EFFECTIVE TAX RATE FOR INCOME FROM EMPLOYMENT IN THE CZECH REPUBLIC AND SLOVAK REPUBLIC – A COMPARATIVE STUDY

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Abstract


The objective of this paper is primarily to compare and describe the development of the effective tax rate (relative tax burden) on the taxpayer earning only income from employment and emoluments in the Czech and Slovak Republics. The reason for choosing this type of income has been its importance in terms of the volume of tax collection in the area of natural persons income tax in the Czech Republic. The actual comparison has been performed for the years 2010, 2011 and 2012. In all cases, the legal status was considered that was valid and effective as of 31. 12. of particular year. Comparison of the effective tax rate was performed not only between the individual countries themselves, but also chronologically for individual countries (the Czech and Slovak Republics, respectively). After the general introduction, the relevant legislation as to incomes from employment and emoluments in both countries is explained. A separate chapter discusses the specification of the applied methodology, within which basic starting points and the simplifications applied are defined. Another part of the paper contains outputs from compiled mathematical models. These are presented in the form of graphic outputs and supplemented with commentary.

Czech and Slovak act on incomes taxes, effective tax rate (relative tax burden), employment and emoluments, natural persons

1 INTRODUCTION

The question of taxes was, is and always will be very politically sensitive. This stands to reason, since taxes and other legally established payments (like paying social security and health insurance) often represent large amounts being taken away from the disposable income of payers (voters). But here one must also emphasize that taxes are a crucial source for financing public goods, the scope and level of which causally develop from the amount of collected taxes (or at least in theory such a conclusion is deduced) (Wilson, 1999). An objectively evaluating subject (taxpayer) should thus take into consideration, aside from the effective tax burden, also the volume and quality of public goods that are provided to him. However, in reality the taxpayer himself perceives most sensitively the impact of the tax burden¹. And that, in the opinion of the author, is typical in terms of natural persons income for income from employment and from emoluments. This group of taxpayers, as opposed to those earning income from enterprising and other self-employment activities, has available a more

¹ For the second indicator, i.e. the volume and scope of public goods, one may expect the engagement of the subject mainly in cases where a decrease will occur in the volume and scope of provided public goods; especially if this is coupled with a tax burden increase.
limited spectrum of options of how to optimize (minimize) its tax burden based on Czech law.

1.1 Objective of the paper

This paper endeavours to describe, assess and compare the development of the effective tax rate (relative tax burden) on a taxpayer earning income from employment and emoluments in the Czech and Slovak Republics respectively. The actual comparison has been performed for the years 2010, 2011 and 2012.

1.2 Methodology of elaboration

Taking into account the expressed objectives and chosen method of grasping the problematic, the basic methods used upon elaborating this paper were logical methods, the method of modelling and method of comparison. Through analysis, the basic variables that influence the resulting effective tax rates were identified. Based on performed findings, it was then possible, using synthesis, to assess the links between individual variables and assess the resulting effective tax rate and its course more easily and objectively. However, with regard to the complexity and extent of the problematic, it was necessary to apply abstraction in certain aspects, and upon modelling the function of the effective tax rate on income from employment, certain simplifications were applied. These along with others are specified before presented graphic outputs of mathematical models (see below). Some of the conclusions valid for the given segment of taxpayers earning income from employment are induced generally for the category of taxpayers with income from employment as such. The legal status was considered that was valid and effective as of 31. 12. of a particular year if not stated otherwise.

The structure of the paper is as follows. After the general introduction in which the basic objective of the paper is outlined, the relevant legislation is then discussed in relation to income from employment in the Czech Act No. 586/1992 Coll., on Income Tax, as amended (Czech Income Tax Act – hereinafter “CITA”) and in the Slovak Act No. 595/2003 Coll., on Income Tax, as amended (Slovak Income Tax Act – hereinafter “SITA”). The next part of the paper specifies the data and methodology used for compilation of the mathematical models describing the dependence of the effective tax rate on the total year gross wages. Following part of the paper presents the results of the comparison of the effective tax rates in particular States (the Czech Republic and Slovak Republic) for the years 2010, 2011 and 2012 and an analysis thereof. The final chapter summarizes attained results. It also points out the limits arising due to essential simplification that the author applied when elaborating the paper. There are also briefly outlined the relating problems and questions that offer room for further research.

2 LEGISLATION ON INCOME FROM EMPLOYMENT IN CZECH AND SLOVAK LEGISLATION RESPECTIVELY

Income from employment may currently be considered in many countries as the prevailing method of performing economic activity by natural persons (the Czech Republic may also be considered to be one of these examples). Also speaking of the importance of this income category is the fact that in a number of countries, income from employment is distinguished as a special category of income of natural persons (see e.g. Kesti, 2009; Nerudová, 2011; Široký, 2012).

