

VALUE ADDED TAX GAP IN THE CZECH REPUBLIC

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Abstract

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The paper deals with an estimation of tax evasion of value added tax in the Czech Republic during 2006–2012. For the estimation I have used the concept of tax gap which is based on a comparison of the theoretical tax liability in the economy with the actual tax receipts. According to my results the VAT gap in the Czech Republic gradually increased during the observed period and it is more than CZK 100 billion in the last three years. The most significant growth of VAT gap occurred between the years 2007 and 2008 and between 2011 and 2012 when the reduced VAT rate was increased by 4 percentage points. The second part of the paper focuses on impact of my estimates on tax policy of the Czech Republic. I discuss two different possibilities how the additional revenue gained from VAT gap reduction could be used – either to decrease the government deficit and therefore to meet the Maastricht criteria or to decrease tax burden on labour which influences particularly low income workers.

Keywords: tax evasion, tax evasion estimation, VAT gap, tax policy, labour tax burden

INTRODUCTION

There is a famous quote by Benjamin Franklin¹ who said that in this world nothing can be said to be certain, except death and taxes. Well, for some people it seems this quote is not fully true. Tax evasion is a widely spread problem which is becoming much more important topic when states are short of their income and are looking for additional revenues to decrease excessive debts and deficits. Since the debt crisis has spread out across the European Union, fighting against tax evasion came on the front burner (see European Commission, 2012; OECD, 2013a; OECD 2013b).

To make your fight successful you need to know your enemy. Estimation of the extent of tax fraud and tax evasion as well as identifying the main causes or loopholes in a tax system which enable people to evade, is therefore crucial for the development of an appropriate tax policy (Warren and McManus, 2007). Another point of view is presented by the Institute for Financial Policy (2012) which

mentions three main reasons of importance for knowing the size of tax evasion in its study:

- 1) distortion of the economic environment – some taxpayers gain a “competitive” advantage which may encourage other taxpayers to evade taxes too;
- 2) the magnitude of tax evasion reflects the effectiveness of country’s tax system;
- 3) the loss of tax receipts has a direct impact on the government’s economic policy.

The goal of this paper is to solve at least one of these problems – estimation of the value of tax evasion of value added tax (VAT) in the Czech Republic during the years 2006–2012. VAT is one of the main sources of Czech government’s revenues accounting for 20% of tax revenues when including social contribution or almost 40% when excluding social contribution (Ministry of Finance, 2013a) – that is why VAT evasion can be very painful for the public budgets of the Czech Republic.

¹ Stated in letter to Jean-Baptiste Leroy (13 November 1789)

MATERIALS AND METHODS

Tax Evasion Estimation

One of the first theoretical papers dealing with estimation of tax evasion, was published by Michael Allingham and Agnar Sandmo in 1972 (Allingham and Sandmo, 1972) and was soon followed by other scientific papers (Cowel, 1990; Slemrod and Yitzhaki, 2000). At the beginning of scientific research in the field of tax evasion, studies were mainly focused on behaviour of individuals instead of on estimation of total tax losses. Later on, especially for governments, it became much more important to know the extent of tax evasion rather than to analyse what are the reasons for evasion. That is why more and more countries regularly publish estimations of tax gaps (see below) in the economy (e.g. in the United Kingdom: HM Revenue and Customs, 2013; in the United States: Internal Revenue Service, 2012; in Slovakia: Institute for Financial Policy, 2012 etc.). Besides official countries' studies there are also some academic papers dealing with the tax gaps, we can mention e.g. Gemmell and Hasseldine (2012) who provide a methodological review of tax gaps, Giesecke and Tran (2012) focusing on VAT compliance rates and Christie and Holzner (2006) trying to describe what explain tax evasion.

