THE IMPACT OF VALUE ADDED TAX ON CASH FLOWS OF ROAD TRAFFIC COMPANIES IN THE SLOVAK REPUBLIC

Angelika Kútna,[1] Norbert Gyurián[2]

Abstract: Within the Member States of the European Union, value added tax (VAT) is the most harmonized form of tax from all types of direct and indirect taxes. It does not affect the costs or the revenues of the company, but it affects taxpayers on the other hand. The impact on the company's cash flows is most significantly affected. The basic principle of VAT taxation consists of the following idea. The Member State of final consumption of the goods or services is the state to whom the VAT finally belongs to. The free movement of goods and services between the Member States resulted in many new traffic companies being created. The measure of VAT influence on Cash Flows depends mainly on two impact factors. The first is the length of excessive deduction payment period to taxpayer bank account. The second impact factor is the amount of excessive deduction expressed through money. The objective of this study is an evaluation and quantification of the impact of value added tax on the road traffic companies' cash flows. The financial burden of traffic companies had an upward trend only during the first and second year of the analyzed period. Since 2006, the financial burden had a downward trend. This decrease was more significant until 2009 (the end of the financial crisis in European countries). After this year, the declining rate had moderated. This development results not only from declining interest rates of the European Central Bank but also from economic growth and development in European countries.

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Key words: value added tax, cash flow, excess deduction, Traffic Company, expense interest

Introduction

The objective of this study is an evaluation and quantification of the impact of value added tax on road traffic companies' cash flows. This research also focuses on the comparison of this impact on three different sets of traffic companies. The criteria for creation these three sets were three basic value added tax (VAT) schemes. The first scheme is supply of goods and services at Slovak territory. The second one is the acquisition of goods in the territory of the country from another member state. The third schema is the importation of goods.

The time period of 2005-2015 is analyzed in this study. The impact of the value added tax is quantified by financial expense interests. These expenses depend on the period of time limits for the excess deduction and also on the excess deduction. The authors have chosen three basic indicators: indicator: "value of money I," indicator: "value of money II" and financial burden (base index). The analysis presented in this study confirms the time period between the day of VAT tax return submission to the Financial Directorate by electronic means (this is the day of taxpayer's entitlement to excessive deduction) and between the validity day (the day when the taxpayer receives payment to his bank account from the Financial directorate) as the cause of VAT financial burden. The study is organized as follows. First, the background of the VAT system in the Slovak Republic is presented, this is followed by the literature review, and finally by the theoretical background of the study and the hypothesis development section. Next, the methods and findings are presented. Last, discussion and implications of the study are presented.

Literature review

There have been two basic approaches to contributing to the debate on the importance of cash flows and the factors which influence them. One approach is to consider the relative usefulness of earnings, in particular, cash flows in predicting future cash flows. For example, a recent US study with this approach is by Barth, Cram, and Nelson (2001), who document the superiority of operating cash flow over earnings in predicting future operating cash flows. However, as pointed out by Subramanyam and Venkatachalam (2007) and Akbar, Shah, and Stark (2011), the prediction horizon in such tests tends to be relatively short. Furthermore, there are many other factors which influence cash flows (present and future) of enterprises. In this research we analyze and influence one of these factors, the influence of taxes. Different studies have examined firms' cash flows risks and their effects on capital costs, values, and appropriate levels of the debt financing (Céspedes, Gonzáles and Molina (2010), D'Mello and Miranda (2010) and Lang, Ofek and Stulz,(1996), Ferenczi- Vaňová, et al.

