Independence between the Efficient Tax Rate and Tax Progressiveness in the Czech Republic During 1993 – 2007

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Abstract

There has been a discussion on simplification of personal income tax in many European Union member states since 2000. The countries of Central and Eastern Europe in particular tend to consider a new tax phenomenon – a flat tax rate. This has been a part of the tax system in the Czech Republic since January 1, 2008 as well. The nominal tax rates predicate the real rate of taxation insufficiently. A more objective way to measure the tax circumstances of the taxpayers in individual countries is relative indicators such as the tax incidence of taxpayers with an average wage, the calculation of an efficient tax rate or measuring the tax progressiveness. This paper shows that changes in the efficient tax rate do not have to influence the relevant change of tax progressiveness. The aim of this paper is to show the impact of personal income tax changes on the efficient tax rate and the tax progressiveness in the Czech Republic.

Keywords: *average wage, efficient tax rate, flat tax rate, personal income tax, tax liability, tax progressiveness*

JEL Classification: H21, H22, H24

Introduction and Aim of the Paper

Recently (since 2000), there has been discussion in most EU member states[1] about possible elimination of the complications in relation to personal income tax. The countries of Central and Eastern Europe in particular tend to consider a new tax phenomenon – a flat tax rate.[2]

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[1] The schemes of personal income tax in the member countries of the European Union are varied, they can differ by the possibility of taking into account the social aspect of the taxpayer

That was introduced in 2004 in Slovakia and since January 1, 2008 it has been a part of the tax system in the Czech Republic as well.

Such a rate is – viewing the existence of deductibles, allowances or tax credits – progressive tax[3] as well, though. Moreover, the nominal tax rates predicate the real rate of taxation insufficiently. A more objective way of measuring the tax circumstances of taxpayers in individual countries is relative indicators such as the tax incidence of a taxpayer with an average wage, the calculation of an efficient tax rate or measuring the tax progressiveness.

The aim of this paper is to ascertain the ambiguous relationship between changes in the efficient tax rate and tax progressiveness (using the example of an employee's personal income tax). The reflection of these changes is analysed on the basis of the example of personal income tax in the Czech Republic. A relatively long analysed period (its lower boundary is qualified by the implementation of the current tax system in the Czech Republic and the upper boundary is qualified by the implementation of an even tax rate) leads to the possibility of theoretical generalization. The achieved results and adopted methodology can help to evaluate the changes of the tax system in other countries.

1. Determination of Questions and Adopted Methodology

The efficient tax rate (*ETR*) can be defined in three different ways depending on the tax liability definition (which deliveries include in the tax liability).[4] The ETR_T index was defined as the ratio of the personal income tax[5] to the gross income with regard to the aim of the paper

$$ETR_T = \frac{T}{Y} \text{ x } 100 \text{ [\%]} \tag{1}$$

(number of dependant children, disability) either in the form of deductible items from the tax base, tax credit or in the form of tax abatement. The schemes can also differ by the number of tax brackets, tax rates in the tax brackets and tax progressiveness. 17 tax brackets could be found in Luxemburg, but only one tax rate in Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Romania and Slovakia as at December 31, 2008.

[2] Authors purposely avoid the term "flat tax", because at deductibles, allowances or tax credits existence, "flat tax" will always be progressive tax and theoretically the value of an efficient tax will achieve the "flat tax" value in infinitude.

[3] It is interesting to see the approach applied in Slovakia: since the even tax rate was introduced, the basic deductible is 19.2 times the living wage. Since 2007, however, in the case of taxpayer who exceeds 100 times the living wage, the value is reduced.

[4] This problem appears especially during the ETR calculation in states, where next compulsory taxes are incorporated into the personal income tax (solidary contribution, church tax, local tax etc.)

[5] For the reason of the defined taxpayer authors do not distinguish the tax liability from the paid tax in fact that can differ in the final statistical data.

Moreover the ETR_{T+SSC} index was calculated for the purpose of total efficient burden monitoring. The ETR_{T+SSC} index also includes social security contribution (*SSC*) paid by the employee:

$$ETR_{T+SSC} = \frac{T + SSC}{Y} \text{ x } 100 \text{ [\%]} \tag{2}$$

A comparison of ETR_T and ETR_{T+SSC} shows the importance of social insurance payments in the total tax payments of the employee.

