

REVERSE CHARGE AND VAT GAP – A MECHANISM TO TACKLE INTRA-COMMUNITY VAT FRAUD

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Abstract

VAT fraud in the European Union (EU) is presuming significant rates, which the reverse charge mechanism is expected to tackle. This paper aims to be a descriptive analysis of the Member States' option to use the reverse charge mechanism based on Articles 199a and 199b of Council Directive 2006/112/EC on combatting fraud, as a tool to prevent and to reduce intracommunity carousel fraud. To do so, we presented a panel of supplies of goods and services from Article 199a paragraph 1 of the VAT Directive above mentioned, the Member State which uses the reverse charge mechanism, the year it started to be applied, and the change of VAT Revenue in the next 2 years after being applied. Then, having in mind that VAT fraud significantly explains VAT Gap (the difference between the VAT total theoretical liability and the amount of VAT actually collected), we made a comparison of countries applying reverse charge from the perspective of VAT efficiency, precisely estimating the following: efficiency of VAT collection, VAT Gap and the percentage of VAT Gap in VAT Potentially Collected. In the last part, there are the conclusions for this work. As an anti-fraud tool, the reverse charge mechanism has been implemented quite early in the certain Member States, with an increasing tendency starting from 2013. Although VAT fraud cannot be quantified exactly, prevention plays an important role in the effort and cooperation of the Member States to combat VAT fraud.

Keywords

Tax evasion; carousel fraud; reverse charge mechanism; VAT Revenue, VAT Gap.

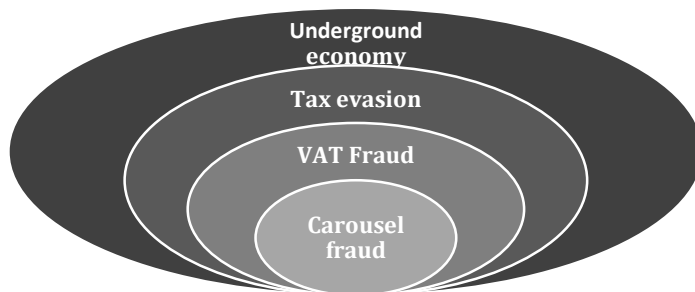
Introduction

Value added tax (further only VAT) is an indirect tax which is an important and growing source of tax revenue in European countries, hence the interest, of each state to collect this consumption tax. Firstly, VAT was introduced in 1954, in France and in the subsequent years was adopted by the European Member States, as well as other states. (Ionela, Porumboiu, Ghețu, & Brezeanu, 2019, p.54). On 1 January 1993, by establishing the European Single Market, the border controls for intra-Community trade were abolished and thus created the premises for the appearance of some VAT fraud mechanisms in the state of consumption. According to Sir Austen Chamberlaine, the

evasion methods change and adapt extremely fast, so the methods of investigation must develop with the minimum same speed (Şaguna, 1995, p.59). Moreover, the European Parliament (2019) points out that the current VAT (transitional) regime has been abused by fraudsters, taking advantage of the exemption to intracommunity supplies within the EU and exports, especially "missing trader" intra-community fraud (MTIC).

Origin of VAT fraud and estimations

The first part presents the "whole-part" relation between the concepts: underground economy - tax evasion - VAT fraud - Carousel fraud. The unofficial economy (shadow economy) is a regular element of the economic/social life and should be considered in such a context (Mróz, 2002, p. 127). In terms of definition, the underground economy is closely linked to the monetary field, mainly through the strong tendency for liquidity, manifested by those who act as payers or paid in this domain (Craiu, 2004, p.91). The underground economy is also linked to tax evasion in its various forms. In most cases, the mixture of activities in the underground economy involves evasion through direct and indirect taxes. Some authors consider that 'tax evasion' is to avoid by any means, in whole or in part from payment of taxes, duties, and other amounts owed to the state budget by individuals or legal entities (Câmpeanu, Oprea, & Niţoiu, 2003, p.174). More than that, we can consider fiscal fraud as the central vector of the underground economy (Pătroi Dragoş, p. 33). Carousel fraud is a particular form of VAT fraud. The "whole-part" relation between the above concepts is illustrated in Figure 1.



**Figure 1. The relation between
underground economy - tax evasion - VAT fraud - carousel fraud**
(own representation)

Although carousel fraud is a popular subject, no complex research has been performed about the size and the effect of this fraud scheme. In most of the studies, carousel fraud is included in the assessment of the shadow economy, VAT Gap, or VAT fraud. Most studies focus on VAT fraud schemes, as well as the solutions to tackle the problem.

A detailed description of missing trader fraud is presented in Ainsworth (2010). On a similar approach, Buskhsh and Weigand (2014) and Walpole (2014) after presenting the different VAT fraud schemes, suggested that the reverse charge mechanism is a quick reaction solution to tackle VAT fraud beyond certain economic sectors. Another important solution is the administrative cooperation of the Member States which is highlighted by Van der Hel-Van Dijk and Griffioen (2016).