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(2015). However, these studies take place under the linearity assumption of the relationship between FCF risks and its influential factors. Bojňanský, Krajčírová, and Ferenczi-Vaňová (2013) and Baštincová (2009) have argued that value added tax as a classic representative of indirect tax burdens and impacts the final result on the end-user. However, its impact is often hidden to the general public in the methodology of its functioning as an indirect tax – i.e., the taxpayer is not obliged to pay this tax personally at the appropriate revenue authority. This will be done by the respective VAT registered company instead, also claim Svátková, et al. (2007) and Hájek, et al. (2015). Hence this tax is becoming an important factor on cash flows of a company, so the traffic companies are not exempt. According to Babone, Bird and Vazquez-Caro (2012), modern taxation systems impose a heavy burden on taxpayers, particularly on small business taxpayers. The level of economic integration in the European Union is relevant and in an initial stage requires measures in order to eliminate tax limits and to remove obstacles to the free movement of production factors in the economic era (Staciokas and Valanciene, 2002). As mentioned by Becker and Fuest (2010) European Union policy is closely connected with tax competition. This free movement of services and goods (main production factor) is closely connected with the development of traffic through the whole European Union.

The basic incentive

The EU's common system of VAT in the European Union member states is based on Council Directive 2006/112/EC. This Directive is used to bring different national laws into line with each other. Implementation of the EU's common system of VAT into the Slovak tax law was one of the conditions of the European Commission during the accession negotiations. The date of the Slovak Republic's accession to the European Union was also the first day of the validity of the new Slovak VAT Law - Act No. 222/2004 Coll. on Value Added Tax, as amended. Taxable transactions include supplies of goods or services within a single EU country, intra-EU acquisitions of goods (goods supplied and dispatched or transported by a business entity in one EU country to a business entity in another one) and imports of goods into the EU from outside. As for the supply of services — the place of taxation is the place where the services are supplied. This depends not only on the nature of the service supplied but also on the status of the customer receiving the service. To ensure that the service is taxed at the place where it is actually consumed, there are some exceptions to these general rules, such as transport services. Since 2004, a large number of traffic road companies have been established in the Slovak Republic. Hence the main aim of this study is the evaluation and quantification of the impact of VAT on the cash flows of road traffic companies.

Model specification

We have used the statistical data after elaboration from the proposed sources:

- The intranet portal of the Slovak Financial Directorate SAP-ISFS SR,
- Data from VAT tax returns which are submitted by taxpayers,
- Data from VAT control statements which are submitted by taxpayers,
- The Statistical Office of the Slovak Republic.

The basic set of taxpayers who are analyzed in this study was selected from databases of the Financial Directorate of the Slovak Republic according to the strict rules:

- SET 1 Traffic companies I - taxpayers are registered at the Slovak Financial Directorate and the Slovak Companies Register. The supplies of transport services connected with imports or exports of goods into the EU from non-EU countries are more than 60% of total turnover,
- SET 2 Traffic companies II - taxpayers are registered at the Slovak Financial Directorate and the Slovak Companies Register. The supplies of transport services connected with Intra-EU acquisition of goods (goods are finally located after transport from another EU country) are more than 60% of total turnover,
- SET 3 Traffic companies III - taxpayers are registered at the Slovak Financial Directorate and the Slovak Companies Register. The supplies of transport services within a single EU country (the Slovak Republic) are more than 60% of total turnover.

As for timing, years 2005-2015 are analyzed in this study and standard mathematical and statistical methods were used for analyzing and comparing the partial indicators in the reporting period (arithmetic Average, base index).

Financial burden

The cause of this burden is the time period between the day of VAT tax return submission to the Financial Directorate by electronic means (this is the day of taxpayer's entitlement to excessive deduction) and between the validity day (day, when the taxpayer receives payment to his bank account from the Financial Directorate).

Indicator ***"value of money I"***= principal x interest rate of ECB x average loan term /365

Principal… *average amount of excessive deduction of traffic companies*

Average loan term …*time period during which the traffic companies as lenders lend money to the state budget (state is the borrower in this case)*

365… *number of days in a year*

Indicator ***"value of money II"***= principal x average commercial interest rate x average loan term /365

Principal… *average amount of excessive deduction of traffic companies*

Average loan term…*time period during which the traffic companies as lenders lend money to the state budget (state is the borrower in this case)*

365…*number of days in a year*

A methodological approach was used in our research using the following criteria:

1. Definition of the criteria for set I, set II, set III of taxpayers (traffic companies),
2. Data were obtained from VAT tax returns. Tax period applicable to a taxpayer is a calendar month. Tax return shall be submitted within 25 days of the end of each tax period by each taxpayer,
3. 95% of taxpayers used to submit their tax return on the very last day or on the day before the last day of this obligation. Following this, taxpayers submit the tax return on 25th or 24th, after the end of the tax period,
4. The day when a taxpayer is entitled to an excess deduction and the day of its returning to the tax payer's bank account is a period of 80-85 days. The period of 83 days (hereinafter only "the period") is considered in the analysis,
5. The Period and Excess Deduction are the most significant factors which influence the extent of impact of VAT to taxpayers' cash flows,
6. An important factor is also the interest rate of ECB.

