

# IMPACT OF LUMP SUM EXPENSE RATES ON PUBLIC REVENUE

Jana Tepperová<sup>1</sup>, Jan Pavel<sup>1</sup>, Lenka Láčková<sup>1</sup>

<sup>1</sup> Department of Public Finance, University of Economics, Prague, náměstí Winstona Churchilla 4, 130 67 Praha 3, Czech Republic

## Abstract

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Lump sum expense has special role within the Czech tax system. As the percentages of the lump sum expense used in the Czech Republic are high compared to other EU countries, they are often criticized as distortive and government searches for ways to limit their use. On the other side, the long-standing role of the lump sum expense in the Czech tax system hinders its decrease. Based on the data from the personal income tax returns of self-employed we analyze the use of the lump sum expense in the Czech Republic over the years 2004 to 2012. Using the same data and controlling for other variables, we estimate the impact of the lump sum expenses' rates on public revenue (personal income tax, social security and health insurance revenue). According to the results, the higher number of taxpayers using the lump sum expense does not influence the public revenue, but there is negative effect of the average portion of lump sum expense to taxable income on the public revenue.

Keywords: lump sum, expense, public revenue, self-employed, social security insurance, health insurance

## INTRODUCTION

The so called “lump sum expense”, that the group of self-employed taxpayers can apply as a substitute to the real expenses, has its place in the Czech tax system since 1993. The amount of lump sum expense (percentage of taxable income as deductible expense) has changed several times during the period of its existence with significant increase in 2006 and 2009. Due to this long-standing position of the lump sum expense in the calculation of personal income tax from income from business activity, it is politically quite difficult to weaken its role by significantly lowering the amounts that can be deducted this way.

The lump sum expense affects not only the personal income tax paid to the financial office, but also the social security and health insurance contributions of the self-employed, as their assessment base is calculated from the difference between the income and expense used for the calculation of the personal income tax. The more, it influences also potential benefits from the social security system of the self-employed, as the benefits (e.g. pensions) are often calculated from the paid contribution.

The lump sum expense is often criticized for widening the gap between the effective taxation (including social security and health insurance) of employees and self-employed, groundlessly favoring the self-employed. This gap also creates ground for undesirable behavior of the participants on the labour market, forcing the employees to take the position of formally self-employed.

Both the distortions on the labour market, and potential future problems with the social status of those self-employed who do not pay enough on the social security contributions, urge the governments to take appropriate measures and limit the use of the lump sum expense. The percentages of the lump sum expense and its possible lowering have been discussed for several years now. Even though, some limits to the use of the lump sum expense have been introduced, the percentages remain unchanged.

The use of lump sum expense was first limited in 2013, with further restrictions introduced for 2015. However, the percentages of the lump sum expense have not been lowered, only the absolute limits for the lump sum expense were introduced. Láčková and Tepperová (2013) show, that these limits affect only small number of taxpayers. Different limitation

illogically aims to those taxpayers using the tax credit for the dependent relatives. Taxpayers using the lump sum expense related to at least 50% of their income are not allowed to use the tax credits for the dependent spouse and dependent child, which is normally available to other taxpayers under given conditions.

Even though often criticized, there is an economic reasoning behind the lump sum expense. The main argument for the existence of lump-sum expense from its introduction in 1993 has been the reduction of the administrative burden connected with the evidence for the tax purposes (both for taxpayers and for tax administration). Furthermore, the lump sum expense can be used as an instrument for supporting small businesses as they have positive role on the economy and labour markets (e.g. Bruce *et al.*, 2003 or Moore, 2002).

In most EU countries the effective taxation of employment is higher compared to self-employed. However, in none EU country this is caused in such extent by the use of lump sum expense (European Commission, 2012, 2013, 2014b).

On potential problems with high lump sum expense and related low taxation of self-employed in the Czech Republic, both OECD and the European Commission comment in their recommendations in taxation fields. OECD in its annual Economic Survey repeatedly alerts that the tax policy towards self-employed (compared to employees) should be reconsidered in the Czech Republic (OECD, 2010, 2011). In the last Economic Surveys OECD again recommended reduction of the disparities in the tax treatment of dependent workers and the self-employed (OECD, 2014).