Tax acts do not work with the average rate; it is construed by the tax theory for measuring the tax burden.

1.1. Tax Progressiveness

While the degree of the tax burden only tells what part of their income the taxpayers income in form of tax, the degree of progressiveness characterizes the degree of difference of the tax burden of individual taxpayers according to their income (Kinkor, 1994, p. 455).

According to the tax progression, tax can be proportionate, progressive and regressive. Tax is progressive[6] if the average tax rate increases together with growth of the gross income, and there are more characteristics: e.g. we can say that tax grows more quickly than income.

If according to the valid tax theory the most important tax principles are equity and efficiency, a degrease of the tax progressiveness will influence both these factors.

If tax principles $$(PT) = \Sigma \{E; S; \alpha\} \tag{3}$$

where

E – efficiency,
S – equity,
α – other tax principles, the number is different according to particular authors, in this paper α – constant.

There is an effort to fill the tax principles more during improvement of the tax system (*IQTS*):

$$IQTS = \uparrow(PT) = \Sigma \{\uparrow E; \uparrow S; \uparrow \alpha\} \tag{4}$$

while α changes abstraction:

[6] In analyzing the tax progressiveness, we cannot forget the term that is often confused with it, i.e. progressiveness of the tax rate. This represents the method of calculating tax from tax base; in practice it is an algorithm of determining the tax liability (progressiveness of the tax rate − amount of the respective tax/tax base). In a progressive tax rate the tax growth is relatively quicker that the tax base growth.

$$IQTS = \uparrow(PT) = \Sigma \{\uparrow E; \uparrow S; \alpha\} \quad (5)$$

However tools for some tax principles realisations react antagonistically, that is the case of changes in tax progressiveness as well. If the equity and efficiency of the tax system are being raised through the tax progressiveness changes (π), following situation will come at short notice:

$$IQTS_{\pi} = (PT)_{\pi} = \Sigma \{\uparrow E; \downarrow S; \alpha\}, \text{ eventually} \quad (6)$$

$$IQTS_{\pi} = (PT)_{\pi} = \Sigma \{\uparrow S; \downarrow E; \alpha\}, \text{ which means} \quad (7)$$

that flat tax rate implementation (without the existence of deductibles, allowances or tax credits) would increase the tax efficiency (in terms of levying, controlling or administration), by contrast, the effort to raise the equity will lead to the larger system complexity.

The tax progressiveness is an oft-discussed topic by tax theorists, politicians and economists (Caminada and Goudswaard, 2001, p. 84). Its solution is not only an economical question – it refers to ethics or morality as well, because it has to choose between situations of subjects with various social positions.

In economics we will not find an answer to the question whether it is proper to remove one unit from a subject with the higher income and give this unit or less to a subject with lower income. The role of economists goes back in these questions and implications of various process and approaches among which politicians decide become more important (Slemrod, 1994, p. 158). The category „tax progressiveness“ can be ranked among political economy (at large Maková and Široký, 2007).

The first mentions of models analysing the income taxation process with progressive tax rates may be found in Edgeworth. His analyses provide a fundamental starting point for discussions on modern income-distributing models. Edgeworth analysed implications of the concept of minimal sacrifice, and examined the hypothesis of identical preferences and decreasing marginal benefit. According to Pigou, the marginal benefit is decreasing if income is increasing, however, no government has access to relevant information about subjective benefits, so any redistribution is merely “second best“ (Mirrlees, 1971, p. 281).

1.2. Progressiveness of the Tax Liability

The tax theory distinguishes the local and global progressiveness.[7] Local (point, interval) progressiveness measures the change of the average rate in one point or between two selected points in the income scale and it is closely linked to effective taxation. The outcomes of its analysis can help to specify the income intervals where the tax progressiveness is the highest or the lowest, in what income

intervals there is an eventual break-even point in tax progression, i.e. when tax changes from one form (e.g. progressive) to the other form (proportional or regressive). Then, the results can determine which group of taxpayers bears the relatively largest part of the tax burden.