There is hardly any literature about evaluating the reverse charge mechanism. Previous analyzes were split and did not draw a clear conclusion regarding the effectiveness of this mechanism in combating tax fraud. Keen and Smith (2007) proposed an estimation of VAT fraud using national accounts. Fedeli and Forte (2008) analyze the rule for sharing the profits obtained by fraudsters from tax evasion and the changes in the prices on the goods subject to the fraud. According to the Reckon study (2009), there are two methods used in calculating the VAT Gap, namely: “top-down” and „bottom-up”. Similarly, Borselli (2011) proposed two ways for the estimation of VAT fraud: the direct approach - „bottom-up” and the indirect approach - “top-down”.

Carousel fraud

The strongest form of the MTIC VAT fraud is known as carousel fraud. It involves contrived transactions within and beyond the EU, to create large unpaid VAT liabilities and fraudulent VAT refunds claims. Carousel fraud exploits the zero-rating of sales/exporting in another member state combined with the “deferred payment” mechanism for collecting VAT on acquisition goods. In Figure 2, we illustrated how this fraud works, in a medium complicated case.

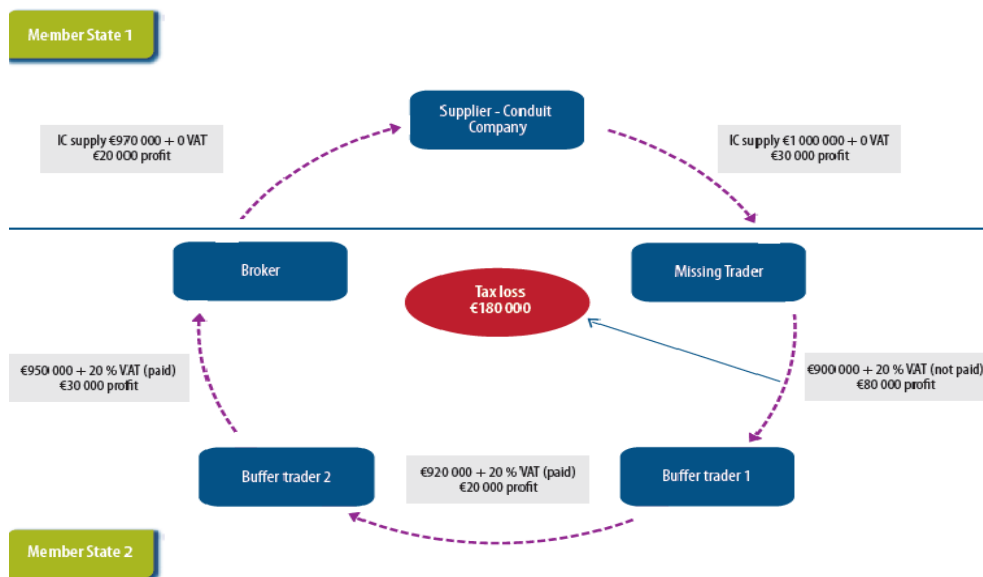


Figure 2. The basic carousel fraud
(European Court of Auditors)

Figure 2 illustrates a carousel fraud scheme, which assumes a 20% VAT rate and the following steps: The “conduit company” located (and registered for VAT purposes) in Member State 1, sells some good to “missing trader” located in Member State 2 (and registered there), without charging VAT because intra-Community supplies are VAT exempt. The “missing trader” sells the goods to the “buffer trader 1” and the invoice issued by the missing trader continues its way down the production chain, through firm “buffer trader 2” — which may be unaware of the fraud being perpetrated—until it arrives at broker firm, with a profit of 30 000 euro and pays 20% VAT of the profit, amounting 6 000 euro. The catch is explained by the fact that the “missing trader” does not pay to the tax authorities the VAT it has charged and invoiced—instead, it goes

missing without paying any VAT. In a pure carousel fraud, the broker ends the fraudulent chain by reselling the goods to the "conduit company", with a profit (perhaps via third countries). The broker does not charge VAT, as intra-Community supplies are VAT exempt, but it requires reimbursement of the VAT it paid to "buffer trader 2" (190 000 euro), and so, the whole process starts again, going round in a lucrative circle. Thus, 180 000 euro is the value of VAT not collected by the tax authorities of Member State 2. It was collected 10 000 from buffer traders 1 and 2 but refunded 190 000 euro to the broker. The total profit obtained by the carousel is also 180 000 euro which is divided between the different parties to the fraud.

Reverse charge mechanism

The reverse charge mechanism is a temporary tool to combat carousel fraud and applied only to transactions between two taxpayers. The essence of this system is to shift the obligation to pay VAT from supplier to customer in certain sectors vulnerable to carousel fraud.