Such elimination of discrepancies was also repeatedly recommended in the Council Recommendation prepared by European Commission and in the final Council Recommendation<sup>1</sup>. Recommendation for a Council Recommendation on the Czech Republic's 2014 national reform programme and delivering a Council opinion on the Czech Republic's 2014 convergence, notes, that *"significant discrepancies remain in the tax and social contributions treatment of employees and self-employed, which lead to the narrowing of the tax base and create incentives for bogus self-employment with unfair consequences for employed under a regular employment contract"* (European Commission, 2014a).

The aim of this paper is to quantify the share of tax payers using lump sum expense and analyze the impact of the usage of lump sum expense on public revenues. Based on the data from the tax returns of self-employed for the years 2004 to 2012, we provide detailed descriptive analysis of the use of the lump sum expense among the taxpayers according to

their taxable income. Further we follow with the regression analysis to assess the impact on public revenues.

It is assumed that higher percentages of the lump sum expense considerably lower the public revenue, and the other way around (General Financial Directorate, 2009, 2012, 2014). However, also other factors, such as the economic conditions and changes in other parameters of tax system (e.g. tax credits) must be considered to provide more arguments for this assumption. Therefore, we follow up with the econometric estimation of the relationship between the rate of lump sum expense and public revenue.

### Lump Sum Expense in the Czech Republic

The possibility for self-employed to apply the lump sum expense has been in the Czech Income Tax Act (No. 586/1992, Coll., further just "Income Tax Act") from the very beginning of its existence, since 1992 (Czech Republic, 1992). Since the introduction of the lump sum expense, the percentage was settled at 30% of income of most entrepreneurs (e.g. income from trade and other entrepreneurial activity under special regulations, as well as for royalties) and 50% of income from agricultural production, forestry and water management. In the same year (1993) the percentage of lump sum expense for income from trade was lowered to 25% of income. Since 1993 the level of lump sum expense remained unchanged till the 2004; with the exception of the change effective since 2001 when the possibility to use the 25% lump sum expense was extended also to an independent occupation that is neither trade nor other entrepreneurial activity under special regulation.

In 2005 the percentages of the lump sum expense increased significantly (Tab. I). This change was introduced with the amendment number 545/2005 to Income Tax Act generally effective since January 2006 (Czech Republic, 2005). However, the increased percentages were allowed to use also retrospectively for 2005.

Such significant increase in the lump sum expenses was justified by savings in administrative procedures both for the taxpayers and tax administration. It was stated in the reasoning report, that before the increase (in 2004) approximately 18% (157,000 taxpayers) of taxpayers with income from entrepreneurial activity and from other independent gainful activity applied lump sum expenses. Lump sum expenses themselves stated for 1% of total expense of all taxpayers with income from entrepreneurial activity and from other independent gainful activity. (Government of the CR, 2005).

1 The National Reform Programme 2012 of the Czech Republic and delivering a Council opinion on the Convergence Programme of the Czech Republic, 2012–2015, Council Recommendation on the National Reform Programme 2013 of the Czech Republic and delivering a Council opinion on the Convergence Programme of the Czech Republic, 2012–2016.

I: *Development in the lump sum expense in the Czech Republic between 2005 and 2015*

	2005	2006*	2009	2010	2012	2013	2015
Income from agricultural production, forestry and water management	50%	80%	80%	80%	80%	80%	80% + cap CZK 1.6 mill.
Income from handicraft trades	25%	60%	80%	80%	80%	80%	80% + cap CZK 1.6 mill.
Income from trade	25%	50%	60%	60%	60%	60%	60% + cap CZK 1.2 mill.
Income from other business according to specific legislation	25%	40%	60%	40%	40%	40% + cap CZK 800,000	40% + cap CZK 800,000
Royalties	30%	40%	60%	40%	40%	40% + cap CZK 800,000	40% + cap CZK 800,000
Income from other independent activity	25%	40%	60%	40%	40%	40% + cap CZK 800,000	40% + cap CZK 800,000
Income from lease						30% + cap CZK 600,000	30% + cap CZK 600,000

Note: \* It was possible to use percentages effective for 2006 retroactively for tax year 2005

Further increase in the percentages of the lump sum expense was effective since beginning of 2009. However, for independent occupation that is neither trade nor other entrepreneurial activity under special regulation and for royalties the lump sum expenses were lowered to 40% the following year, effective since 2010. In 2012, almost 52% (524,035 taxpayers) of the total number of taxpayers with income in the form of business and other self-employment used the lump sum expenses and the most of them – 62% – used the flat rate of 60% and 28% of them used the flat rate 80% (General Financial Directorate, 2013).