Income from employment forms a separate tax base in both the CITA and the SITA. This fact itself speaks of the specificity of the given income in terms of the given legislation, and also of the aim of the legislature to establish various rules for taxing the given type of income. Tab. I below lists the basic income categories pursuant to the CITA and SITA respectively. It is necessary to point out that the actual definition of the subject of tax is, in the sense of the categorization of individual types of income,
The effective tax rate for income from employment in the Czech Republic and Slovak Republic – a comparative study

Stable in both acts (having not changed since the effective dates of the acts in question4).

From the actual comparison of Sec 6 CITA and Sec 5 SITA, the common roots of the legislation are clearly evident. In both provisions, we find the same institutes (ex. “economic employer” – Sec 6(2) CITA and 5(4) SITA, and despite the differentiating wording in terms of formulation, the structures of both provisions one can conceive the same (this mainly concerns definition of income falling into the category of income from employment; definition of income that is not the subject of taxation and specification of tax-free income5). The Tab. II below presents a comparison of the types of income that fall into the category of income from employment.

In the monitored years 2010, 2011 and 2012, the definition of income from employment in Czech and Slovak legislation respectively was identical. A change nevertheless occurred at the level of defining income from emoluments in the Czech legislation6. Tab. III gives a comparison of the

4 The CITA took effect on 01. 01. 1993; the SITA, which is more recent, took effect on 01. 01. 2004 (Act No. 595/2003 Coll. derogated Act No. 366/1999 Coll., which also contained the identically defined subject of taxation in terms of categorization of income as did the CITA).

5 The stated structure is simplified and only indicates the basic content of the articles in question.

6 In the Czech legislation, as opposed to the Slovak legislation, two categories of income are strictly distinguished - income from employment (see Sec 6(1) CITA, and emoluments Sec 6(10) CITA).
III: Emoluments pursuant to Sec 6(10) CITA

<table>
<thead>
<tr>
<th>Year 2010</th>
<th>Year 2011 and 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) functional salaries of members of the government, deputies and senators of the Parliament of the Czech Republic and salaries of heads of central state administrative offices,</td>
<td>a) functional salaries and fulfilment provided in relation to current or previous execution of an office, whose amount is determined based by the law regulating salaries and other matters related to performing the office of representatives of state power, certain state bodies and judges, with the exception of the salary belonging to the President of the Republic and compensations related to execution of his office,</td>
</tr>
<tr>
<td>b) remuneration for execution of office in municipal bodies, in other local self-government offices, state bodies, civic and interest associations, chambers and in other bodies and institutions.</td>
<td>b) remuneration for execution of office and fulfilment provided in relation to current or previous execution of office in municipal bodies, in other bodies of local self-government, state bodies, civic and interest associations, chambers and in other bodies and institutions.</td>
</tr>
</tbody>
</table>

Source: author's own elaboration using CITA

IV: Concept of establishing a partial tax base pursuant to Sec 6 CITA and Sec 5 SITA

<table>
<thead>
<tr>
<th>Country</th>
<th>Income pursuant to Sec 6 (Income pursuant to Sec 6)</th>
<th>Expenditures</th>
<th>Partial tax base</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>Income pursuant to Sec 6 ( (I_{sec6}) )</td>
<td>( x )</td>
<td>( I_{sec6} + SS_{employee} + HI_{employee} )</td>
</tr>
<tr>
<td>SR</td>
<td>Income pursuant to Sec 5 ( (I_{sec5}) )</td>
<td>( SS_{employee} )</td>
<td>( I_{sec5} - SS_{employee} - HI_{employee} )</td>
</tr>
</tbody>
</table>

Source: author's own elaboration using CITA and SITA
Note: 1. The label \( SS_{employee} \) (or \( HI_{employee} \)), which is used as a variable for establishing the partial tax base in the Czech Republic refers to social security (or health insurance) paid by the employer for the employee.
2. The label \( SS_{employee} \) (or \( HI_{employee} \)), which is used as a variable for establishing the partial tax base for the Slovak Republic refers to social security (or health insurance) paid by the employee (i.e. premium deducted from the employee's income).

From the performed analysis it is evident that despite the differing wording of the applicable legislation defining income from employment, or income from employment and emoluments, the actual definition of incomes overlaps. This cannot be, however, said of the method of establishing the partial tax base, which is discussed in the following sub-chapter.

2.1 Establishing the partial tax base for income from employment

Establishing the partial tax base may be generally understood as the function of several variables. If we apply simplification that the given income is an income achieved by a tax resident from resources of the state of his tax residence, it is possible to identify in the case of CITA and SITA several basic variables as specified in Tab. IV.