Basically, there are two approaches how to quantify tax evasion – micro (bottom up) and macro (top down) methods. Choosing one of them depends on the type of tax studied. Bottom up methods are preferred when studying direct taxes, top down when estimating indirect tax gaps such as the VAT gap. However, there is also a third method used by some researchers (e.g. Eichhorn, 2006) to estimate the size of tax evasion in the whole economy which is based on an estimation of the shadow economy. In this particular case the size of the shadow economy simply represents a theoretical tax base to which a tax rate is then applied and then a theoretical tax evasion is calculated. This approach is highly dependent on the tax rate used for the calculation and therefore it can be very imprecise (e.g. Eichhorn, 2006 simply uses the individual and corporate tax rates ignoring other taxes in the economy in his study).

Microeconomic Methods

Microeconomic (bottom up or direct) methods are suitable mainly for direct taxes and involve e.g. compliance controls and tax audits performed by tax administration or anonymous surveys. Micro methods may turn out risky if the sample is wrongly chosen because it is impossible to control or survey the whole economy, each person or firm. In the case of tax audit, the selection of taxpayers to control is not random – tax administration focuses on entities and individuals that are assessed as risky ones. On the other hand surveys, even if they are anonymous, may provide undervalued

results because respondents are simply afraid to tell the truth. That is why surveys are frequently considered as the lowest level of tax evasion estimates. However, if surveys are repeated regularly, we can learn about the evolution of tax evasion in time (Hanousek and Palda, 2006a) and furthermore the micro method enables a detailed view on the structure of tax fraud.

Hanousek and Palda (2002, 2006a, 2006b) use direct methods to estimate the size of the shadow economy and to describe evolution of tax evasion in the Czech and the Slovak Republic. They surveyed respondents both in the Czech and the Slovak Republic in the years 2000, 2002 and 2004. According to the authors the main advantage of surveying people is the richness of demographic data – thanks to which they are able to identify what groups of people evade the most: women or men, of what education level and age etc. Based on the research of Hanousek and Palda the number of people claiming to be active in shadow economy of the Czech Republic grew in the second half of the nineties and started to slightly fall afterwards.

Macroeconomic Methods

Macroeconomics (top down or indirect) methods are based on a tax gap concept. The tax gap is a difference between the actual tax revenue and a theoretical tax revenue, it means a difference between the tax that would have been determined – if all taxpayers had reported all their activities and transactions correctly – and the tax determined in practice (Swedish National Tax Agency, 2008, p. 16).

When using macro methods, I try to specify how much tax ought to be paid in a certain area with the aid of data from sources other than tax administration such as national accounts. These estimates are then compared to the actually received tax in order to obtain a tax gap or the amount of tax fraud.

Macro methods are used particularly to estimate tax evasion connected with the value added tax – so called VAT gap. Similar studies were published concerning VAT gap e.g. in Slovakia (Institute for Financial Policy, 2005; Institute for Financial Policy, 2012) or in the whole European Union (Reckon, 2007; Reckon, 2009; and CASE, 2013). In the study made by Reckon (Reckon, 2009) authors pointed out that terms “VAT gap” and “VAT fraud” have not exactly the same meaning. Some of the reasons why the VAT gap is not a measure of VAT fraud are as follows: the VAT gap might include the VAT not paid as a result of legitimate tax avoidance measures and it does not take into account the taxable activities that are outside the scope of national accounts. However, VAT gap approach has been so far the best method how to estimate VAT evasion.

VAT Gap Methodology

Calculation of the VAT gap consists of four main steps (as described e.g. in Institute for Financial Policy, 2012):

- 1) a theoretical VAT tax base of the whole economy is estimated;
- 2) the second step is to determine an effective VAT tax rate for the particular economy;
- 3) the effective VAT tax rate is applied to the theoretical VAT tax base which results in a VAT theoretical tax liability (VTTL);
- 4) the VTTL is then compared with the actual VAT receipts as the final step. The difference between the actual VAT receipts and the VTTL is called VAT gap (assumed that the VTTL is bigger than the actual VAT receipts).

