum, changes in the decisions-making of the final customer (Copenhagen Economics 2007b).

Obviously, this derives from the price elasticity of the goods and services affected by the tax imposition. In those case to which the price elasticity is high, a small price variation involves in an elevated level of demand deviation, significantly changing consumers ‘purchasing decisions. As easily comprehensible, goods with high response to price-changes are not the best candidates for high VAT rates in an efficient tax apparatus. On the other side, goods with a low response to price-changes should be good applicants for high VAT rates since the moment that they minimally affect consumers’ purchasing decisions. It involves that from the considerations given above, an efficient VAT apparatus should apply various VAT rates especially on non-elastic price rather than price elastic goods (Copenhagen Economics 2007b).

Within the European Community the existing situation is far from being uniform. Indeed, Member States opted for a highly varied and complex VAT system deciding to give up a slice of tax revenue.

Four main reasons ‘categories in favour of taxing some goods and services at reduced VAT rates are identified:

- Efficiency;
- Equity concerns (to lower down the taxation’s effects on consumptions) (Institute for Advanced Studies 2013);

- Favourable production/consumption effects and consumers' externalities (Institute for Advanced Studies 2013)
- Positive externalities: there are studies supporting the imposition of reduced VAT rates to support the consumption of the so-called "merit goods" as for instance cultural events, books etc.

### **3.3.1 Member States interest: Promoting efficiency**

The first point of the list above reported, focus on efficiency problem. A well-known reason, to tax a certain range of goods and services at a lower rate, is to placate distortions that can arise from the impositions of the taxation system on the households' purchasing decisions.

In the current economy situation, 2017, the amount of indirect tax affecting goods and services involves increasing the price that the customer must pay. The change level on the customer willingness to continue to buy the commodities depends from the elasticity of the goods affected by the tax imposition. As it can easily understand the "welfare cost" of a tax is higher when and where it has a high shock on the decision-buying conduction. Considering the elasticity theory, that the optimal economic efficiency is reached by affecting consumption commodities at percentages rates that are inversely proportional to their price elasticity (De La Feria 2014).

Goods as for instance foodstuff, and goods considered as "primary goods" should be then taxed at a higher rate because there will be low level or no changes on people's purchasing behaviours if compared with other typologies of goods, raising vertical equity concerns.

Considering all the economic costs of imposing reduced VAT rates, the extent usage and ongoing spread of the interest in applying differentiated VAT rates, presumes that if adequately implemented lower VAT rate or equivalent direct support schemes for various motives could increase Member State and society welfare.



Lowering the VAT rates application on a specific list of goods and services is mainly made to push households to move their demand from some activities to other, that for various motives are more beneficial activities (Copenhagen Economics 2007a).

This can take advantage if and only if the higher standard VAT rate imposed on all other commodities as needed by budget neutrality does not eliminate the changes brought about in the first part. For this motive, an obligatory condition for reduced VAT rates to be economically advantageous will be that there are important gaps among the commodities incentivised by the reduction in VAT rates and all the other goods discouraged by high VAT rates. If these gaps are present, moving activities among sectors may push stable changes in the economic system of the member country.

Increase overall productivity and reduce structural unemployment are two main topics incentivising the usage of reduced VAT rates on specific goods based on the certainty that would increase the overall economic efficiency. These topics recognise that reduced VAT rates could give rise to distortions and lower welfare as already anticipated, but continue by sustain that there are more aspects that should be taken into consideration that could lead to a general gain in economic efficiency.

The first topic is based on the observation that various economic activities are by nature not taxable, as for instance do-it-yourself work (DIY-work) in private houses. Affecting all the other activities with the imposition of taxes, for instance labour income and consumption, it becomes more attractive for households to carry out DIY instead of purchase the comparable service on the market. In this way, a distortion may raise leading skilled and very productive people to move their preferences in the direction of DIY. In this way, they decide to spend some hours on DIY instead of increase labour supply and productivity.” (Copenhagen Economics 2007a).