In specialized literature (f.e. Musgrave and Musgrave, 1994, p. 333) we can mostly see three ways of measuring local progressiveness: progressiveness of the average rate, tax liability and earning after taxation.[8] In order to come up to the objective of the essay, an indicator of tax liability progressiveness was applied, which represents elasticity of tax liability with regards to the income before taxation:

$$\text{Progressiveness of the tax liability } (PTL) = \frac{\%\Delta T}{\%\Delta Y} = \frac{\frac{T_1 - T_0}{T_0}}{\frac{Y_1 - Y_0}{Y_0}} \qquad (8)$$

where Y is the income before taxation and T is the tax liability. Indexes 0 and 1 relate to marginal points of the income interval, in which the progressiveness is measured.

If the value of PTL is 1, it is proportional tax; in the case that the PTL is higher than 1, the tax is progressive (or regressive, if the PTL is lower than 1).

1.3. Using of the Average Wage Multiple

If such a methodology is chosen (Musgrave and Thin, 1968) the standard procedure is that indices 0 and 1 are matched with marginal values of the income interval, and cannot be changed for the time of the examination. This approach, however, represents a fixation of the values whose real valuation is changing (or decreasing) with time. If a fixed interval has been taken into account, then the result would be a comparison of the tax progressiveness along the interval, and a determination of how the changes in the construction of the tax (allowances, deductibles, tax brackets and tax rates within them, tax credits) affected the degree of the progressiveness within the interval defined by means of fixed nominal margins. The question is whether or not such a methodology makes sense in case of the Czech Republic, and whether or not relevant results may be reached at all. As for the Czech Republic, the average employee gross wage in 2007 when compared

[7] Indices of global progressiveness are mostly oriented on the Lorenz method of analysis of income distribution. The most popular are the Lorenz curve and the Gini coefficient, Musgrave-Thin index, Kakwani index, Suits index, Atkinson index, Robin Hood index and Theil index. For the purposes of this paper they will not be described in detail.

[8] Authors tend to test the predicative merit of all three indices in conditions of the Czech Republic in 1993 – 2008 in possible next paper.

to 1993 is 3.63 times higher. The values of the average wage in the Czech Republic, their total and year-on-year growth are shown in Table 1 and Graph 1.

T a b l e 1

Development of the Average Wage in the Czech Republic in 1993 – 2007

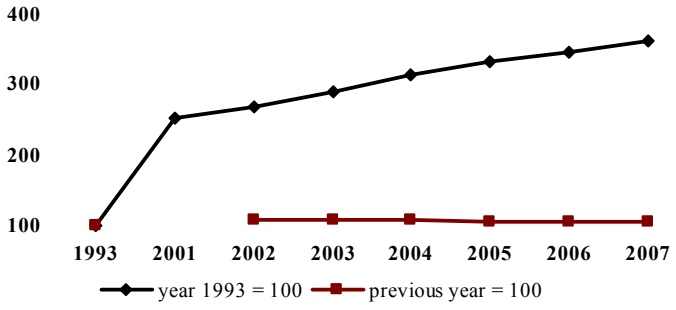
Year	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
***Average wage* [CZK]**	5,817	6,894	8,172	9,676	10,691	11,693	12,666	13,490
Year 1993 = 100	100.00	118.51	140.48	166.34	183.79	210.01	217.74	231.91
Previous year = 100	100.00	118.51	118.54	118.40	110.49	109.37	108.32	106.51
Year	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	
***Average wage* [CZK]**	14,642	15,707	16,917	18,250	19,406	20,211	21,119	
Year 1993 = 100	251.71	270.02	290.82	313.74	333.61	347.45	363.01	
Previous year = 100	108.54	107.27	107.70	107.88	106.33	104.15	104.49	

Source: Czech Statistical Office.

Therefore, the procedure has been modified, and the margin values of the intervals are matched to average wage adjusted by coefficients equal to the particular multiple of the average wage. Viewing the level of the intervals, the average wage represents an independent variable. The main advantage of this modified approach is the relatively constant number of the taxpayers within the individual intervals analysed, taking into account the fact that the income "scissors" have been opening[9] widely. When applying this method of the determination of the interval margin values, you may discover how the tax progressiveness is changing in the case of a taxpayer that stays within the same income interval for the whole period examined.

G r a p h 1

Year-on-year Development of the Average Wage Growth in the Czech Republic in 1993 – 2007



Source: Own calculations.

[9] In the Czech Republic, for example in 2007, 68% employees were earning below-average wages.