Determination of the theoretical VAT tax base and the effective VAT tax rate is the most challenging issue of the whole process. In both cases, there are at least two ways how to do that.

Theoretical VAT Tax Base

In Slovakia (Institute for Financial Policy, 2012, p. 11–14), two methods have been used to calculate the theoretical VAT tax base:

- 1) calculation based on the input-output tables;
- 2) calculation based on nominal GDP cleared of the items not subject to VAT.

According to the authors of the study, the first method is more precise as it is based on detailed expenditures in the economy of those items that are subject to VAT. The second method is more simple and uses more aggregated data. In this papers both methods are used to estimate the theoretical VAT tax base and therefore both methods are explained below in more detail.

Effective VAT Tax Rate

Basically, there are at least two methods how to determine the effective VAT tax rate. We can either use data from VAT tax returns where goods and services are reported separately by the corresponding VAT rate or we can use a household budget survey in which household expenditures are sorted out into very detailed groups of goods and services. Matching household expenditures on goods and services with particular VAT rate we can estimate the effective VAT rate in the economy. In this paper the first method was used thanks to internal data from Ministry of Finance of the Czech Republic (MoF). As described in Tab. I, the consumption of goods and services in the Czech Republic is mostly taxed by the standard VAT rate and that is why the effective tax rate is closer to the standard rate. However, the variability of the effective VAT rate is caused not only by the share of tax liability coming from either reduced or standard VAT rate on the total tax liability, but is influenced also by relatively frequent VAT rate changes.

RESULTS

Vat GAP in the Czech Republic

In the Czech Republic, there is no institution that would officially publish any estimation of tax evasion or VAT gap. However, as the Czech Republic is a member state of the European Union an estimation is available as the European Commission has commissioned two research institutions to put together a study to quantify and analyse VAT gaps in all member states of the European Union. The first study, made by Reckon, was published in 2009 (Reckon, 2009), the second by CASE in 2013 (CASE, 2013). Differences² between both mentioned studies are shown in Fig. 1. According to CASE

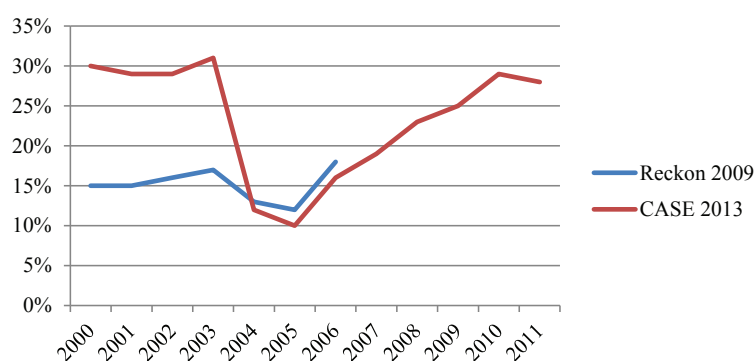
I: *Effective VAT tax rate in the Czech Republic*

Year, in bn. CZK	Reduced VAT rate		Standard VAT rate		Total Tax Liability (as declared in Tax Return)	Effective VAT rate
	Tax Liability	Share on Total Tax Liability	Tax Liability	Share on Total Tax Liability		
2006	32	14.3%	193	85.7%	226	13.56%
2007	40	16.2%	204	83.8%	244	13.07%
2008	63	23.0%	211	77.0%	274	15.13%
2009	64	24.3%	200	75.7%	265	14.97%
2010	68	26.4%	189	73.6%	257	15.82%
2011	68	24.2%	213	75.8%	281	16.11%
2012	89	32.4%	185	67.6%	274	17.56%

Source: own calculation, MoF

2 The only indicator which can be used for comparing Reckon and CASE studies is VAT gap as a share of VTTL because only this one is included in both studies. E.g. Reckon study quantifies VAT gap in CZK while CASE in EUR. VAT gap as a share of GDP contains only CASE study. Therefore, to prevent any distortion, the studies are compared only using VAT gap as a share of VTTL indicator.