The second topic, is based on the observation that (structural) unemployment for the low -skilled persons is “much higher and pervasive than unemployment for the high-skilled. Restrictive labour market regulation, high minimum wages, and hiring and firing regulation tend to have generated significant structural unemployment problems for the low-skilled in many member states.” (Copenhagen Economics 2007a).

By decreasing the taxation burden, for instance VAT, on sectors with an important level of low-skilled workers and financing it by increasing the VAT rates on sectors with

a high level of high-skilled workers, it could be affordable to enhance demand for low-skill workers, enhance their wage and reduce structural unemployment without affecting employments opportunities for high skilled workers on their not rigid labour market (Copenhagen Economics 2007a).

Unfortunately, in the real economy, the application of this theory is complicated for assorted reasons. First, understanding and collecting the information about consumers 'preferences necessary to impose a differential tax apparatus that maximise economic welfare would result too much expensive making this system impossible to actuate, indeed, it would demand to calculate the price-elasticities of each product on the market and also frequent updates of those elasticities to consider variations in preference and/or technology (OECD 2010).

Beside all these considerations, 12 Member States are nowadays adopting a reduced rate to restaurants.

### **3.3.2 *Member State interest: Promoting equity***

Unfortunately, the efficiency reason is not the only issue that an indirect taxation system should consider, in fact the equity problem is another element to keep into account, since the moment that, primary foods occupy a largest quote of the poorest people's salary, the authorities must consider the distribution problem among society even if the efficiency theory says to tax in a higher rate inelastic goods.

As shown in the section above, the imposition of lower VAT rates, is deeply induced by efficiency motivations. If carefully implemented, the lower imposition of VAT rates may help in supporting Member States in solving equity concerns. In this contest, the question is not if the usage of reduced VAT rates should improve the global efficiency, but if they are the right tool to reach equity objectives. In the study carried by the Copenhagen Institution, they have selected two main topics that the imposition lower VAT rates should help to improve the overall equity.

They conclude that reduced VAT rates could:

- Sustain a more equal income distribution;
- Supporting consumption of merit goods (Copenhagen Economics 2007a).

The first point of the list is based on the perception that reduced VAT rates on a specific range of good should generate a more equal income distribution, after consumption, if they are able to decrease the costs of goods and services that for the majority part are purchased by low-income households as for instance food or energy. The possibility to support income distribution, after consumption, is since prices of a representative basket for low income households decreases, meanwhile the price of a representative purchased basket for high income households rises (Copenhagen Economics 2007a).

For these considerations, the VAT rates frameworks adopted in Europe do not follow the inverse elasticity theory, but there is an inverse situation in which necessities and some inelastic good are low taxed. Poorer households tend to spend a larger slice of their total income on consumption than prosperous households, who can save more for future expenditures. Thus, taxing non-elastic goods at a higher VAT (standard rate) means to increase the burden on poorest households. Taxing basic needs, such as food, water or social housing, at a reduced rate, aims to reduce this burden and increase their consumption capability (De la Feira 2014). The motivations behind this policy is relatively easy to explain, indeed richer households have a higher part of savings to spend in non-primary goods after having satisfied their basic needs. Taxing at a higher VAT rate non-essential goods would mean that a bigger slice of tax revenue is being carried by richest households.

Using low VAT rate to tax essential goods means also using VAT to redistribute purchasing power from wealthier households to poorer one. A policy that may help governments to reduce the distortions that income tax may create would be taxing more goods that are “complementary” to leisure discouraging the high-ability individual from getting much leisure. Obviously, there are constraints in the range of taxing more complementary goods (Copenhagen Economics 2007b).

Similarly, it is possible to reach the redistribution goal by taxing less goods associated with more working hours (children services, during working hours or again public transport). Thus activities, goods and services associated with leisure time (for

instance restaurant meals, beauty centres & Spa) are optimal subjects to be taxed at a higher VAT rate. If goods and services are unvaryingly associated with leisure, then all commodities must be taxed at the equal tax rate, (weak separability) (Copenhagen Economics 2007b).