From the actual comparison, it is evident that the concept of establishing the partial tax base in the Czech and Slovak Republics respectively significantly differs in the monitored years. Nevertheless, in this aspect it is appropriate to add that the method of establishing the partial tax base in the Czech Republic was identical with the Slovak Republic until the end of the tax period 2007. Since 01 January 2008, however, a change came where the partial tax base pursuant to Sec 6 CITA is established as a sum of gross wage and social security and health insurance paid by the employer for the employee. From the perform analysis it is evident that the effective tax rate for the listed group of taxpayers represents an notional ceiling, because any other factors (application of other non-taxable parts of the tax base [in the CITA their exhaustive list is contained in Sec 15] or tax reliefs) leads to a decrease in the value of the effective tax rate.

Other starting points and simplification, from which the configured mathematical models are derived, are listed in the following Table V for clarity's sake. The aforementioned basic starting points are again listed for completeness in this table.

3 DATA AND METHODOLOGY

Focusing on the situation in the Czech Republic as to the tax collection from the incomes of natural persons, the income from employment and emoluments is the key type of incomes for tax collection. Compared to the tax collections from the income from enterprising and other self-employment activities, the tax collection from employment and emoluments was significantly higher (9.22 times higher on the average for the period 1993–2012). For more details see the Fig. 1.

The aim of the paper is to set the maximal level of the effective tax rate for the taxation of incomes from employment based on Czech and Slovak legislation in 2010, 2011 and 2012. That is why the author chose as a representative taxpayer (tax resident), who only earns income from employment in the applicable country and who is a single taxpayer with no children applying only the basic tax relief (Sec 35ba(1)(a) CITA), or the basic non-taxable part of the tax base (Sec 11(2) SITA). The reason for this choice is the fact that the effective tax rate for the listed group of taxpayers represents an notional ceiling, because any other factors (application of other non-taxable parts of the tax base [in the CITA their exhaustive list is contained in Sec 15] or tax reliefs) leads to a decrease in the value of the effective tax rate.
There were several reasons for setting the maximum annual income amounts to CZK 2,004,000.00 (EUR 79,713.60 respectively). Firstly, the author intended to demonstrate the influence of the maximum assessments base for insurance premiums (for this reason the considered level of amount is sufficient – see below); secondly, aggregate of all the tax partial bases (Sec 6 of CITA) for a taxpayer up to 2,000,000.00 represented more than 82% of the total sum of the partial tax bases for the years 2005–2009 in the Czech Republic. Besides, the logic dictates that the share of the minimum wage.
number of taxpayers with the assessment base up to CZK 2,004,000.00 will be even higher than the share stated above. The situation can be perceived to be very similar also for the period 2009–2012.

To support the thesis on relevance of the stated income limit and its relevance also for the period 2009–2012, the data of the (Czech Statistical Office, 2013) on household income and living conditions can be indirectly used. Hence, the limit up to CZK 2,000,000.00 can be considered sufficient and predicative.

One of the key terms mentioned very often in the text is the so-called effective tax rate. The indicator of the effective tax rate may be considered, in terms of the actual comparison of the tax burden as opposed to the indicator of the nominal tax rate, as more meaningful. In standard terms, the indicator of the effective tax rate is given as the quotient of two variables as follows:

\[
\text{ETR} = \frac{T}{GI} \times 100 \% ,
\]

where the indicator \(T\) indicates the amount of the resulting tax liability and \(GI\) is the amount of the overall gross income. The thus-conceived indicator of the effective tax rate is indicated as a “fictitious tax burden” (for more information see Schratzenscatter, 2005, p. 92).

The tax, according to the Czech and Slovak legal systems, respectively, of course represents only a part of the required payments influencing (in the given case decreasing) the disposable income of the taxpayer\(^9\). For this reason, it seems appropriate to include into the numerator not just the resulting amount of income tax, but also payments of social security and health insurance paid by the taxpayer (in the given case the amounts paid by the employee). Contributions made to social security and health insurance have, if we compare their features with “classic taxes”, at the very least a character similar to that of taxes\(^10\). For the stated reasons and for the purposes of this paper, this indicator is conceived as follows:

\[
\text{ETR} = \frac{T + SS + HI}{GI} \times 100 \% ,
\]

where the indicator \(T\) again represents the amount of resulting tax liability, the indicator \(SS\) means the amount of social security paid by the employee and the indicator \(HI\) means the amount of health insurance also paid by the employee. In the denominator there is again listed the amount that equals the amount of annual gross income (\(GI\)). For the reasons of this paper, the annual gross income represents the total year sum of gross wages. Thus, a comparability of the indicator will be assured despite different conceptions of the taxable income according to Czech and Slovak legislation.