VAT gap as a share of VTTL in the Czech Republic



1: Differences between tax gap estimations made by Reckon and by CASE for the Czech Republic

Source: Reckon (2009), CASE (2013)

II: Theoretical VAT tax base in the Czech Republic based on input-output tables (Method 1)

in bn. CZK	2006	2007	2008	2009	2010	2011	2012
Final consumption	368	392	424	445	437	386	362
Gross fixed capital formation	1 425	1 522	1 612	1 633	1 639	1 673	1 668
Intermediate consumption	248	266	266	270	264	280	277
Theoretical VAT base	2 041	2 180	2 302	2 348	2 340	2 339	2 307

Source: own calculation, CSO

(CASE, 2013, p. 10 and p. 107–109) their estimates were better compared to Reckon thanks to several direct communications from the EU member states' authorities.

My own calculation of the VAT gap in the Czech Republic presented in this paper is using the macro method and is calculated for the years 2006–2012. The data crucial for the calculation comes from the Czech Statistical Office (CSO) and MoF. It is important to note that the CSO made an extraordinary revision of national accounts – an important source of data – in 2011 and that all data used in the paper are after this revision.

Theoretical VAT Tax Base in the Czech Republic

As mentioned above, two different approaches can be used to estimate the theoretical VAT tax base. Both methods are explained in the Slovak study (Institute for Financial Policy, 2012) very well and in a detailed way therefore I will use some of their explanations.

Method 1: Estimation Based on the Input-output Tables

The first method tries to identify all transactions that are relevant for the VAT. For this purpose, input-output tables contain perfect data organised into matrices broken down by branches and products, which describe transactions in products in the national economy in detail (Institute for Financial Policy, 2012, p. 12).

Based on data provided by input-output tables, the following three categories of the theoretical VAT tax base are identified:

- 1) final consumption;
- 2) gross fixed capital formation; and
- 3) intermediate consumption.

Final consumption can be divided into three subcategories – final consumption of household, final consumption of government and final consumption of non-profit institutions. Data for all of these categories can be gathered from the input-output tables. The data in input-output tables is in the form of final prices, which means prices including all taxes and VAT alike. Therefore we need adjust these prices of the VAT. Regarding the fact the data in input-output tables are segmented according to individual commodities, we are able to group them with the appropriate VAT rate. By this we can transfer the final prices into the VAT tax base. The segmentation of commodities also enables to exclude the part of consumption which is tax-exempted.

Gross fixed capital formation consists, similarly to final consumption, of three subgroups – gross fixed capital formation of household, government and non-profit institutions. In this case specific tables from national accounts of Czech statistical office were used e.g. a table about acquisition of non-financial assets by households etc.

The last category within method 1 is intermediate consumption. Basically the intermediate consumption equals to value of goods and services

which are used as inputs in production process. That means that these goods and services are not consumed by final consumers but are used or transformed by another manufacturer. In method 1 we focus on those transactions made between tax exempted sectors (no VAT is applied) and non-exempted (taxed) sectors. The idea behind is that when a firm from tax exempted sector buys goods from taxed sector, the firm is not entitled to VAT deduction and therefore the transaction is fully taxed. As we are trying to identify all transaction relevant for the VAT, we have to include also these types of transactions.

Method 2: Estimation Based on GDP Adjustments

The second method is based on nominal GDP cleared of items not subject to VAT (Institute for Financial Policy, 2012, p. 13). The starting point of the method is the following equation:

$$GDP = C + I + G + NX,$$

where

GDP.... Gross domestic product;

C..... Household consumption;

I..... Capital investment;

G..... Government consumption;

NX Net international trade (export – import).