The authors Berger, Kindl, and Wakounig (2010) suggested that it is a measure aimed to simplify the procedure for evaluation of VAT tax and to strongly support in the prevention of tax evasions and avoidance of the tax liabilities in certain fields. (Grásgruber, Otavová, & Semerád, 2013, p.2133). Thus, the reverse charge mechanism is regulated by the Article 199 of Council Directive 2006/112/EC on the common system of value-added tax (further only the VAT Directive) which stipulates that Member States have the option to apply a temporary (until 31 December 2018) reverse charge mechanism to specific goods and services counted by and under the conditions laid down by Article199 and Article199a of the VAT Directive. The Council Directive 2018/1695 extended the term of application until 30 June 2022.

For this paper, we have collected data from Eurostat Database and from Report of the Commission to the Council and the European Parliament on the effects of Articles 199a and 199b of Council Directive 2006/112/EC on combatting fraud (further only the Report of the European Commission 118 final, 2018). In the next section, we emphasized the option of the Member States to use the reverse charge mechanism based on Article 199a (1) of the VAT Directive. We included as well the United Kingdom because the period analyzed was part of the European Union.

Table 1. Sample of countries which apply the reverse charge mechanism for "the transfer of allowances to emit greenhouse gases"

Member State	Start year	VAT Revenue per year*		Trend	Member State	Start year	VAT Revenue per year*		Trend
Austria	2010	7.7	2010	↓	Hungary	2011	8.4	2011	↑
		7.5	2011				9.1	2012	
Belgium	2010	6.9	2010	↔	France	2011	6.8	2011	↔
		6.9	2011				6.8	2012	

Finland	2010	8.3	2010	↑	Netherlands	2011	6.4	2011	↔
		8.8	2011				6.4	2012	
Denmark	2010	9.5	2010	↑	Poland	2011	7.8	2011	↓
		9.6	2011				7.1	2012	
Germany	2010	7.0	2010	↔	Romania	2011	8.6	2011	↓
		7.0	2011				8.3	2012	
Ireland	2010	6.0	2010	↓	Slovakia	2011	6.7	2011	↓
		5.7	2011				6.0	2012	
Luxembourg	2010	6.5	2010	↑	Slovenia	2011	8.1	2011	↓
		6.7	2011				8.0	2012	
UK	2010	6.0	2010	↑	Sweden	2011	9.0	2011	↓
		6.8	2011				8.9	2012	
Czech Republic	2011	6.9	2011	↑	Portugal	2010**	8.1	2011	↑
		7.0	2012				8.3	2012	
Greece	2011	7.3	2011	↓	Croatia	2013	12.6	2013	↔
		7.2	2012				12.6	2014	
					Italy	2015	12.8	2015	↑
							12.9	2016	

Notes: * in % of GDP; ** CO2 emission rights

Source: own representation based on Eurostat and European Commission, 2018

The category is referred to the transfer of allowances to emit greenhouse gases as defined in Article 3 of Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community. This fraud occurred mainly between the end of 2008 and the beginning of 2009, the reason why most of the Member States (21) started to apply the reverse charge mechanism in 2010 or 2011. Only Croatia and Italy started to apply it in 2013, respectively 2015.

Regarding VAT revenues (in the percentage of GDP), from 21 Member States which applied the mechanism, it can be noticed that in 7 countries had an increasing trend, and 9 countries had a downward trend, while in countries like Belgium, Croatia, France, Netherlands and Germany, VAT revenue remained the same. We can conclude that the revenues increased by less than half of the countries, both emerging and developed.

Table 2. Sample of countries which apply the reverse charge mechanism for "supplies of mobile telephones" and "supplies of integrated circuit devices"

Member State	Start year	VAT Revenue per year*		Trend	Member State	Start year	VAT Revenue per year*		Trend
Germany	2011	7.0	2011	↔	Denmark	2014	9.4	2014	↔
		7.0	2012				9.4	2015	
Italy	2011	6.0	2011	↔	Poland	2015	7.0	2015	↑
		6.0	2012				7.2	2016	
Austria	2012	7.7	2012	↔	Czech Republic	2015	7.3	2015	↑
		7.7	2013				7.4	2016	
Netherlands	2013	6.4	2013	↔	Latvia	2016	8.1	2016	↓
		6.4	2014				8.0	2017	
Slovakia	2014	6.6	2014	↑	Romania	2016	6.4	2016	↓
		6.8	2015				6.2	2017	

Notes: * in % of GDP

Source: own representation based on Eurostat and European Commission, 2018

Table 3. Sample of countries which apply the reverse charge mechanism for "supplies of game consoles, tablet PC's and laptops"

Member State	Start year	VAT Revenue per year*		Trend	Member State	Start year	VAT Revenue per year*		Trend
Netherlands	2013	6.4	2013	↔	Czech Republic	2015	7.3	2015	↑
		6.4	2014				7.4	2016	
Austria	2014	7.6	2014	↔	Poland	2015	7.0	2015	↑
		7.6	2015				7.2	2016	
Denmark	2014	9.4	2014	↔	Italy	2016	6.1	2016	↑
		9.4	2015				6.3	2017	
Germany**	2014	6.9	2014	↔	Latvia	2016	8.1	2016	↓
		6.9	2015				8.0	2017	
Spain	2015	6.5	2015	↔	Romania	2016	6.4	2016	↓
		6.5	2016				6.2	2017	