Another methodical step leading to ascertaining the correct amount of the effective tax rate was an analysis of legal documents with the aim of retrieving the relevant legislation.

The summarization of the attained data is again listed in a table, which enables better comparison of Czech and Slovak legislation respectively (see Tab. VI). Tab. VI lists data for comparison between legislation valid and effective in 2010, 2011 and 2012.

Pursuant to provisions of Sec 52(h)(13) SITA, the amount of the subsistence minimum for the tax period 2010 amounts to EUR 178.92. For 2011, this amount of the subsistence minimum amounts to EUR 185.38. For 2012, the amount of the subsistence minimum amounts to EUR 189.83.

Other very important variables are the amounts of social security and health insurance premiums paid by the employee. For enhanced clarity, the data is again listed in a table. Tab VII contains the Czech legislation, and the following Tab. VIII and Tab. IX then contains the Slovak legislation.

The legislation governing social security and health insurance is relatively wide-ranging in scope, it is complicated and subject to frequent changes. This understandably evokes high administrative demands on both the part of required subjects and on the part of state administration\(^11\).

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\(^9\) Social and health insurance premiums make up a large part of taxpayers’ tax burden and payments realized by employers for their employees both in the Czech Republic and the Slovak Republic (in support of this statement, see e.g. European Commission. Eurostat, 2013).


\(^11\) In this regard, the question of complete integration of natural persons income tax and social security premium has been the subject of an intensive discussion in the Czech Republic (Vančurová, 2010). Already in 1998, a group of experts within the framework of the research project No. HR 151/06 arrived, on the basis of carried out analysis, at the conclusion that integration of collection and enforcement of the aforementioned required payments would contribute to a more significant simplification of this agenda on both the side of required subjects, and on the side of public administration (for further information, see Vlach et al., 2008). The recommendations stated in the research report by Vlach et al. seem to be reflected partially in the current valid legal regulation connected with the establishment of so called “single collection point”.
### VI: Variables for compiling mathematical models according to legislation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Year</th>
<th>CR</th>
<th>SR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal tax rate</td>
<td>2010–2012</td>
<td>15%</td>
<td>19%</td>
</tr>
<tr>
<td>Basic tax relief per taxpayer</td>
<td>2010 and 2012</td>
<td>CZK 24,840 (EUR 988)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>CZK 23,640 (EUR 940)</td>
<td>-</td>
</tr>
</tbody>
</table>

- **Basic non-taxable part of the tax base per taxpayer**
  - **2010**
    - tax base is equal to or lower than 86 times the living minimum: 22.5 times the living minimum
    - tax base is higher than 86 times the living minimum: max (0; [44 times the living minimum – ¼ of the tax base])
  - **2011–2012**
    - tax base is equal to or lower than 100 times the living minimum: 19.2 times the living minimum
    - tax base is higher than 100 times the living minimum: max (0; [44.2 times the living minimum – ¼ of the tax base])

Source: author’s own elaboration using relevant legal standards

### VII: Social security and health insurance paid by the employee based on Czech legislation

<table>
<thead>
<tr>
<th>Year</th>
<th>Type of insurance premium</th>
<th>Czech Republic</th>
<th>Max. amount of insurance premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Social security paid by the employee</td>
<td>6.50% Annual in total for the entire tax period 72 times the average wage (CZK 1,707,048.00; i.e. around EUR 67,901.67)</td>
<td>CZK 110,959.00 (i.e. around EUR 4,413.64)</td>
</tr>
<tr>
<td></td>
<td>Health insurance paid by the employee</td>
<td>4.50% Annual in total for the entire tax period 72 times the average wage (CZK 1,707,048.00; i.e. around EUR 67,901.67)</td>
<td>CZK 76,818.00 (i.e. around EUR 3,055.61)</td>
</tr>
<tr>
<td>2011</td>
<td>Social security paid by the employee</td>
<td>6.50% Annual in total for the entire tax period 72 times the average wage (CZK 1,781,280.00; i.e. around EUR 70,854.42)</td>
<td>CZK 115,783.00 (i.e. around EUR 4,605.53)</td>
</tr>
<tr>
<td></td>
<td>Health insurance paid by the employee</td>
<td>4.50% Annual in total for the entire tax period 72 times the average wage (CZK 1,781,280.00; i.e. around EUR 70,854.42)</td>
<td>CZK 80,158.00 (i.e. around EUR 3,188.46)</td>
</tr>
<tr>
<td>2012</td>
<td>Social security paid by the employee</td>
<td>6.50% Annual in total for the entire tax period 48 times the average wage (CZK 1,206,576; i.e. around EUR 47,994.27)</td>
<td>CZK 78,427.00 (i.e. around EUR 3,199.61)</td>
</tr>
<tr>
<td></td>
<td>Health insurance paid by the employee</td>
<td>4.50% Annual in total for the entire tax period 72 times the average wage (CZK 1,809,864; i.e. around EUR 71,991.41)</td>
<td>CZK 81,443.88 (i.e. around EUR 3,239.61)</td>
</tr>
</tbody>
</table>