Results and Discussion

The scope of VAT influence on Cash Flows depends mainly on two impact factors. The first one is the time limit for the excess deduction refund to the taxpayer bank account. The second impact factor is the amount of excessive deduction expressed through money. If the taxpayer cannot deduct excessive deduction from his own tax obligation in the following taxation period, the tax office shall return the non-deducted excessive deduction or its non-deducted part no later than 30 days after filing the tax return for the taxation period following the taxation period, in which the excessive deduction was created. In approximately 90% of submissions, tax returns are submitted within 23 - 25 days of the end of each tax period by each taxpayer. The period of 83 days can be considered to be the most frequent period and also the average period. The extension of excessive deduction is created as the difference between the right to deduct the tax on goods or service (§49 to §54 Act No. 222/2004 Coll. on Value Added Tax, as amended) and obligation to pay VAT from taxable transactions (tax liability for the supplied goods and services) (§8 to §9 Act No. 222/2004 Coll. on Value Added Tax as amended). Monetization of the time period between the days of VAT tax return submission to the Financial Directorate by electronic means and between the validity day is considered in this study as the indicator "value of money." This indicator represents the percentage of money which the taxpayer will have in case that he has them immediately after he becomes entitled to an excess deduction, and he lends them to the bank, having an interest in this financial operation. In addition, the majority of companies borrow money from financial institutions and pay interest to them. From this point of view, we can consider the indicator "value of money" to be an indirect cost of the company. The evaluating of the results expressed by the indicators "value of money I" and "value of money II" should also take

into account the following facts. The average commercial bank interest rate in this study is the average interest rate of loans with validity not longer than one year which were provided by financial institutions to commercial companies (not to households and also not to other financial institutions).

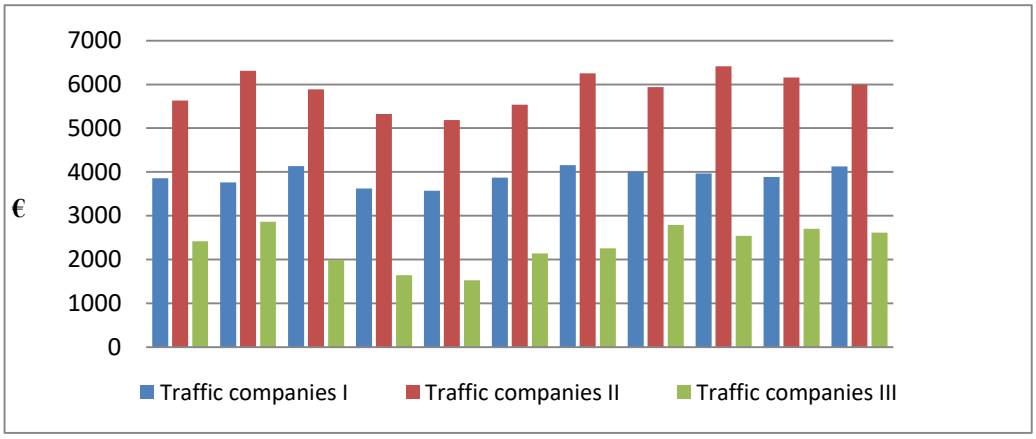
Table 1: ECB rates and commercial bank average interest rates at Slovak Republic 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
IR ECB	3.	4.75	4.25	2.50	1.75	1.75	1.75	1.50	0.5	0.30	0.30
IR CB	6.15	4.58	5.96	5.76	3.54	3,89	4.45	4.10	3.88	3.78	3.45