Notes: * in % of GDP; ** without laptops

Source: own representation based on Eurostat and European Commission, 2018

The first remark we can make from Table 2 is that in less than half of the Member States (10), is currently applied reverse charge mechanism for supplies of mobile telephones and "supplies of integrated circuit devices such as microprocessors and central processing". Respecting VAT Revenue there were no considerable changes. VAT revenues remained constant in 5 countries, such as Germany, Austria, Italy and have increased with 0,2% of GDP in Slovakia and Poland. Also, they decreased in other emergent countries as Romania and Latvia.

Table 3 indicates that excepting Spain, all the Member States showed in Table 2 apply the mechanism, also for "supplies of game consoles, tablet PCs and laptops". Carousel fraud is well suited in the sector of mobile telephones because there are small but high-value units that can be easily stored and moved around.

According to the Report of the European Commission 118 final, 2018 on combatting fraud, some countries identified a shift of fraudulent activities in case of similar electronic goods which are very close to the specifications of the goods included in the provision, taking advantage of tax avoidance. The fraud shifted to similar products like cameras, play stations, monitors, printer cartridges or consumer electronic equipment, and consumer electrical appliances.

Table 4. Sample of countries which apply the reverse charge mechanism for "supplies of gas and electricity to a taxable dealer as defined in Article 38(2)" and for "supplies of gas and electricity certificates"

Member State	Start year	VAT Revenue per year*	
France – only gas and electricity	2005	7.2	2005
		7.1	2006
Romania - only for electricity, electricity certificates	2013	8.1	2013
		7.6	2014
Austria	2014	7.6	2014
		7.6	2015
Denmark	2015	9.4	2015
		9.5	2016
Italy	2015	6.1	2015
		6.1	2016

Member State	Start year	VAT Revenue per year*	
Germany – only gas and electricity	2013	7.0	2013
		6.9	2014
UK – only gas and electricity	2014	6.7	2014
		6.8	2015
Czech Republic	2016	7.4	2016
		7.7	2017
Ireland	2016	4.7	2016
		4.5	2017

Notes: * in % of GDP

Source: own representation based on Eurostat and European Commission, 2018

"A gas or an electricity certificate" is an electronic document which states the source and production of energy. A common example is the 'Guarantee of Origin' certificate,

which provides evidence that a quantity of energy has been generated from a renewable source. Reverse charge is widely applied throughout the European Union for gas and electricity to a taxable "dealer as defined in Article 38(2)". The rule does not apply to supplies of gas or electricity to a final consumer. For the „supplies of gas and electricity certificates" is applied starting from 2005 in France, followed by Romania and Germany (2013), Denmark and Italy (2015). More recently, countries like the Czech Republic and Ireland (2016) applied the mechanism.

The largest increase in VAT Revenue occurred in the Czech Republic, an increase of 0.3% of GDP in 2017 compared to 2016. The increase of VAT revenues in the Czech Republic, an emerging country, may be due, in part, to changes in VAT legislation that entered into force: extension of the reverse charge mechanism to additional services in the real estate and energy sector (2015) and to supplies of mobile telephones and several other electronic products (2016).

Table 5. Sample of countries which apply the reverse charge mechanism for "supplies of raw and semi-finished metals, including precious metals"

Member State	Start year	VAT Revenue per year*		Member State	Start year	VAT Revenue per year*	
Poland	2013	7.0	2013	Slovakia	2014	6.6	2014
		7.1	2014			6.8	2015
Croatia	2013	12.6	2013	Hungary	2015	9.6	2015
		12.6	2014			9.3	2016
Austria	2014	7.6	2014	Spain	2015	6.5	2015
		7.6	2015			6.5	2016
Estonia	2014	8.5	2014	Czech Republic	2015	7.3	2015
		9.1	2015			7.4	2016
Germany	2014	6.9	2014	Latvia	2017	8.0	2017
		6.9	2015			8.4	2018

Notes: * in % din GDP

Source: own representation based on Eurostat and European Commission, 2018

This class is referring to raw and semi-finished metals, including "precious metals, where they are not otherwise covered by point (d) of Article 199(1), the special arrangements for second-hand goods, works of art, collector's items and antiques according to Articles 311 to 343 or the special scheme for investment gold according to Articles 344 to 356" (VAT Directive). Same as the sector of mobile telephones, the sector of raw and semi-finished metals, including precious metals is suited well to carousel fraud, being small units, but with a high value which can be easily stored and moved around.

Since 2013 is applied in Poland and Croatia, followed by other European countries, Latvia applying since 2017. Overall, 10 Member States use reverse charge in this sector.