From 2013, other limitations of lump sum expense in form of total limit have been introduced.

Further limitations are to be effective since 2015.

Tab. I summarizes the development in the lump sum expense in the Czech Republic.

### The Lump Sum Expense Within the EU

The lump sum expense within the EU member states, are used only in Austria, Belgium, Poland, Slovenia, Slovakia and in the Czech Republic (IBFD, 2014). Percentage of the lump sum expense is significantly lower in the other countries than in the Czech Republic. In Austria taxpayers may use rate of lump sum expense of 12% from income in business and professional activities and of 6% for some activities. The lump sum deduction is limited with maximum turnover with the previous year EUR 220,000. In Poland the deduction of lump sum expense is allowed in the amount of 20% of the income. In Slovakia taxpayers in selected activities (e.g. craftsmen, experts and interpreters) under conditions that are not registered as a VAT payers, may use lump sum expense in the amount of 40% of generated income up to an annual amount of EUR 5,040. In Slovenia the lump sum expense of 15% is allowed only for sportsmen entrepreneurs to the taxable base of up to EUR 25,000. For entrepreneurs engaged in agriculture, forestry and farming industry the deduct lump sum of 70% of

the income is allowed in Slovenia. The possibility of lump sum expense was recently introduced in Belgium. It is set at the same level for both employees and entrepreneurs. Deduction depending on income level gradually decreases from 28.7%, to 10%, 5% and finally on 3%. Absolute maximum deduction is EUR 3,950.

### DATA AND METHODOLOGY

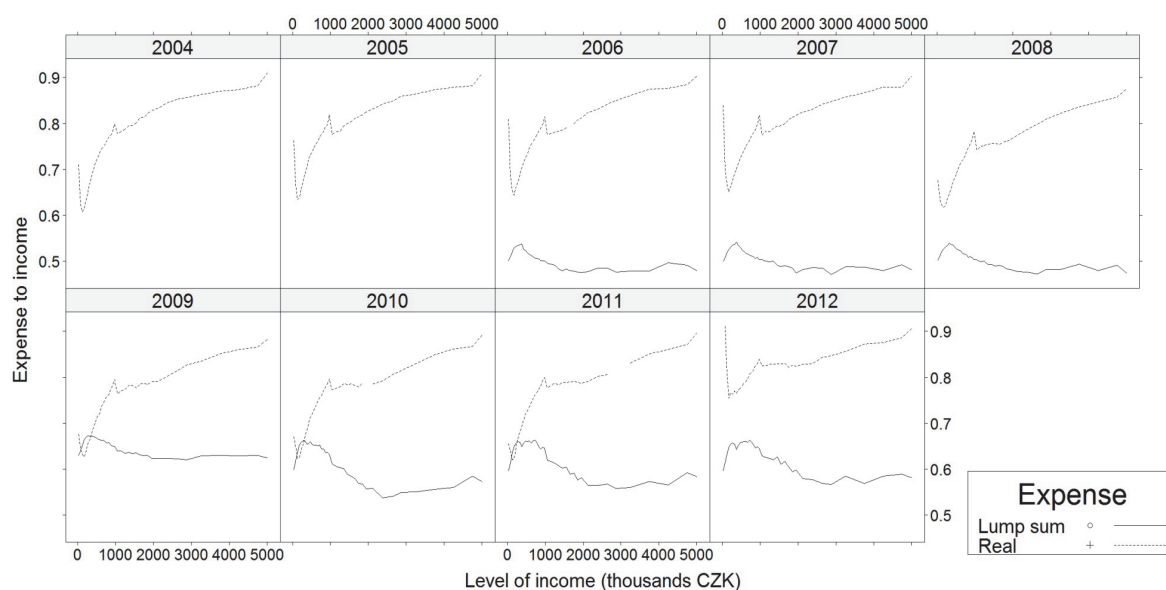
Main set of data used in further analysis were provided by General Financial Directorate. These data state for taxpayers with income from entrepreneurial activity and from other independent gainful activity (see Section 6 of the Act on Income Taxes; Czech Republic, 1992a, hereinafter referred to as “business activity”), who filed personal income tax return in relevant year. We do not differentiate between the taxpayers with income only from business activity and the taxpayers with other income besides the income from business activity.