The second point of the list is based on the perception that reduced VAT rates on specific range of goods, may support purchase of merit goods that are considered to have intrinsic high value for the society as for instance tickets for museum and theatres. The concept is that the imposition of reduced VAT rate on merit good may decrease the price of them supporting the demand among the society (Copenhagen Economics 2007a).

### ***3.3.3 The use of reduced VAT rates decreases prices and support demand***

Starting from the beginning, it is relevant to underline that, “there are no doubts that everlasting lowering the VAT rate on specific good or service sooner or later will involve a decrement in the price of the commodity reflecting the monetary equivalent of the lower VAT rate” (Wason et al. 2011). For instance, if the rate of VAT decrease by 10% points on a specific good with a previous price of 200€, the price that the final consumer would pay sooner or later will decrease by 20€ for the purchase of that product or category of products. Using an economic expression, there is a strong inclination in the direction of “full pass-through” (Copenhagen Economics 2007b).

“There is also a strong evidence that as the price decrease, consumers’ demand for this typology of good or service will increase” (Copenhagen Economics 2007b). Consumers will move their demand in the direction of the good with a reduced VAT rate imposition since the moment that the price is lower than in the origin. Anyway, the strength and the swiftness of the production and employment response is based on certain specific features of the sector, which are treated in the following part.

### *Strength*

The strength of the impact of the imposition of lower VAT rates on production and employment is strictly linked to the consumer response to the decrement of prices and from the level of competition present in the sector. In the case of non-elastic good the production and the labour demand will not rise significantly. Usually this is the reaction of food and of primary goods, as consumers tend to keep stable the level of consumption of those goods to keep the saved expenses for type of good and services more expenses (Copenhagen Economics 2007b). Otherwise, if the good and service considered is price-elastic, the two elements considered will face an increment. This is the situation for non-basic good, package holidays and so on. Studies stress that if the production of the sector affected by the decrement of the VAT rate imposition is very labour-intensive, seems that there is a strong response in production and employment request (Copenhagen Economics b).

In monopolistic sectors or in sectors where there is a low level of competition, the pass-through to prices could be less than full consequently with a lower impact on employment and production demand.

### *Speed*

The quickness of the response of production and employment to the imposition of lower VAT rates can vary importantly among sectors determined by the technology and the labour market. In the case to which technology is labour intensive or if the labour market is rigid there should be some delay before businesses can adapt to the new market situation. Indeed, it can result that the adaptation to the new level of demand after the fall in price is costly and requires long time (Copenhagen Economics b).

The third point in favour of taxing some goods and services at reduced VAT rates is that their fruition is judged desirable, because it is assumed they are not fully understood and internalised by customers. For instance, some services and good could have favourable production and/or externalities that consumers do not totally consider (solar panels to produce energy) (Copenhagen Economics 2007b).

Again, there are many other arguments supporting the impositions of various VAT rates. Many Member States have the aim to enhance employment. Some Member States want to increase the population's cultural awareness or health. Others have care of supporting non-privileged groups (Copenhagen Economics 2007b). Many other topics in favour of applying various VAT rates are based on the consideration that lowering the VAT could enhance society's welfare.

At this point some questions may arise. Firstly, it must be understood to what range/extent do VAT reduced rates enhance economic efficiency such that they are able to cover the distortionary loss? Second, which is the right level of reduced VAT rates that can be imposed in the real economy with reasonable administrative costs?

### ***3.4 Evaluating Proposals for lower VAT rates***

In the introduction part of this section two questions were raised, again:

- What range/extent do VAT reduced rates enhance economic efficiency such that they are able to cover the distortionary loss?
- Which is the right level of reduced VAT rates that can be imposed in the real economy with reasonable administrative costs?

It has been displayed that in some particular sectors there are persuasive topics for maintaining, introducing or increase the imposition of lower VAT rates (Copenhagen Economics 2007a). As noticed in the previous section, this is particularly true for those sectors having to deal with DIY-work; it is to a lower level relevant for those sectors hiring a high number of low-skill workers; and it is to a narrow extent important for sectors whose outputs are consumed in majority part by low income persons, for instance food (Copenhagen Economics 2007a).