For the purposes of the analysis, an employee was chosen as a representative of the majority of the "active" taxpayers. He claims only the basic tax allowances (in 1993 – 2005), or tax credit (in 2006 and 2007).

2. Results

The calculations of the efficient tax rate and the tax progressiveness of personal income tax in the Czech Republic cover the period 1993 – 2007, income categories 0.50; 0.67; 1.00; 1.33; 1.67 and 2.00 multiple of the average wage; a lower average wage is not so predicative for the taxpayer's income (social security benefit influence), higher incomes refer to minimum of employee.

2.1. Development of the Construction of the Personal Income Tax in the Czech Republic

In the Czech Republic three methods have been used when taking into account the inflation since the tax system reform in 1993. It includes: increasing tax-relieves, adjustment of the tax rates and adjustment of the tax brackets. The exemption limit was considered the basic tax allowance, whose worth was raised annually during the period 1993 – 1999 (and in 2001 as well). The substitution of the tax allowances with tax credits in 2006 was profitable for taxpayers according to the amount of their other incomes.[10]

In period 1993 – 2000 number of tax brackets was lowered from the previous six (1993 – 1995) to five (1996 – 1999) and four (by 2007), in 1993 (47%), 1994 (44%), 1995 (43%), 1996 (40%) and 2000 (32%) the highest marginal tax rate was lowered as well. On the other hand the lowest marginal tax rate (15%) was not changed until 2006, in next two years it was 12%. The tax bracket with the lowest tax rate was enlarged in 1996, 1998, 1999, 2001 and 2006.

T a b l e 2

Precept for the Progressive Tax Rate in the Czech Republic in 1993

From the tax base		Tax
From (CZK)	To (CZK)	
---	60,000	15%
60,000	120,000	9,000 CZK + 20% from the tax base over 60,000 CZK
120,000	180,000	21,000 CZK + 25% from the tax base over 120,000 CZK
180,000	540,000	36,000 CZK + 32% from the tax base over 180,000 CZK
540,000	1,080,000	151,200 CZK + 40% from the tax base over 540,000 CZK
1,080,000	and more	367,200 CZK + 47% from the tax base over 1,080,000 CZK

Source: Collections of laws.

Tables 2 and 3 show the sliding tax rate only in 1993 and 2007, Table 4 shows the calculation used when the wage is e.g. 20,000 CZK in the analyzed period.

Table 3

Precept for the Progressive Tax Rate in the Czech Republic in 2007

From the tax base		Tax
From (CZK)	To (CZK)	
---	121,200	12%
121,200	218,400	14,544 CZK + 19% from the tax base over 121,200 CZK
218,400	331,200	33,012 CZK + 25% from the tax base over 218,400 CZK
331,200	and more	61,212 CZK + 32% from the tax base over 331,200 CZK

Source: Collections of laws.

Table 4

Tax Flow Diagram in the Czech Republic in 1993 – 2007

	Institute (CZK)	1993 – 2005	2006 and 2007
W	**Annual Gross Wage**	**240,000**	**240,000**
SSC	social security contribution paid by the employee (SSC =W x 0.125)*	30,000	30,000
A	tax allowances**	38,040	---
BT	tax base (rounded on hundreds down)	171,000 [W – (SSC + A)]	210,000 (W – SSC)
GT	tax before credit	24,006	31,416
C	tax credit	---	7,200
T	final tax after credit (T = GT – C)	24,006	24,216
T + SSC	tax + social security contribution paid by the employee (T + SSC = T + SSC)	54,006	54,216

* The social security contribution rate (includes the health insurance, the disability insurance, the pension insurance, the unemployment insurance) was 13.5% in 1993, 12.75% in 1994 and 1995.

**Development of allowances values (CZK): 20,400 (1993); 21,600 (1994); 24,000 (1995); 26,400 (1996); 28,800 (1997); 32,040 (1998); 34,920 (1999 and 2000); 38,040 (2001 – 2005).

Source: Own calculations.