Source: author’s own elaboration using relevant legal standards and information of the General Health Insurance Company of the Czech Republic on maximum assessment base and information of the Ministry of Labour and Social Affairs of the Czech Republic

### VIII: Social security insurance paid by the employee based on Slovak legislation

<table>
<thead>
<tr>
<th>Type of insurance premium</th>
<th>Rate</th>
<th>Period</th>
<th>Max. amount of monthly assessment base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social security paid by the employee</td>
<td>6.50%</td>
<td>1 January 2010 – 30 June 2010</td>
<td>Sick-benefit insurance EUR 1,084.55; remainder EUR 2,892.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 July 2010 – 31 December 2011</td>
<td>Sick-benefit insurance EUR 1,116.75; remainder EUR 2,978.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>01 January 2012 – 31 December 2012</td>
<td>Sick-benefit insurance EUR 1,153.50; remainder EUR 3,076.00</td>
</tr>
</tbody>
</table>

Source: author’s own elaboration using relevant legal standards and information published by the Slovak Social Insurance Company
EMPIRICAL RESULTS AND DISCUSSION

Mathematical models were configured using the gained findings on the relevant legislation. These provided the basis for configuring graphic outputs, whereas attention is paid to comparison of the development of the effective tax rate for the tax period 2010, 2011 and 2012.

4.1 Situation in the year 2010

The graph (Fig. 2) describes the situation in the year 2010.

Part describing effective tax rate excluding social and health insurance

It is evident from this graph that despite differing conceptions of establishing the resulting tax liability, the course of the functions is very similar. For very low-income groups, the amount of the effective tax rate according to the CITA and SITA is almost the same. On the contrary, from the level of income in the amount of around EUR 5,600.00, the effective tax rate of natural persons income tax according to CITA is higher throughout almost the remaining monitored interval. From the amount of EUR 31,000.00, the relative difference achieves minimal values (less than 1%). Tax relief, or the non-taxable part of the tax base respectively, have a clear influence on the course of particular functions. Even at the linear tax rate (in CR 15%, in SR 19%), the actual course of the functions is principally progressive, and is moreover very similar in a major part of the interval of the considered income. At the end of the function of the effective tax rate from natural persons income in the case of the Czech Republic there is noticeable a clear influence of the conception of the tax base framed as the sum of the gross wage and social security and health insurance paid by the employer in connection with the existence of the maximum assessment base for social security and health insurance. That is to say, this conception of the tax base in connection with the maximum assessment base for social security and health insurance causes the depression in development of the effective tax rate function.

Part describing effective tax rate including social and health insurance

Up to a certain income level, the effective tax rate is formed solely of social security and health insurance paid by the employee. This fact is apparent from the

IX: Health insurance paid by the employee based on Slovak legislation

<table>
<thead>
<tr>
<th>Type of insurance premium</th>
<th>Rate</th>
<th>Year</th>
<th>Maximum assessment base</th>
<th>Max. amount of health insurance premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health insurance paid by the employee</td>
<td>4%</td>
<td>2010</td>
<td>3 times the average monthly wage in the year 2008 (i.e. EUR 2,169.09 monthly)</td>
<td>EUR 86.76 monthly (EUR 1,041.16 annually)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>3 times the average monthly wage in the year 2009 (i.e. EUR 2,233.50 monthly)</td>
<td>EUR 89.34 monthly (EUR 1,072.08 annually)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012</td>
<td>3 times the average monthly wage in the year 2010 (i.e. EUR 2,307.00 monthly)</td>
<td>EUR 92.28 monthly (EUR 1,107.36 annually)</td>
</tr>
</tbody>
</table>

Source: author’s own elaboration using relevant legal standards and information published by the Slovak General Health Insurance Company

2: Effective tax rates in 2010
Source: author’s own elaboration
courses of both effective tax rate functions. This graph also shows the explicit visible influence of maximum assessment bases for social security and health insurance in both the Czech Republic and Slovak Republic. In reality, the degression element means that the effective tax rate is already influenced just only by the growth in earned income, whereas the amount of social security and health insurance remains constant (its relative share in the effective tax rate thus decreases with the growing income).