In any cases the possibilities to catch the economic advantages from the imposition of lower VAT rates is not only based on the features of the sector considered but also on the economic situation of each Member State. For instance, spreading lower VAT rates to sectors hiring a high number of low-skill workers needs not flexible labour markets for

low-skill persons and spreading lower VAT rates to food sectors needs a high level and stable gaps in the consumption pattern of high income and low-income customers (Copenhagen 2007).

In those sectors to which the topics before treated do not hold but regardless this, lower VAT rates are utilized, it is difficult find believable economic topics, both based on efficiency or equity, for continuing to use lower VAT rates. In preference, there is an economic reason for imposing more uniform VAT rates with the aim to relieve the distortions created by the imposition of lower VAT rates. A specific worry is the possible conflict among EU Community interests and each Member State interests. For instance, there should the case to which the imposition of lower VAT rates may be beneficial for the economic situation of a Member State, but this can conflict with the operational of the common market (Copenhagen Economics 2007a).

However, there are no doubts on the fact that in most of cases lower VAT rates are not the only strategy able to reach the desired Member State goals and in most of cases it is not the best strategy instrument to use (Copenhagen Economics 2007a).

### ***3.5 What are the main costs of adopting lower VAT rates?***

The advantages of imposing lower VAT rates are thus controversial. In addition, the costs of subsidiary goods and services in this way are on the opposite likely to be important.

The first important cost is the revenue loss, which is approximated to be relevant. The VAT tax expenditures, as estimated by the OECD for 2007 based on Member States' tax expenditures reports and responses to a form focused at OECD delegates, was very relevant. In Italy, Spain and UK, the revenue sacrificed by those expenditures was of estimated to be more than 1/3 of the whole VAT revenues (De La Feria 2014).

To consider that estimation is not due only from the application of reduced VAT rates but also from the imposition of exemptions. "It is also true that the amount of revenue forgone may not be exactly equal to the revenue that would be actually obtained if the tax expenditures were eliminated and the standard rate of VAT was to be applied; it is likely

that consumption will somewhat contract, depending on the price elasticities of the products in question” (De La Feria 2014).

On the other hand, the estimation of the amount of VAT tax expenditures in the EU countries does give an approximation of the revenue costs of imposing lower rates.

Other than the rough revenue losses, the application of lower VAT rates expose the system to other relevant costs. Considering the legal view, the imposition of lower VAT rates creates interpretative troubles, and represent an inducement to tax planning. For these motives, lower rates are inclined to result in important litigation, which is followed by compliance and administrative costs.

Lower VAT rates reduce the tax base, and relevantly could subsidies not efficient production, considering that providers of products subject to lower VAT rates do not compete with providers of products subject to standard VAT rates.

The outcome of the cost-benefit estimation as imposed to lower VAT rate is above all negative: Firstly, there is no certainty if they satisfy each of the social and distributional goals and the carry relevant costs over the big loss of ideal revenue.

Moreover, from the quantifications carried out by IMF and the OECD it is shown a relevant decrease in efficiency of the tax displaying that the EU Member States’ “VAT apparatus tend to rank below the OECD VAT Revenue Ratio, average, which stands at 55 points out of 100 possible” (De La Feria 2014).

### ***3.6 Is there an optimal (statutory) rate?***

Answer to this question it is not easy since the huge quantity of elements that have to be considered in finding the best equilibrium that maximize the tax revenue (Rebellato 2015).

To assess this topic, the Laffer curve can help to describe the connection among tax rates and the resulting level of authorities’ revenue collection (Rebellato 2015). This theory is traditionally represented as a graph that begins at 0% tax with no revenue, it increases to a top rate of revenue at a middle rate of taxation, and then decrease to zero revenue at a



100% tax rate. What the theory wants to represent is that increasing the tax rates over a certain point is not productive anymore and reduce the revenue collection.

Empirical evidence advices that raising the tax rate would result in a decrement in average propensity for consumption, and in a raising in non-compliance and fraud behaviours (Rebellato 2015).