Source: http://www.nbs.sk/sk/statistickeudaje

The average amount of excessive deduction in the analyzed period in traffic companies was between € 1,500 and € 6,500. The highest level of excessive deduction was at traffic companies in which supplies of transport services connected with the intra-EU acquisition of goods (goods are finally located after transport from another EU country (hereinafter only "SET II companies" was more than 60% of total turnover. There was the interval of excessive deduction from € 5,187 to € 6,411. As Figure 1 shows, in comparison with the traffic companies in which the supplies of transport services connected with imports of goods into the EU from non-EU countries (hereinafter only "SET I companies") are more than 60% of total turnover, the amount of excessive deduction is higher than in traffic companies in which the supplies of transport services connected with imports of goods into the EU from non-EU countries the interval of excessive deduction was from € 3,569 to € 4,158, both traffic services (connected with intra-EU acquisition of goods and also imports/exports of goods) have the place of supply of a service out of the Slovak territory. The supplies of transport services within the Slovak Republic are subject to 20% VAT. This is the reason why the traffic companies which supply transport services within a single EU country (the Slovak Republic), with more than 60% of total turnover, (hereinafter only "SET III companies") had in the analyzed period (and also still have) the lowest average amount of excessive deduction. This amount was € 3,559 lower in average as in traffic companies which belong to the first set.

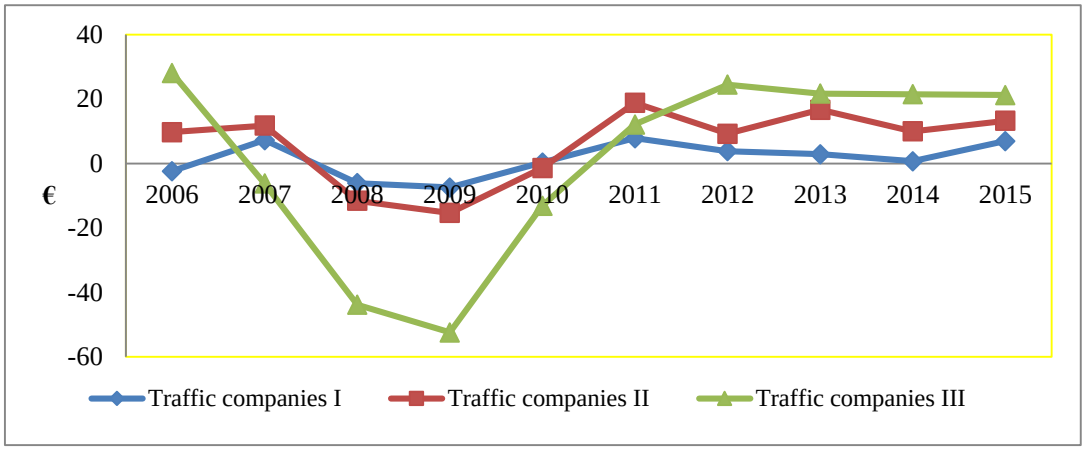
Figure 1: Comparison of excessive deduction amount in traffic companies (2005 – 2015)



Source: Information system of Financial Directorate of Slovak Republic

As Figure 2 shows, comparing with the year 2005 (base year and the first day of the analyzed period) the most significant changes of excess deductions were in SET III companies, which is most probably a result of constant changes in fuel prices. This price is the most important part of costs of traffic companies. The amount of excessive deduction had a downward trend until year 2009, which was closely related to the economic crisis in the whole Europe. After year 2010, it had an upward trend because of the upward trend in all economic areas (e.g. turnover of companies) after conclusion of the economic crisis in the European countries.