### 4.2 Situation in the year 2011

As obvious from the Fig. 3, the situation for the year 2011 is fairly similar to that of the year 2010. However, there are some changes in the course of the functions of the effective tax rates reflecting legislative changes made.

**Part describing effective tax rate excluding social and health insurance**

From the graph the influence of legislative changes is apparent in cases of both particular States. With regard to the decrease in the tax relief pursuant to Sec 35ba(1)(a) CITA by CZK 1,200 per year and with regard to the change in the maximum assessment base for social security and health insurance, an increase occurred in the values of the effective tax rate for the whole monitored interval of total year gross wages in case of the Czech Republic. Such a unique conclusion cannot be made for the situation when comparing the effective tax rate for 2010 and 2011 for the Slovak Republic. The values of the effective tax rates are very similar for high incomes level. On the other side, there is a conspicuous increase in the values of the effective tax rate for the incomes at the beginning of the function that is caused by decreasing of the non-taxable part of the tax base for the interval in question.

**Part describing effective tax rate including social and health insurance**

In 2011, there was an increase in maximum assessment bases for social and health insurance leading to higher payments for these contributions both in the Czech Republic and Slovak Republic. In general, the above-mentioned contributed partly to increasing the total effective tax rate and partly to moving the inflection point (i.e. the income level from which the function course has a degressive character) – however, the size of changes is marginal.

### 4.3 Situation in the year 2012

The Fig. 4 shows a comparison for the last reference year, i.e. 2012.

**Part describing effective tax rate excluding social and health insurance**

In the case of Czech legislation, decreasing the assessment base for social insurance to a 48 multiple of average income was the most significant change in terms of effective tax rates. In the case of the Czech Republic, a repeated increase of the amount of tax relief per taxpayer to the original amount of 24,840 CZK (amount corresponding to the level as stated in 2010) was transposed in the total slight decline in the effective income tax rate in the whole reference interval. As for the Slovak Republic, changes were minimal (in the reference interval of income considered, the change ranged from −0.39% to 0.00% compared to the previous year).

**Part describing effective tax rate both including social and health insurance**

When considering social and health insurance contributions paid by employees, the effect of the change consisting in decreasing the maximum assessment base for social insurance to a 48 multiple of average income has become even more obvious.
Two partitions of the function are clear from the course of the effective tax rate function in the Czech Republic – the first partition corresponding to the maximum assessment base for social insurance and the second partition to the maximum assessment base for health insurance. In the case of the Slovak Republic, changes in effective tax rates were insignificant, even when considering social and health insurance contributions – they ranged from −0.39% to 0.30%.

4.4 Comparison of the effective tax rates between the Czech Republic and Slovak Republic for the reference years

The Fig. 5 shows a comparison of effective tax rates without social and health insurance in the Czech Republic and in the Slovak Republic for the reference years.

As shown in the Fig. 5 above, the differences in relative tax burdens of the reference category of taxpayers are minimal (maximum absolute value of difference is 2.06%). It is also clear from this graph that in the Czech Republic, the tax burden is higher for high-income taxpayers (with the exception of 2012 bringing positive change from the perspective of taxpayers consisting in decreasing the maximum assessment base for social insurance). In the reference periods (2010–2012), Czech low-income taxpayers were contrarily subject to the lower tax burden compared to Slovak taxpayers.

The Fig. 6 shows the results of comparing the effective tax rate considering also the social and health insurance premiums.

That comparison showed that in the Czech Republic, the effective tax burden considering social and health insurance is higher for high-income taxpayers. However, the differences do not
reach too high levels. Though, despite the similarity of the results achieved, gradual convergence of legal regulations of taxation of income from employment cannot be deduced without a deeper analysis. It is caused by the fact that the Czech legal regulations and Slovak legal regulations have common foundations, which makes the deduction of such conclusions more complicated, as well as by the fact that the author's attention is focused only on a certain category of taxpayers.

4.5 General summery of the results and discussion

To sum the results up, the reached results unambiguously demonstrate that an indicator of a nominal tax rate is not a predicative one and that despite different nominal tax rates and despite different conception for assessment of the taxable income, the function of the effective tax rate can be very similar. Furthermore, the graphical results based on drawn mathematical models demonstrate substantial influence of social security and health insurance premiums on disposable income of a taxpayer. The graphs that represent outputs of compiled mathematical model also demonstrate an influence of the tax relief, or the non-taxable part of the base respectively, which lead to progressiveness in the course of the functions of the effective tax rates. At the same time the paper also gives evidence for positive impact of maximum assessment base for social security and health insurance on effective tax rate for taxpayers with high incomes in both countries – the maximum assessment base for the insurance by contrast causes a depression in the course of the functions of the effective tax rates.