The equilibrium is every time changing, therefore, before the economic crisis in 2008 was suggested that the VAT tax rate maximizing the revenue collection were among 18% and 19.3% in EU area (De La Feria 2014). After the crisis, it has been suggested that the VAT rates maximizing the revenue collection in EU countries is about 22.5% (De La Feria 2014).

Moreover, it is advised that the best VAT rates to impose vary in connection to the business cycle, should be higher in low growth period, this should be justified with variation consumption, as well as with VAT collection efficacy and efficiency. Additionally, recent demonstrations show that, if there is a VAT Laffer Curve, the optimizing revenue rate has not yet been reached in EU Member States, with EU countries still having “increases in VAT revenue intakes, despite the increase in rates to unprecedented levels” (De La Feria 2014).

Another question, is understanding if the increase of VAT rates is the best way to increase VAT revenues or if the extension of the VAT base could reach better results

From the advices of empirical studies, it can be understanding that the best effective and direct way to enhance VAT revenue collection is “base-broadening”. Increments in statutory VAT rates could extend the complications and distortions imputable to the reduced rates, enlarging the VAT gap between them. The optimal VAT is believed, not only “be broad-based, with a single rate tax, but equally that rate should also be low”. Unfortunately, such VAT rate frameworks would be rather difficult – if not impossible – to imposing in European countries. At this point the question that can be raised is, what would be an “improved, achievable, VAT rate structure in Europe”. (De la Feria 2014).

Another important reason beyond the incapacity of Member States to reach an agreement on base-broadening and more generally a better harmonization of VAT rates structures could be presence of “status quo bias”.

Expanding the VAT base signify basically shifting from an already workable tax system, in the direction of a new one, essentially meaning that the status quo bias should be eradicated. The bias consists in the more willingness of Member States to stay in the existing tax regime rather than moving in a new one. Moreover, the reform path and the imperfect information could create uncertainty. Specifically speaking of the VAT, the main reason of the unpopularity of broadening-base actions is the incomplete information on the possible revenue and redistribution effect of these base-broadening actions.

In the case of VAT, the status quo is represented by the inefficacy of the “pure economic argument”, concentrating on efficiency gains, that is not enough to gather the political accord to adopt VAT expanding actions. Eradicate the status quo bias could require EU countries to keep into account others elements “regarding the form and timing of the reform” (De La Feria 2014).

Regarding the form, to break the power of the status quo bias, it has been advised to try to attain incremental reforms, by dividing the whole reform into small different and fast reform explicating advantages that many taxpayers will have. Additionally, many other studies, suggest that reach an agreement on the extension of the VAT base could be easier if bundled; indeed, when each elements of the reform are analysed singularly, “the status quo may be seen as genuinely redistributive” and can tie voters to the existing tax system (De La Feria 2014). Defining the right timing to introduce VAT broadening measures is complicates if not impossible.

## Conclusions

The overall aim of this thesis was to give to the readers a concise overview of the past and of the contemporary situation of the EU VAT system in the context of the various and every time changing economic and social context of the European Union.

More in detail, the goals were: Provide an overview of the importance in terms of revenue collection of the VAT tax systems in the EU context displaying the main problems related to its imposition; provide a general understanding of the main steps of the harmonization process of the EU through the VAT system and provide a deeper understanding of the current VAT rates situation in the EU, analysing the pattern of the imposition of the reduced, zero-rating and exemption of VAT rates with an analysis of the pros and cons of the adoption of a uniform VAT rate instead of lower VAT rates.

This work made a comparison among the two most important taxations in terms of geographical extension and of revenues collection in the European Union system. It resulted that both taxation methods are handled by EU tax authorities with the aim to encourage or discourage certain behaviours depending from the economic situation. Starting from the PIT this thesis has outlined the main principles on the basis of its imposition explaining the “ability to pay principle” and how it can be assessed as for instance from the income, wealth, and expenditure of an individual. The thesis highlighted that the ability to pay principle, is the principle that receives most of consensus between practitioners and tax lawyers since that main purpose of a personal income tax is to tax individuals in accordance with their taxpaying ability. The equal sacrifice theory is another reasoning that economists are studying with the aim to give reason to taxation according to the capacity to pay. What resulted was, that basically, a tax system should impose the same sacrifice on the taxpayers whose individual utility is reduced by the tax imposition. Another relevant criterion analysed is the “Benefit Theory” that according to it taxpayers should be taxed “in line with their demand for public services”

Focusing on the VAT purpose, the thesis concluded that the main purpose of a broad-based tax that affects not only the final consumption of private individuals, but also various subjects that operate non-business activities.