No change in VAT Revenue in the next year after applying reverse charge for countries such as Croatia, Austria, Germany, Spain. In the other countries, excepting Hungary, it is notable that VAT Revenues increased, in Estonia being registered the biggest percentage (0.6%) from 2015 to 2014. The increase of VAT revenues in Estonia, an emerging country, may be due, in part, to changes in VAT legislation that entered into force: introduction of a system subjecting precious metals, if supplied to persons without a waste permit, to the reverse charge mechanism, in force from 01.07.2014; introduction in January 2015 of the Mini One-Stop Shop for telecommunication services (Taxation Trends, 2016).

Performance of VAT collection

In this paper we used a quantitative method to estimate the performance of VAT collection, for the period 2009-2018, after the economic crisis, based on the VAT collection efficiency coefficient, calculated by Jorge Martinez-Vazquez and Richard M. Bird in the study "Value Added Tax: Onward and Upward?" (2010), using the formula:

$$\text{Efficiency VAT collection} = \frac{\text{VAT Revenue}}{\text{Standard rate} \times \text{Gross Domestic Product}}$$

The research begins with the analysis of emerging countries, like the Czech Republic, Bulgaria, Romania, followed by Italy, which, from a quality of life perspective, ranks in the middle of the EU picture. As well, Italy applies reverse charge in 7 sectors laid down by Article 199a of the VAT Directive. To point out the differences between emerging and the developed Member States, we included Austria and Germany. In the study previously mentioned, the authors opined that the level of development of a country stands for the significant differences between the results. Applying this theory to the analyzed countries, the results are presented in Table 6.

Table 6. Efficiency VAT collection

State / Period	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bulgaria	0.42	0.43	0.40	0.45	0.47	0.44	0.44	0.45	0.45	0.45
Czech Republic	0.35	0.33	0.36	0.35	0.35	0.35	0.35	0.35	0.37	0.37
Romania	0.33	0.32	0.33	0.34	0.34	0.32	0.34	0.32	0.33	0.33
Italy	0.27	0.30	0.30	0.28	0.28	0.27	0.28	0.27	0.28	0.28
Austria	0.38	0.38	0.36	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Germany	0.36	0.35	0.34	0.37	0.37	0.37	0.37	0.37	0.37	0.37

Source: own calculation based on Eurostat data accessed on 25.03.2020

Basically, a country with a single standard VAT rate, without exemptions for taxable transactions and without tax evasion, the efficiency of the VAT should register the value 1, which is 100%. As the reality is different from what should happen, the highest value

of VAT collection efficiency was 0.47 and recorded in Bulgaria in 2013, meaning that was collected only 47% of the revenue. In the following year, values fell and the main reasons could be either tax evasion, especially VAT fraud, or changes in legislation.

VAT GAP - Methods for estimation

The VAT Gap is determined as the difference between the VAT total theoretical liability and the amount of VAT actually collected. (Study and Reports on the VAT Gap in the EU-28 Member States, 2016). VAT fraud significantly explains this difference. However, it should also be considered for this gap that each country may adopt, besides the standard rate, other reduced rates, zero rates or exemptions and also, the temporary option for a reverse charge in certain economic sectors.

According to the Reckon study (2009), there are two methods used in calculating the VAT Gap, namely: "top-down" and „bottom-up". In this paper, we analyzed the period 2009-2018 starting from the "top-down" method, with the following observations:

- due to insufficient data that is seldom publicly available in most countries, we didn't consider the specific adjustments for each state included in the sample;
- for non-taxable transactions were estimated coefficients between 50% and 70%, given the estimates made in previous studies published in the international literature (Reckon, 2009; Barbone, 2013);
- to estimate potentially VAT, we proposed the indicator: Gross Value Added.

Methodological considerations for VAT Gap estimation

To estimate the VAT Gap the methodologies from „Study and Reports on the VAT Gap in the EU-28 Member States" (2016) were developed. They are based on appraising the total VAT revenue that it should be paid to the state budget. In this study, for VAT Gap, we referred to the following formula:

$$VAT\ Gap = VAT\ potentially\ collected - VAT\ collected$$

$$\text{where, } VAT\ potentially\ collected = (Gross\ Value\ Added - Export + Import) \times propex \times VAT\ standard\ rate$$

An important concern is the assumption of propex factor. In the above studies, an exemption coefficient called Propex was introduced, which was given values between 0.6 and 0.7 for the financial sector industry (Reckon, 2009). We fixed the propex value, accordingly to the number of the economic sectors the reverse charge mechanism is applied. So, for countries which use it in more than 6 sectors, we fixed the propex at 0.5 (Austria, Germany, Italy, Czech Republic) and for countries with lower usage, we fixed it at 0.6 in Romania and 0.7 in Bulgaria. After collecting the necessary data from Eurostat, it was calculated VAT Gap, respectively the percentage of VAT Gap in VAT potentially collected (VPC). However, this approach should be seen as a general estimation of VAT fraud in which carousel fraud is included. The results are highlighted in Table 7 and Figure 3 and covers the period 2009 - 2018.