Upon deducing general conclusions, however, it is necessary to consider the defined stipulations and simplifications. The stipulated group of taxpayers is made up of single persons with no children, who are at the same time tax residents of the relevant country. Taxpayers only apply the basic tax relief or the basic non-taxable part of the tax base. For this reason, one may deduce that the ascertained level of relative tax burden (effective tax rate) may be perceived as a notional ceiling. Furthermore, the model functions are only configured for a certain interval of earned income. Of course, on the other hand this concerns the interval covering the major part of the spectrum of taxpayers in terms of the frequency of the appearance of given income in the population (see the justification in the text of the paper above).

The outputs presented in this paper may be understood and used as outputs for widening research and analysis. The results could be extended by an analysis for other categories of taxpayers with incomes from employment and emoluments (e.g. families with children) and for other taxable periods. From the view of relative tax burden assessment, it would be suitable to compare the effective tax rate for the income category in question with that one for income from enterprising and other self-employment activities. The comparative analysis could be also extended by a comparison with other EU Member States (especially with the neighbouring ones). In this respect it could be also interesting to compare the influence of the case-law of the European Union Court of Justice on legal regulation of taxation of incomes from employment in EU Member States. That is to say, despite the fact that legal regulation of taxes in particular Member States differs significantly (Tvč, 2010, p. 250), one cannot omit the role of above mentioned Court as an institution establishing general principles of acceptable tax policy for the EU as a whole (Genschel and Jachtenfuchs, 2001, p. 300).
5 CONCLUSION

In the case of the Czech Republic and Slovak Republic, the carried out comparison of effective tax rates made is further prima facie evidence that a nominal (statutory) tax rate need not be an informative (and plausible) indicator for a comparison in the case of natural person income tax. As indicated by the above-mentioned results, different nominal rates in connection with different conceptions of determining the final tax liability do not mean substantial differences in the real tax burden of the taxpayer. This fact should also be taken into consideration by business entities when planning their economic activities and while evaluating an external environment, its development and subsequently its impact on the course of their business. This question is particularly timely when speaking of eliminating business and other barriers which results in spreading the interest spectrum of business entities even outside the state of their place of business (or better to say state of residence). Then, the comparison of effective tax burdens of employees in connection with identification of other statutory payments for employees is not only a theoretical question but utterly important and practical one. Unmistakably, knowledge of legal environment and necessity of monitoring its development are constantly underestimated in that regard – in this respect, a prevailing trend is to realize only rough analyses the outputs of which have little explanatory power. The impossibility (or unwillingness) given to cover relevant aspects and focus on effective tax rates can be largely attributed to the comprehensiveness and complexity of legal regulations.

The author of this paper takes the view that the legal regulations of both states, i.e. of the Czech Republic and Slovak Republic, are relatively complicated. This is to some degree a result of the fact that the legal regulations included in the income tax act are closely tied to legal regulations in other acts. Nevertheless, basic rules were irrevocable and there were only partial changes, which cannot be described as system changes, in the reference period.

5.1. Results of the comparison made

The following can be mentioned with regard to the results of the comparison of legal regulations and effective tax rates for the reference categories of taxpayers made. The legal regulations governing taxation of income from employment in the Czech Republic and in the Slovak Republic show great similarities. The author believes that the above-mentioned cannot be attributed to gradual convergence of legal regulations but rather to common foundations of these legal regulations. In terms of comparing effective tax rates in individual years, the author of the paper considers interesting the fact that the maximum difference of effective rates excluding social and health insurance paid by employees is 2.06% and in the case of effective rates including social and health insurance paid by employees, it is not more than 5.33%. In view of the fact that the Czech and Slovak legal regulations are significantly different, the differences given can be considered surprisingly low. With these differences, the author refers especially to the different tax rate (15% in the Czech Republic versus 19% in the Slovak Republic), different conception of a partial tax base of income from employment (super gross wage in the Czech Republic versus income decreased by insurance paid in the Slovak Republic), different conception of a basic item decreasing the final tax liability (tax relief per taxpayer in the Czech Republic versus a non-taxable part of the tax base in the Slovak Republic) and last but not least to the different rates and maximum assessment bases for social and health insurance. On the other hand, the last mentioned, i.e. existence of the concept of maximum assessment bases for social and health insurance, can be considered a significant common feature of legal regulations which causes a degressive course of functions of effective tax rates.

In terms of the criterion of benefits for taxpayers, it can be stated that when considering social and health insurance contributions paid by taxpayers, the situation in the Czech Republic was slightly more favourable for low-income taxpayers and middle-income taxpayers in the reference period 2010–2012 (roughly up to the level of income oscillating around 36 thousand EUR – the situation

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12 According to the opinion of the author of this paper, this is closely connected with the issue of Competitive Intelligence that represents a very broad system application discipline that has to deal necessarily with a general and industrial environment of an enterprise (see e.g. Bartes, 2010; Bartes, 2011).