Data are structured according to amount of the income (in CZK) from business activity. The income is partitioned by 50 thousand beginning with none income, up to CZK 1,000 thousand, than by 100 thousand up to 2,000 thousand, than by 250 thousand up to 3,000 thousand, than by 500 thousand up to 5,000 thousand, and up 5,000 thousand. Thus, we work with 38 income ranges in each researched year.

We performed descriptive and exploratory analyses; first, to identify quality of the data and second, to see the development in relevant variables used later in regression.

Further we follow up with the econometric estimation of the relationship between the rate of lump sum expense and public revenue. Within the econometric analysis the data from the General Financial Directorate were used for some relevant independent and dependent variables. Further data for regression are taken from official





2: Expense to Income for Taxpayers using the Lump Sum Expense and Real Expenses according to the Amount of the Income in 2004 to 2012 (in %)

Source: General Financial Directorate, Data from income tax returns of self-employed. Analysis processed in R (R Core Team, 2014).

statistics on revenue from the Czech social security administration and from the health insurance companies.

### Descriptive and Exploratory Analysis

In Fig. 1 we present the development in the share of taxpayers using lump sum expense and taxpayers using real expenses. Taxpayers with the real expenses include both those using accounting and tax evidence.

The number of taxpayers with lump sum expense to the total number of taxpayers with income from business activity increase gradually. The lump sum expense is used mostly by the taxpayers with the income from business activity ranging from CZK 51 thousand to CZK 400 thousand.

As stated above, the significant increase in the percentages of the lump sum expense was introduced in 2005 and 2009. The change in 2005 was effective since January 2006 with retrospective use for 2005, thus its potential effect most likely spread between the years 2005 and 2006.

Fig. 2 provides the comparison of the expense to income index for taxpayer with the lump sum expense and taxpayers with the real expenses. The data for 2004 and 2005 on income and expense of the taxpayers using the lump sum expense was not available.

### The Econometric Estimation of the Relationship Between the Rate of Lump Sum Expense and Public Revenue

According to the data presented in the previous chapters as well as to simple economic reasoning, it is likely that changes in percentage rates of lump sum expense affect the amount of public revenue.

However, it is not possible to clearly confirm this relationship, as public revenue was also probably influenced by other factors (such as inflation rate, economic growth, etc.) during the analyzed period (2004–2012). Further, we analyze the hypothesis of negative relationship between the lump sum expense rate and public revenue considering also these other factors.

The percentage rate of the lump sum expense affects not only personal income tax (PIT), but also social (SSC) and health insurance (HIC) contribution. Thus, to verify the hypothesis of negative relationship between the lump sum expense rate and public revenue, we estimated three regression models, where dependent variable is represented one by one by these three types of public revenue (PIT, SSC and HIC).

Dependent variables are created as follows:

- Personal income tax (PIT) – Gross revenue (without the influence of tax allowances and tax credits) – using the data from personal income tax returns from the General Financial Directorate.
- Social security contribution (SSC) – official statistics on revenue from the Czech social security administration (MFCR, 2014).
- Health insurance contribution (HIC) – official statistics on revenue from the health insurance companies (CSO, 2014).