Table 7. VAT Gap*

State/ Period	2009	2010	2011	2012	2013
Bulgaria	1823	1482	1667	1513	1176
Czech Republic	2442	3267	2930	2355	2084
Romania	6043	7784	6394	6823	6717
Italy	57263	50895	52140	55440	54776
Austria	2596	2644	3380	2958	3056
Germany	29327	36861	38680	24307	27764
State/ Period	2014	2015	2016	2017	2018
Bulgaria	1462	1400	1107	1344	1509
Czech Republic	2217	2640	2126	1829	2284
Romania	7776	7498	7564	8183	8895
Italy	59151	57853	59283	58312	60282
Austria	3248	3165	3193	3506	3707
Germany	28875	25579	27369	29147	31464

Note: * million euro

Source: own calculation based on Eurostat data accessed on 25.03.2020

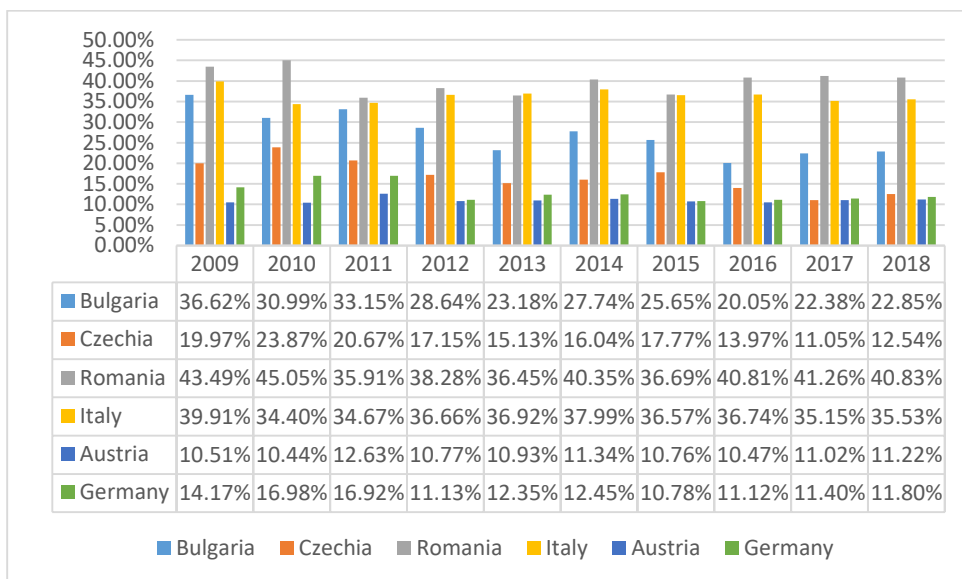


Figure 3. % VAT Gap in VAT Potentially Collected
 (own calculation based on Eurostat data accessed on 25.03.2020)

Table 7 shows that, on average, high levels of the VAT Gap are found mostly in the emerging countries, Romania ranking first, in 2010. Meanwhile, in developed countries, the VAT Gap had a downward trend after 2013. From the perspective of % VAT in VPC, it is notable the year 2014: in emerging countries that focus more on indirect taxes than direct taxes (Văcărel, I., 2007), VAT Gap registered significant increases in all countries. The lowest percentage of VAT Gap, 10.47%, was registered in 2016 in Austria - a developed country, which focuses more on direct taxes. In terms of value, in Italy was recorded the largest VAT Gap, amounting to 60.282 million euro, in 2018. Also, this gap may be due, in part, to the base decrease following changes in VAT legislation that entered into force at the beginning of 2018: transactions within the group as single VAT taxpayers are excluded from the scope of VAT. The VAT Gap is not only a result of tax evasion, as well, due to tax avoidance, especially in the VAT field by exploiting the zero-rating of sales/exporting in another member state.

Noteworthy is that in Italy, which ranks in the middle of the EU picture on the quality of life, VAT Gap has quite high values. In the analyzed period, the percentage of VAT Gap oscillated starting with 2010 in both directions from year to year reaching the maximum value of 37.99%, in 2014.

Since 2011, when the reverse charge started to be used, the authors of the study "A retrospective evaluation of elements of the EU VAT system" (2011) stressed the distinction between VAT Gap and VAT fraud and that the top-down approach used for obtaining the VAT Gap, does not help much in detecting what sectors and types of business are more suitable/prone to VAT fraud. The mechanism indicates the sectors suitable for carousel fraud and influences the spreading rhythm of carousel fraud, with contributions on VAT Gap reduction.

More than that, since 2018 member states can apply the generalized reverse charge mechanism (GRCM), under some strict conditions, one of them is that at least 25% of the VAT gap has to be due to carousel fraud. According to Hartwig Löger, minister for finance of Austria "This directive will provide a solution for member states that face endemic carousel fraud". The Czech Republic has shown interest for many years in using this simplified procedure, considering is already applying reverse charge in all sectors the EU legislation allows. Nevertheless, we have to emphasize that is not suitable for sectors vulnerable to non-compliance at the final or retail stage.