13 Such as a comparison of nominal tax rates only.

14 An example of such a system change can be e.g. changing the conception of determining a partial tax base. This is the situation which should occur in the Czech Republic from 1 January 2015 (see Czech Income Tax Act, as applicable with effect from 1 January 2015).

15 Slovak legislators proceeded to introducing a progressive tax rate (see Section 15 of SITA). The rate of 19% is applied to the part of the tax base which does not exceed a 176.8 multiple of the sum of actual subsistence minimum (included); the rate of 25% is applied to the amount exceeding the limit given.

16 It is also interesting to note that the Czech Republic refrained from applying the maximum assessment base for health insurance in connection with efforts to prevent a worsening of public-sector deficits with effect from 1 January 2013 to 31 December 2015 (see Article VIII, Section 3d of Act 500/2012 Coll.).
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is slightly different in individual years; see Fig. 6 above.

With regard to the trend in the tax burden development in 2010–2012, no dynamic changes can be seen within individual States as it is clear from Fig. 7.

In the case of the Czech Republic, the differences fell within the interval \((-2.99\%; 0.00\%\) in the case of the Slovak Republic, the changes fell within the interval \((-0.42\%; 1.55\%\). However, the changes in the effective tax rates can be taken as an indication of minor legislation changes which cannot be compared to those resulting in a significant decrease in the tax burden of taxpayers and those typical (at least for the Czech Republic) for the development until year 2008 (for details see Brychta, 2010).

It can be summed up that the Czech Republic as well as the Slovak Republic count amongst the States which backed from the trend of decreasing the tax burden of employees (or natural persons in general). The above-mentioned is also supported by legislation changes for 2013 which contrarily result in increasing the tax burden – in the Czech Republic, it is e.g. a solidarity surcharge tax for high-income taxpayers or eliminating the maximum assessment base for social insurance; in the Slovak Republic, one of the most obvious changes is introducing a progressive tax rate for taxation of natural person income where the income in the second range is taxed at 25%.

7: Differences in effective tax rates including social and health insurance in both States (comparing 2012 to 2010)
Source: author’s own elaboration

SUMMARY

The objective of this paper was primarily to describe the development of the effective tax rate (relative tax burden) on the taxpayer earning only income from employment and emoluments in the Czech and Slovak Republics. The actual comparison has been performed (both excluding and including social and health insurance premiums paid by the employee) for the years 2010, 2011 and 2012. In all cases, the legal status was considered that was valid and effective as of 31. 12. of particular year. Comparison of the effective tax rate was performed not only between the individual countries themselves, but also chronologically for individual countries (the Czech and Slovak Republics, respectively).

The carried out comparison of effective tax rates made is further prima facie evidence that a nominal (statutory) tax rate need not be an informative (and plausible) indicator for a comparison in the case of natural person income tax. As indicated by results reached, different nominal rates in connection with different conceptions of determining the final tax liability do not mean substantial differences in the real tax burden of the taxpayer (in the effective tax rate).

In terms of comparing effective tax rates in individual years, the author of the paper considers interesting the fact that the maximum difference of effective rates excluding social and health insurance paid by employees is 2.06% and in the case of effective rates including social and health insurance paid by employees, it is not more than 5.53%. In view of the fact that the Czech and Slovak legal regulations show significant differences, the differences in the effective tax rates can be considered surprisingly low. With these differences, the author refers especially to the different tax rate (15% in the Czech Republic versus 19% in the Slovak Republic), different conception of a partial tax base of income from employment (super gross wage in the Czech Republic versus income
decreased by insurance paid in the Slovak Republic), different conception of a basic item decreasing the final tax liability (tax relief per taxpayer in the Czech Republic versus a non-taxable part of the tax base in the Slovak Republic) and last but not least to the different rates and maximum assessment bases for social and health insurance.

In terms of the criterion of benefits for taxpayers, it can be stated that when considering social and health insurance contributions paid by taxpayers, the situation in the Czech Republic was slightly more favourable for low-income taxpayers and middle-income taxpayers in the reference period 2010–2012.

As to the trend in the tax burden development in 2010–2012, no dynamic changes can be seen within individual States. The changes in the effective tax rates (both excluding and including social and health insurance premiums paid by the employees) can be taken as a result of minor legislation changes which cannot be compared to those resulting in a significant decrease in the tax burden of taxpayers and those typical (at least for the Czech Republic) for the development until 2008.

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