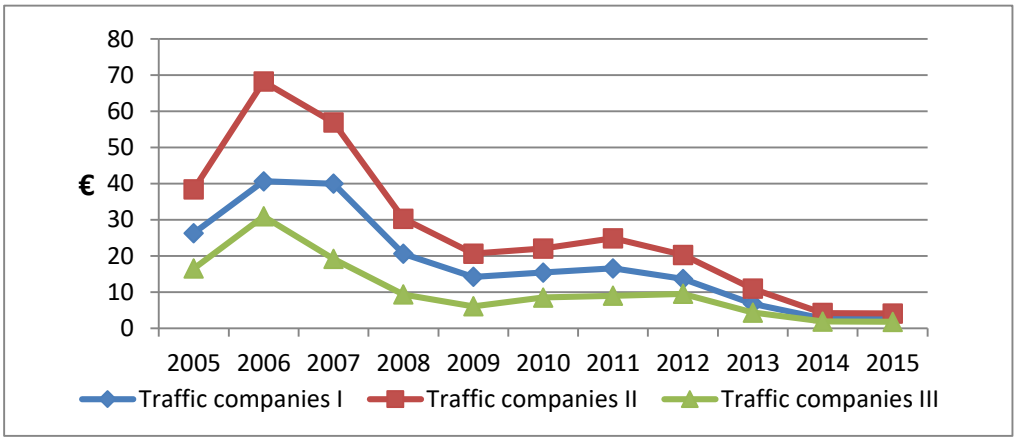
Figure 2: Comparison of excessive deduction amount comparing base index year 2015



Source: Information system of Financial Directorate of Slovak Republic

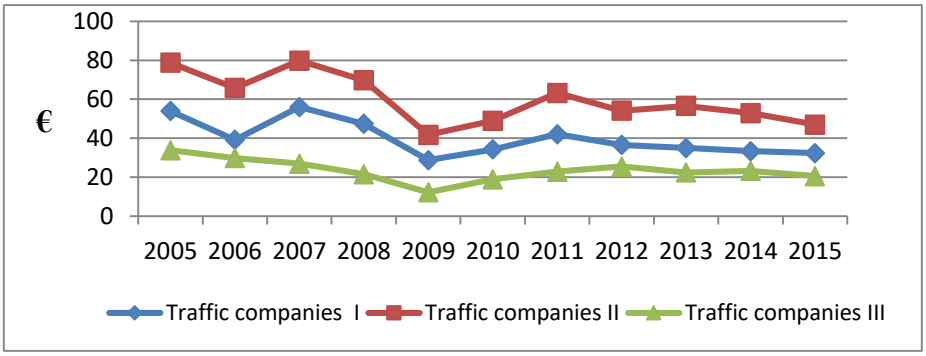
The financial burden of traffic companies had an upward trend only during the first and second year of the analyzed period, as we can see from the Figure 3. Since 2006, the financial burden had a downward trend. This decrease was more significant until 2009 (the end of the financial crisis in European countries). After this year, the declining rate had moderated. This development results not only from declining interest rates of the European Central Bank, but also from an increase in economic growth and development in European countries, as was mentioned previously. The average monthly financial burden was € 18.71 for one company (as a taxpayer) per month. The lowest VAT financial burden was for "SET III companies" of € 10.63 per month. The development of commercial interest rates is similar to the development of interest rates of the European Central Bank. For this reason, the development of "Financial burden II" is similar to "Financial burden I," as Figure 4 presents. Financial burden reached the minimum in all three sets of the analyzed traffic companies in 2009. This minimum is mainly the result of the turnover's decrease in these companies and the decrease of excessive deductions amount, which are closely connected. "Financial burden II" is more realistic because the commercial interest rates are the rates which represent the value of money in a real business life. Interest on loans or mortgages as a cost directly affects the economic (profit or loss) results of companies. The average cost of each company in this point of view was € 41.06 in the analyzed period. In SET I companies, these costs ranged from € 28.73 to € 56.04. In SET II companies, these costs ranged from minimum € 41.75 in 2009 to a maximum €78.76 in 2006. In 2006, there was a good financial and economic situation and also high interest rates. In SET III companies these costs ranged from € 12.96 to € 33.84.