Conclusions

Reverse charge mechanism, as an anti-fraud instrument aims to reduce the VAT Gap and has been implemented quite early in certain states. Depending on the Member State, some have made extensive use of the option and apply the reverse charge mechanism to a large number of the goods and services enumerated by Article 199a of the VAT Directive, while at the other pole, other countries do not make use of the option at all. Our analysis indicates that in more than half of the Member States (16), the reverse charge mechanism is currently applied wider in the Czech Republic, Austria, Denmark, Italy, and Hungary. By contrast, in countries like Greece, Estonia, Croatia, or Belgium is applied for one or two sectors listed by Article 199a of the VAT Directive. Moreover, some countries prefer a "generalized reverse charge mechanism", while others are opposed.

Most countries consider that reverse charge is a useful temporary tool in combating particular cases of fraud. The measure increases the chances for Member States to address fraud mechanisms and reduce the possibility of irreparable VAT losses.

Some Member States consider that the measure is not useful, arguing that the conditions are extremely strict and that their implementation is not possible. Another reason may be that involves additional costs. According to the recent study "Assessment of the application and impact of the optional 'Reverse Charge Mechanism' within the EU VAT system on the evaluation of the optional reverse charge mechanism" (2014) the mechanism implies a 43% increase in the compliance costs supported by businesses.

Even though over the last years, several Member States have used reverse charge mechanism in more sectors, VAT losses in the EU had not significantly decreased. More than that, in one Member State which applies successfully the reverse charge to tackle VAT fraud in a specific sector, it can lead to the displacement of fraud to other countries or into new markets. Thus, only the symptoms are cured and not the root causes of VAT fraud. (Directorate General for Taxation and Customs Union, 2016).

A weak point of this mechanism is that we cannot quantify exactly how much is influencing VAT Gap or the change in VAT Revenue, because there is no available data. We have to take into consideration that European Commission has no estimate of intra-Community VAT fraud at the EU level, as only two Member States, the United Kingdom (is not part of the European Union since 31 January 2020) and Belgium publish estimates about VAT losses due to intra-Community fraud (European Court of Auditors, 2015).

Even if is a temporary measure and we don't have an exact estimation of the results for each Member State, we consider that the reverse charge mechanism is an important part of the cooperation and the common effort of the Member States to tackle VAT Fraud. The interest in controlling the phenomenon of the carousel fraud differs from country to country depending on the major or minor changes in the prices that occur just because of the fraud (Fedeli & Forte, 2011).

References

- Ainsworth, R. T. (2010). VAT fraud: MTIC & MTEC-THE tradeable service problem. Working Paper No. 10-39, Boston University School of Law, Boston. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1708080#.
- Alain Charlet, A., & Owens, J. (2010). *An International Perspective on VAT*. Reprinted from Tax Notes Int'l, September 20, 2010, p. 943. Retrieved from <https://www.oecd.org/ctp/consumption/46073502.pdf>.
- Barbone, L., & Belkindas, M.V. (2013). Study to quantify and analyze the VAT Gap in the EU-27 Member States. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/docs/body/vat-gap.pdf.
- Borselli, F. (2011). Organized VAT Fraud: Features, Magnitude, Policy Perspectives. Banca D'Italia, Occasional Paper 106. Retrieved from <https://www.bancaditalia.it/pubblicazioni/qef/2011-0106/index.html?com.dotmarketing.htmlpage.language=1>.