The transactions which are not subject to VAT are gradually deducted from the components of GDP and the transactions which are subject to VAT are gradually added (Institute for Financial Policy, 2012, p. 13)

The main adjustments for the Czech Republic are as follows:

a) International trade (NX)

VAT is chargeable on goods and services in the place where these goods and services are consumed. Export is exempted from VAT, that's why it must be deducted from the VAT base. On the other hand import must be added as the goods and services consumed in the Czech Republic are taxed here as well.

b) Government consumption (G)

Government expenses for salaries have to be deducted. (Government expenses for investments are covered in the next step).

c) Capital investment (I)

VAT is applied on final consumption therefore we have to deduct gross fixed capital formation. At the same time, we have to add back components of investments which are taxed such as real estate bought by households, purchase of company cars without the right of deduction on VAT (in the Czech Republic till the mid of 2009), investment expenditures of government etc.

d) Household consumption (C)

Adjustments on consumption are divided into three sub-groups:

1) sectors exempted from VAT;

2) final consumption exempted from VAT; and

3) small businesses whose annual turnover is under the threshold for registration for VAT.

It is obvious that Method 1 and Method 2 do not give totally identical results of the theoretical VAT tax base. However, both methods are at least showing the same trend in the development of the VAT gap.

VAT Gap in the Czech Republic During Years 2006–2012

When theoretical VAT tax base is estimated, we have to apply an effective VAT tax rate to calculate the VAT theoretical tax liability (VTTL). I have discussed two ways of determination of the effective VAT rate above. In my estimation, I will use the effective VAT rate which is calculated from the VAT returns because it provides a better reflection of the Czech economy. The theoretical revenue from the VAT in the Czech Republic during the observed period is contained in Tab. IV.

Finally, the last step of VAT gap estimation is to compare the VTTL with the actual VAT receipts on an accrual basis. If we used the actually received VAT on a cash flow basis, the result would be distorted.

Even though the two methods of estimation do not provide the same results, they show a similar trend in the VAT gap. Therefore we can at least make a conclusion about development of the VAT gap in the Czech Republic. In the following analysis, the VTTL and the VAT gap will be represented by an average of Method 1 and Method 2.

III: *Theoretical VAT tax base in the Czech Republic based on GDP adjustments (Method 2)*

In bn. CZK	2006	2007	2008	2009	2010	2011	2012
GDP	3 353	3 663	3 848	3 759	3 791	3 823	3 846
GDP excluded VAT	2 952	3 239	3 343	3 270	3 273	3 293	3 271
NX International trade	-101	-97	-92	-152	-127	-159	-215
I Investment	-414	-503	-487	-303	-349	-399	-386
G Government labour costs	-252	-269	-280	-293	-286	-280	-286
C Consumption	-44	-75	-139	-141	-144	-114	-112
Theoretical VAT base	2 141	2 295	2 345	2 381	2 367	2 341	2 272

Source: own calculations, CSO

IV: VTTL in the Czech Republic in 2006–2012

In bn. CZK, %	2006	2007	2008	2009	2010	2011	2012
Effective VAT rate	13.56%	13.07%	15.13%	14.97%	15.82%	16.11%	17.56%
VTTL Method 1	277	285	348	351	370	377	405
VTTL Method 2	290	300	355	356	374	377	399