Figure 3: Excessive deduction financial burden development (ECB rates) in traffic companies



Source: Information system of Financial Directorate of Slovak Republic

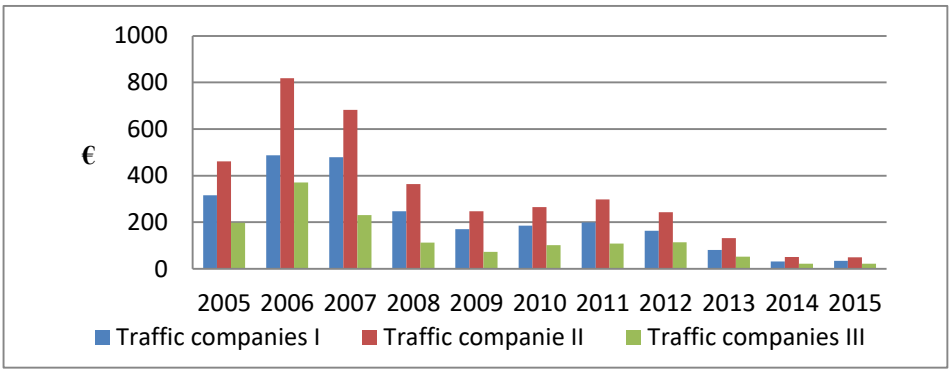
Figure 4: Excessive deduction financial burden development (average interest rates) in traffic companies



Source: Information system of Financial Directorate of Slovak Republic

Figure 5 and Figure 6 present development of interest cost per one calendar year which is caused by a time period between the days of VAT tax return submission to the Financial Directorate by electronic means and between the validity days. SET I companies had average costs of € 217.66. SET II companies had these average costs approximately 1/3 higher, i.e. € 328.14. SET III companies had the lowest cost caused by time changing. The costs were €127.59 in average.

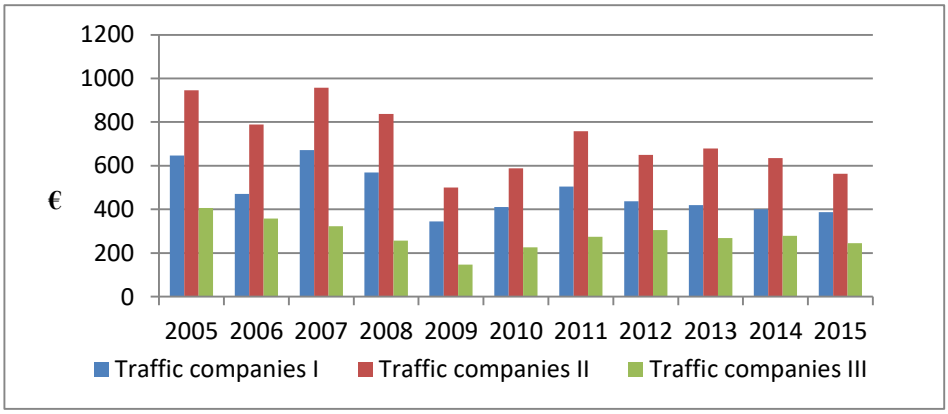
Figure 5: Indicator "value of money I"(ECB) per year



Source: Information system of Financial Directorate of Slovak Republic

In the analyzed period, SET I companies had the average cost € 478.71. SET II companies had the average cost approximately 50% higher at about € 718.46 per year. Set III companies had the lowest financial burden per year of € 281.02.

Figure 6: Indicator "value of money II"(average interest rate) per year



Source: Authors

Conclusion

The main aim of this study is the evaluation and quantification of the impact of value added tax on the cash flows of road traffic companies. The authors have chosen three basic indicators: indicator "value of money I," indicator: "value of money II" financial burden (base index). Data for analysis were gained from the information system of the Slovak Republic ISFS SR under the condition of anonymity. The analysis presented in this study confirms: time period between the day of VAT tax return submission to the Financial Directorate by electronic means (this is the day of taxpayer's entitlement to excessive deduction) and between the validity day (the day when the taxpayer receives payment to his bank account from the Financial Directorate) is the cause of VAT financial burden. The measure of VAT influence on Cash Flows (not only of traffic companies but in general all types of companies) depends mainly on two impact factors. The first one is the length of excessive deduction payment period to taxpayer bank account and the second one is the amount of excessive deduction expressed through money.

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