- Brezeanu, P. (2010). *Fiscalitate, concepte, teorii, politici si abordari practice [Taxation, concepts, theories, policies and practical approaches]*. Bucharest, RO: Wolters Kluwer Publishing House.
- Bukhsh, F.A. & H. Weigand, (2014), VAT Fraud: Possible Technical and Ontological Solutions. Tilburg, Tilburg University Retrieved from https://vmbo2015.blogs.dsv.su.se/files/2015/02/VMBO2015_submission_14.pdf.
- Câmpeanu, E., Oprea, A., & Nițoiu, S.-E. (2003). Studiu comparativ al evaziunii fiscale într-o țară dezvoltată vs. o țară emergentă (Belgia vs. România) [*Comparative study of tax evasion in a developed country vs. an emerging country (Belgium vs. Romania)*]. Colecția de working papers ABC-ul Lumii Financiare, Vol. WP 1/2013, 174-203. Retrieved from http://www.fin.ase.ro/ABC/fisiere/ABC1_2013/Lucrari/2.4.pdf.
- Directorate General for Taxation and Customs Union, (2016). Study and Reports on the VAT Gap in the EU-28 Member States: 2016 FinalReportTAXUD/2015/CC/131. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/2016-09_vat-gap-report_final.pdf.
- European Commission (2018). Report from the Commission to the Council and the European Parliament on the effects of Articles 199a and 199b of Council Directive 2006/112/EC on combatting fraud. Brussels. Retrieved from <https://eurlex.europa.eu/legalcontent/EN/ALL/?uri=COM%3A2018%3A0118%3AFIN>.
- European Commission (2019). Press release VAT Fraud: New tool to help EU countries crackdown on criminals and recoup billions. Retrieved March 20, 2020, from https://ec.europa.eu/commission/presscorner/detail/en/IP_19_2468.
- European Commission, TAXUD (2010). *A retrospective evaluation of elements of the EU VAT system, Final report TAXUD/2010/DE/328*. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/docs/body/report_evaluation_vat.pdf.
- European Council (2013). Council Directive 2013/43/EU amending Directive 2006/112/EC on the common system of value-added tax, as regards an optional and temporary application of the reverse charge mechanism in relation to supplies of certain goods and services sus. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013L0043>.
- European Council (2018). Council Directive 2018/1695/EU of 6 November 2018 amending Directive 2006/112/EC on the common system of value added tax as regards the period of application of the optional reverse charge mechanism in relation to supplies of certain goods and services. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018L1695>.
- European Parliament (2019). *Report on financial crimes, tax evasion and tax avoidance(2018/2121(INI))*. Retrieved from https://www.europarl.europa.eu/doceo/document/A-8-2019-0170_EN.html.
- Fedeli S., & Forte F. (2011). International VAT Fraud: The Carousel Game, Sapienza - University of Rome-Italy, *Journal of Modern Accounting and Auditing* 7(3), 211-226. Retrieved from https://www.researchgate.net/publication/282978852_International_VAT_Fraud_The_Carousel_Game.

- Frunza, M.-C., Guegan, D., & Lassoudiere, A. (2011). Missing trader fraud on the emissions market. *Journal of Financial Crime* 18(2).
<https://doi.org/10.1108/13590791111127750>
- Grásgruber, M., Otavová, M. & Semerád P. (2013). Impacts of the application of the reverse charge mechanism of the value added tax. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis* LXI (7), 2133-2135.
<https://doi.org/10.11118/actaun201361072133>
- Ionela, B., Porumboiu, A., Ghețu, R., & Brezeanu, P. (2019). Theoretical Considerations on VAT Structure Rates in the European Union. *Finance–Challenges of the Future* 21, 54-61.
- Martinez-Vazquez, J., & Bird, R.M. (2010), Value Added Tax: Onward and Upward?. Retrieved from
https://www.researchgate.net/publication/254391737_Value_Added_Tax_Onward_and_Upward/link/00b49536cea2b6fb0c000000/download.
- Mróz, B. (2012). The shadow economy and systemic transformation: the case of Poland. *ResearchGate*. <https://doi.org/10.4337/9780857937032.00015>
- Nicolae, C. (2004). *Economia subterană. Între "Da" și "Nu" [The underground economy. Between "Yes" and "No"]*. Bucharest, RO: Economic Publishing House.
- Pashev, K. V. (2007). Countering Cross-Border VAT Fraud: The Bulgarian Experience. *Journal of Financial Crime* 14(4) 490-501.
<https://doi.org/10.1108/13590790710828190>
- Pătroi, D. (2001). Evaziunea fiscală între latura permisivă, aspectul contravențional și caracterul infracțional [*Tax evasion between the permissive side, the contraventional and the criminal aspect*]. Bucharest, RO: Economic Publishing House.
- Pestieau, P. (1989). *L'Economie Souterraine*. Paris, FR: Hachette.
- Porumboiu, A.-E., Ionela, B., Ghețu, R., & Brezeanu, P. (2019). Fiscal Risk of Vat Uncollected In European Union. *Annals of Faculty of Economics, University of Oradea, Faculty of Economics* 1(2), 200-207.
- Reckon LLP. (2009). *Study to quantify and analyse the VAT gap in the EU-25 member states*. Retrieved from
https://ec.europa.eu/taxation_customs/sites/taxation/files/docs/body/reckon_report_sep2009.pdf.
- Șaguna D.-D., & Tutangiu, M.E. (1995). *Evaziune fiscală [Fiscal evasion]*. Bucharest, RO: Oscar Print Publishing.
- Șaguna D.-D. (2001). *Tratat de drept financiar și fiscal [Financial and tax law treaty]*. Bucharest, RO: All Beck Publishing.
- Van der Hel-van Dijk, L. & M. Griffioen (2016). Tackling VAT-Fraud in Europe: A Complicated International Puzzle. *Intertax* 44(4), 290-297 Retrieved from
<https://kluwerlawonline.com/journalarticle/Intertax/44.4/TAXI2016021>.
- Văcărel, I. (2007). *Finanțe publice [Public finances]* (6th ed.). Bucharest, RO: Didactica & Pedagogica Publishing.
- Walpole M. (2014). Tackling VAT Fraud. *International VAT Monitor* 25 (5), 268-263.