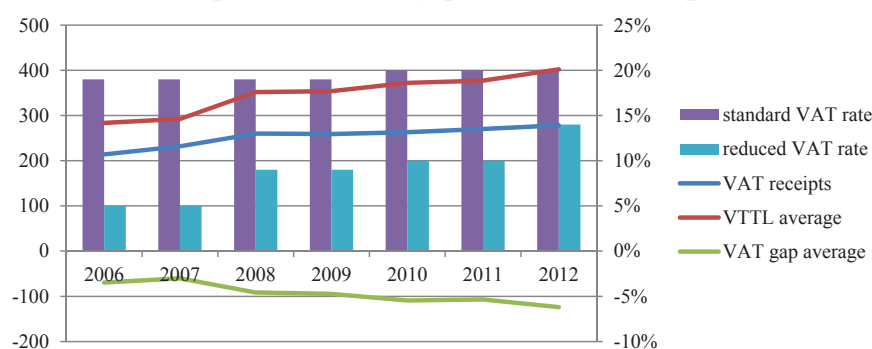
Source: own calculations

V: VAT gap in the Czech Republic in 2006–2012

In bn. CZK, %	2006	2007	2008	2009	2010	2011	2012
Actual receipts of VAT	214	232	260	259	263	270	278
VAT gap	-63	-53	-88	-92	-107	-107	-127
Method 1 VAT gap as a % of VTTL	22.7%	18.6%	25.4%	26.3%	28.9%	28.3%	31.4%
VAT gap as a % of GDP	1.9%	1.4%	2.3%	2.5%	2.8%	2.8%	3.3%
VAT gap	-76	-68	-95	-97	-111	-107	-121
Method 2 VAT gap as a % of VTTL	26.3%	22.6%	26.7%	27.3%	29.8%	28.4%	30.3%
VAT gap as a % of GDP	2.3%	1.9%	2.5%	2.6%	2.9%	2.8%	3.2%

Source: own calculations

Development of VAT gap in the Czech Republic



2: Development of VAT gap in the Czech Republic in 2006–2012

Source: own calculations, MoF

As we can see from Fig. 2, the difference between the actual VAT receipts and the VTTL has been widening and the VAT gap has thus increased over time. The most distinctive growth in the VAT gap can be observed when tax policy makers increase the VAT rates. It seems that the growth of VAT rates is not fully reflected in the actual VAT receipts. Such types of errors may occur when forecasting the VAT revenue for purpose of public budgeting – any change of VAT rate can also change consumers' behaviour. E.g. a decrease in the VAT rate may put up a price of goods and services which leads to situation that consumers do not spend as much money as it was expected.³ However, this is not the case. The VAT gap is estimated from historical data which already include changes of consumer behaviour.

Another reason for the widening of the VAT gap when increasing the tax rates is that when the VAT rates increase, more people decide to evade

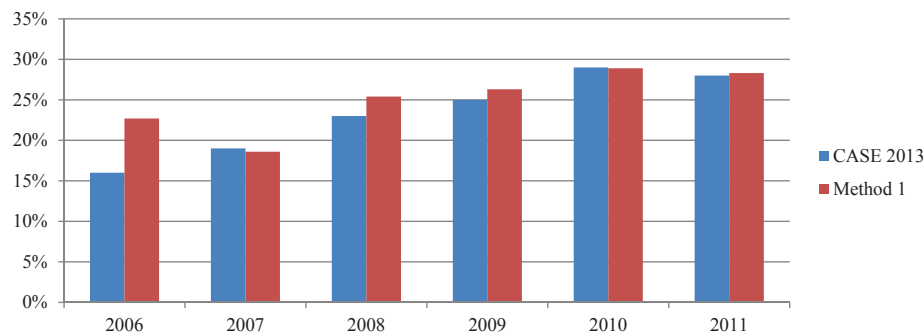
or to increase evasion activity. The evasion then becomes much more worth trying. People simply do not have so much money to pay the higher taxes. This hypothesis was confirmed e.g. by Matthews (2003) who estimated the revenue maximising VAT rate for the European Union and drew a conclusion that the efficiency of VAT system declines as the VAT rate increases. Agha and Haughton (1996) came with similar results as well.

The VAT rates are not the only aspect that influences the VAT gap. An important role is also played by the statistical data on which the calculation is based and which cannot be considered as perfect.