The thesis analysed the origin and the destination principle focusing on the main consequences of the adoption of the first or of the second one in the EU economy highlighting that the destination principle is the principle adopted by EU and OECD Member States to define the jurisdiction to which the taxation should occur. Imports are usually taxed and export are exempted.

Successively there was a focus on the reasons of the success and consequently the adoption by more 160 countries on all the world of the VAT tax. From the analysis resulted that the main reason was that the majority slice of countries in the world have introduced the VAT taxation because their originally tax systems was unsatisfying financial aims, under both, economic or efficiency perspectives.

Data reported showed that the VAT tax The Value Added Tax (VAT) is one of the most important sources of revenue for all the European Member States and it has become the main consumption tax in terms of geographical extensions.

The EU's total revenue from the VAT own resource (including balances from previous years of EUR 181.9million) was EUR18087million (12.4% of total revenue) in 2015. The method explained to calculate the VAT performance and the data reported made easily understandable that the VAT performance must be improved considering that the VAT Revenue Ratio taken by this thesis as a proxy displayed a performance of about 55 points out 100.

The thesis reported that many fragmented policy responses have been actuated over the last decades with the aim to improve the ability to operate of the VAT system, adapting it to the ongoing process of the business environment, but many relevant issues are still left over. Here was done a deeply analysis of the main reason of the middle performance of the VAT explaining the main reasons of the so-called VAT gap problem defined as the difference among the total amount of tax theoretically collectable based on applicable tax law and the total amounts of tax collected.

Data available nowadays, 2017, displayed that in 2014 the VAT gap amounted at €159.5 bn in the EU-27 zone (Cyprus excluded). The VTTL amounted to 1.136.3 billion euro and the revenue was 976.9 billion euro. Expressed as a percent of VTTL, the gap reached 14.06%.

The thesis identified the main causes of the VAT gap in: 1) the use of rates, exemptions, zero rating, registration and return filing thresholds, refunding VAT specific rules and the existence of parallel small taxpayer's regimes.

After that, with the aim to provide to the readers an understanding, if in the EU area a common harmonization is being reached in the application of the VAT rates, it has been presented the crucial points of the ongoing harmonization process starting since the beginning in 1957 and passing from the first versions of what is now the Sixth VAT Directive.

The thesis displayed all the economic theories in favour of a uniform VAT rate or in favour of the use of various lower VAT rate among EU.

What resulted is that the ideal situation should present a uniform VAT rate affecting all the acquisitions of goods and services to maximize the collection of revenue and decreasing the administrative and compliance cost related to the use of lower VAT rates. Reaching this situation is complex and the current system displays that the EU is still far from achieving such ideal context.

Obviously, it is not possible to select the optimal VAT rate to impose as well as this thesis didn't find out the solution to solve all the VAT problems. What is emerged is that the current EU VAT system is far from being uniform and totally harmonized. What should be reached is an agreement on the imposition of the lower VAT rates in EU because the current situation still allow a certain level of freedom that make the whole situation very complex.

The path to reach an agreement on lower VAT rates is complicate and long; and even if reachable, it will end in only smaller improvements to the actual EU VAT rate frameworks. In this situation, it is important to understand if, through national and not coordinated measures, it would be easier to reach agreements on relevant reforms. The adoption of an ideal VAT by EU countries, as for instance a single-rate apparatus with compensatory actions in favour of poorer is influenced by political restriction and relevant limitation on the availability of the budget.

Of relevant importance are the form and the timing to act to circumvent the status quo bias. The suggestion given here to adopt VAT broadening-base through national actions would not give the optimal VAT rate, but the optimal VAT EU countries considered the context.



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