As explanatory variables we used the following:

- the share of tax bases of taxpayers using the lump sum expense on the total tax base ( $rTB$ ),
- the share of taxpayers using the lump sum expense on the total number of taxpayers with the income from business activity ( $rP$ ),

## II: Factors affecting the revenue of personal income tax, social security and health insurance contributions

Dependent variable	$\Delta$ PIT	$\Delta$ SSC	$\Delta$ HIC
Const.	-3.547*** (0.522)	-2.042** (0.673)	-0.611 (0.431)
IR	1.466*** (0.187)	1.032*** (0.255)	0.564*** (0.112)
$\Delta$ rLSE	-22.637*** (1.689)	-26.363*** (3.082)	-17.529*** (4.154)
Adj. R <sup>2</sup>	0.83	0.77	0.70
F test (p-value)	6.07e-07	0.000011	0.003621

Notes: \*\*\* significant at the 99% significance level; \*\* 95% significance level; \* 90% significance level; standard deviations in brackets, number of observation – 8

Source: own calculation

- the average portion of expense to taxable income of taxpayers using the lump sum expense (rLSE),
- the inflation rate (IR),
- GDP growth (gDPG).

All included variables are for the period of 2004–2012. Since the information on expense to taxable income was not available for 2004 and 2005 in the original data set provided by GFD, we have completed these numbers accordingly from the other data. ADF-GLS tests indicate that except of inflation rate the time series are not stationary. We solved this problem using first differences.

We set up three regression models and due to a problem with the autocorrelation heteroskedasticity and autocorrelation we used consistent standard errors (HAC). Results are presented in Tab. II.

In all three models only inflation rate and the change in the average portion of expense to taxable income of taxpayers using the lump sum expense appears as statistically significant. It is quite surprising, that the GDP growth and number of taxpayers using the lump sum expense do not show any influence.

While the inflation rate positively affects the change in the amount of public revenue in all

three models, the change in portion of lump sum expense to taxable income has negative affect. This is consistent with the hypothesis. The degree of negative influence is the highest for social security contribution and the lowest for health insurance contribution. The highest explanatory power (expressed by adj. R<sup>2</sup>) has model with personal income tax revenue. In other two cases the adj. R<sup>2</sup>s are lower. This is logical because a simple linear relationship between the ratio of lump sum expense to taxable income and revenue are disturbed by the existence of minimum and maximum assessment base. The quality of the presented model can be negatively affected by relatively short time series (only 8 observations).

Taking into account the estimated value of the regression coefficients, the increase in the average portion of expense to income of taxpayers using the lump sum expense by 1 percentage point reduces public revenue by CZK 665 million. Consequently, if the empirical data show us, that because of 2008 tax reform the average portion of expense of taxpayers using the lump sum expense increased by about 12 percentage points (in 2006–2008 the average was 51%, while in 2011–2012 it was 63%), the impact on public revenue can be quantified to around minus CZK 8 billion.

## CONCLUSION

The significant increase in the lump sum expense was not separate change in income tax legislation; thus it is very difficult to assess its impacts.

Data acquired from the income tax returns of the self-employed shows continuous growth in the number of taxpayers using the lump sum expense to the total number of taxpayers with income from business activity filing personal income tax return.

The use of the lump sum expense is often criticized and is assumed to significantly lower the tax revenues; negative impact of the lump sum expense on the public revenues also showed in our analysis. However, further analysis should follow to determine all the impacts of the changes in the lump sum expense. For further research it seems reasonable to quantify the scope of administrative savings both of the taxpayers and of the tax administration. This should be compared with estimated revenue cuts to find optimal percentage of the lump sum expense.

Since with becoming the VAT payer, the administrative advantage is practically suppressed (even though the purpose of the evidence is in some aspects quite different from the personal income tax), it should be recommended to limit the use of the lump sum expense only to those taxpayers who are not at the same time VAT payers.

For further support of the small businesses, the coefficient used for the calculation of the assessment base for the obligatory insurance of the self-employed should be used rather than the lump sum expense. This could be fully recommended for the health insurance. For the social security insurance, especial pension insurance, the implications for future benefits would have to be also considered. These measures would allow to remove unsystematic parts in the income tax act, such as limitation of the tax credits supporting families when the lump sum expense are used in dominant part of taxable income.

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**Contact information**

Jana Tepperová: [jana.tepperova@vse.cz](mailto:jana.tepperova@vse.cz)  
Jan Pavel: [pavelj@vse.cz](mailto:pavelj@vse.cz)  
Lenka Láchová: [lenka.lachova@vse.cz](mailto:lenka.lachova@vse.cz)