On the other hand, looking at the development in the VAT gap in the Czech Republic, it is obvious that the most significant increase in the VAT gap occurred between the years 2007 and 2008 and the years 2011 and 2012 when the reduced VAT rate was increased by 4 percentage points. That

3 More about how consumer spending is influenced by VAT rate change can be found e.g. in Gelardi (2013) or Cashin and Unayama (2012)

VAT gap as a share of VTTL in the Czech Republic



3: Comparison of own VAT gap estimates with CASE results
Source: CASE (2013), own calculations

brings us to an idea that the VAT gap in the Czech Republic is more sensitive to changes in the reduced rates. Goods and services subject to the reduced VAT rate are primarily goods and services of basic needs such as foodstuff and pharmaceutical products. Expenses on these types of goods and services account for most spending of low-income people. Therefore any increase in the VAT reduced rate may significantly influence disposable income of these consumers and make tax evasion more attractive.

Comparison of my Results With Previous Studies

As mentioned above, the European Commission has commissioned external research and academic institutions to estimate VAT gap in the whole European Union including the Czech Republic. In spite there are similar methods used in this paper as in the previous studies estimating the extent of VAT gap, the results are not easily comparable. The problem of comparison consists of two main issues – revisions of statistical data and assumptions. Statistical data is regularly reviewed therefore the date of data mining is crucial – e.g. during the revision in 2011, gross fixed capital formation for 2010 has changed from 783 bn. CZK to 923 bn. CZK which means the change of more than 17%⁴. The second problem is assumptions. Not all data needed for the estimation of VAT gap can be known with certainty. Therefore authors have to make some assumptions – e.g. when consumption is divided into few categories which can deal with different tax rates. In this case, without knowing any details, one must decide what rate to use or how to calculate the “average” rate. However, this of course is not the thorough list of all possible differences.

If we ignore the different level of VAT gap, the estimation should at least agree on the trend of the VAT gap – Is VAT evasion increasing or decreasing? Fig. 3 compares CASE study (2013) with the results of method 1 of this paper as the method 1 is closer to CASE methodology than method 2. Both results are slightly different. However, on average the difference is less than 2 pp.

DISCUSSION

Even though the public finance deficit and debt in the Czech Republic does not seem as big a problem as in other European countries⁵, the VAT gap is a significant loss for public finance.

I do not expect that the VAT gap can be completely eliminated. The VAT gap is a broad concept that covers transactions and losses which are impossible to detect. On the other hand, when comparing the Czech Republic with other European countries using VAT gap as a share of GDP, the Czech Republic's results are above the European average. According to CASE (2013, p. 29) the average VAT gap as a share of GDP in the European Union was 2.1% in 2011. Therefore, if the Czech Republic would like to reach at least the average VAT gap in the EU, the VAT gap would have to be decreased by 20–30 bn CZK. I believe this is a realistic target.

Additional revenue would be very helpful and welcomed for the Czech Republic public finance. Considering the current situation, I discuss two different ways how additional revenue can be used:

- 1) decrease in the public finance deficit and fulfilment of Maastricht criteria;
- 2) decrease in other taxes.

4 More about the revision in 2011 can be found at <http://apl.czso.cz/nufile/RevizeRNU2011.pdf>.

5 The deficit of government sector was 4.4% in the Czech Republic, however the result was affected by two one-off measures – financial compensation to churches and the non-refunded EU inflows). When adjusting the deficit for these measures, the deficit would have been around 2.6% of GDP (Ministry of Finance, 2013b, p. 13). Average deficit in 2012 in the EU is 3.9% of GDP according to Eurostat data. The same is, according to Eurostat, true for the government debt, which counted for 46.2% of GDP in the Czech Republic and for 85.2% of GDP in the EU in 2012.

VI: *Government deficit in the Czech Republic adjusted by VAT gap reduction*

In bn CZK, %	2009	2010	2011	2012
Government deficit	-218.3	-182.7	-124.9	-169.0
Deficit as a % of GDP	-5.8%	-4.8%	-3.3%	-4.4%
Adjusted deficit as a % of GDP	-5.3%/-5.0%	-4.3%/-4.0%	-2.7%/-2.5%	-3.9%/-3.6%

Source: CSO, own calculations

VII: *The tax/benefit position of single persons in the Czech Republic in 2012*

In CZK, %	67% of average wage	100% of average wage	67% of average wage 2 children
Gross wage earnings	200 281	300 421	200 281
Tax paid by employee	15 416	35 545	-11 392
Employee's social security contributions	22 031	33 046	22 031
Employer's social security contributions	68 095	102 143	68 095
Labour costs (cost of the employer)	268 376	402 564	268 376
Take-home pay	162 833	231 830	229 289
Take-home pay to labour costs	60.7%	57.6%	85%
Total tax wedge	39.3%	42.4%	14.6%

Source: OECD (2013c, p. 244), own calculations

Fulfilment of Maastricht Criteria

In the last four years, the Czech Republic did not fulfil the Maastricht criteria of government budget deficit which must not exceed three percent of GDP, as it is shown in Tab. VI. To decrease the budget deficit, the government has introduced specific measures⁶ in 2012 on both expenditure and revenue sides of the budget. These measures should be in force in the years 2013–2015. If the VAT gap was reduced by 20–30 bn CZK, the government deficit as a percentage of GDP would decrease by 0.5–0.8 pp each year. This means that e.g. in 2011, the Czech Republic would have fulfilled the Maastricht criteria.

Fiscally Neutral Measure

Alternatively to the previous scenario, the Czech Republic could use the additional revenue from the VAT to decrease other taxes. In my opinion, one of the biggest issues in the Czech Republic is tax burden on labour⁷. This view is strongly supported by both the OECD and the European Commission who regularly recommend shifting tax burden from labour to consumption. They also point out a high effective tax rate affecting low-income workers (European Commission, 2013; OECD 2010 and OECD 2011).

The largest part of tax burden on labour represents the social security contributions paid by employers. Employers pay 34% of an employee's gross wage in social security contributions which

means that the labour costs are 134% of the gross wage while the employee receives only around 60% of what is the true cost of the employer if not having any children (OECD, 2013c).

A reduction in the VAT gap would allow the Czech Republic to either decrease overall tax burden on labour or to adopt a specific measure focused on low income workers. Considering the revenue from social security contributions paid by employers, the rates could be decreased by 2–3 pp⁸, which means from 34% to 32%, and the balance of public budget would remain the same.

If policymakers would prefer to focus on tax burden of low income workers, I estimate, based on available data of the Ministry of Finance, that the additional revenue from the VAT gap would cover a significant reduction or even the elimination of social security contributions paid both by employee and employer for people who earn less than 12 000 CZK a month. According to the Ministry of Finance's data, approximately 10% of all employees earn less than 12 000 CZK. These employees bring to the state budget around 20 bn CZK on social security contributions which is less than I expect it is possible to gain from a VAT gap reduction. Please note that these calculations are only rough and do not represent any behavioural effects. Nevertheless, I believe that similar measure would support employment in the Czech Republic and considerably help addressing the so called inactivity trap problem.

6 E.g. increase in VAT rates by 1pp (both reduced as well as standard rate).

7 Overall labour tax burden consists of personal income tax paid by employee and social security contributions paid by both employee and by employer.

8 1 pp of social security contributions paid by employer brings to the public budget slightly less than 11 bn CZK (Ministry of Finance, 2013a).

SUMMARY

In the paper I first tried to estimate the amount of VAT evasion using the concept of VAT gap. According to my results, the VAT gap in the Czech Republic oscillates around 100 bn CZK starting from the year 2008 and, except 2011, has increased every year. I do not believe that the VAT gap can be completely eliminated as it covers transactions and losses which tax administration is not able to detect. However, a reduction of the VAT gap in a value of about 20–30 bn CZK, which would meet the EU average, is in my opinion a realistic target. In the second part of the paper I discuss how additional revenue from the VAT in the Czech Republic could be used. According to the recommendation of European Union and OECD I focus on a reduction in the government deficit to meet the Maastricht criteria and a reduction in tax burden on labour, particularly for low income workers.

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