2.2. Changes in the Efficient Tax Rate

The ETR_T values are shown in Table 5A and Graph 2. ETR_T development shows increasing tax burden with all income groups in 1993 – 2005 with the exception of 1998 and 1999 (with all kinds of taxpayers) and 2001 (with the two lowest income groups). The values in bold show this in Table 5A. The reason was especially the enlargement of the tax brackets with the lowest tax rate (15%). In 2006 the ETR_T was lowered in the case of taxpayers with less than a 1.67 multiple of the average wage, it was due to the substitution of the

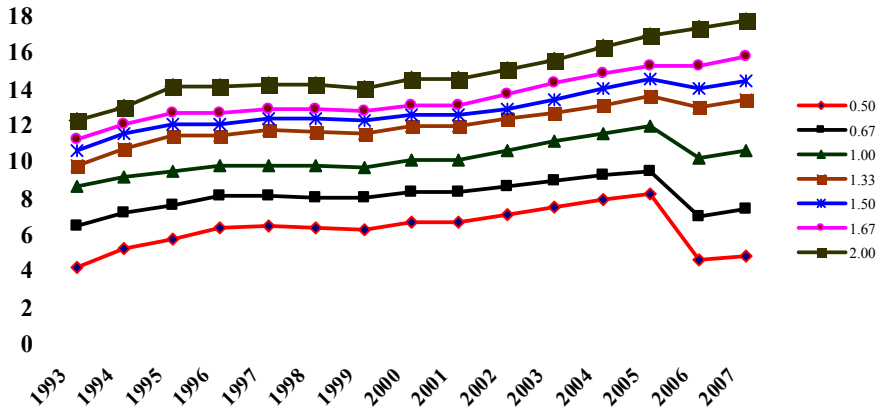
[10] The taxpayer whose tax base was in the first tax brackets made a profit on the change CZK 2,635 (positive difference between the tax credit and the absolute tax savings (38,040 x 0.12), vice-versa the taxpayer from the highest tax brackets lost CZK 4,973 (negative difference between the tax credit and the absolute tax relief (38,040 x 0.32).

allowances with the tax credit. The changes made in 2006 result in the fluctuation of ETR_T.

Changes made in 2006 cause greater ETR_T fluctuations, which break anticipation of the taxpayer's tax burden. There is also great differentiation between the taxpayer on the lower boundary and the upper boundary of the examined interval (0.5 times and double the average wage). From 1993 – 2005 this difference moved from 7.74 percentage points (in 1999; in 1993 it was 8.05) to 8.67 percentage points (in 2005), in the last two analysed years its values have been 12.80 and 12.93 percentage points.

Graph 2

Development of the Tax Burden (only tax) of the Employee with the Average Wage Multiple in the Czech Republic in 1993 – 2007



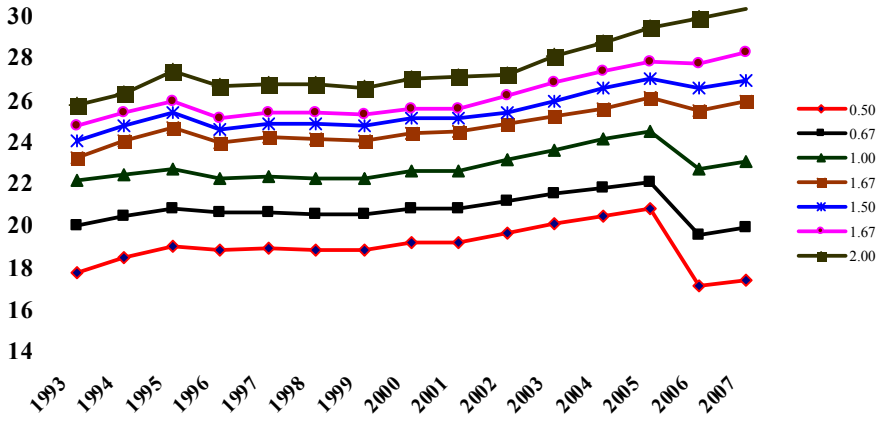
Source: Own calculations.

The development of ETR_{T+SSC} copies the ETR_T trend, which is comprehensible with regard to the linear rates of social insurance payments. The values of ETR_{T+SSC} are shown in Table 5B and Graph 3. Calculated values in Table 5B confirm increasing tax burden of the employee by the fact of an increasing number of taxpayers whose tax is higher than their social insurance payments. While in 1993 and 1994 the social insurance payments were higher than tax for all taxpayers, in 1995 personal income tax was higher than the social insurance payments for taxpayers with twice the average wage, in 1996 this phenomenon occurred for employees with 1.67 times the average wage, in 2000 for employees with 1.5 times the average wage and since 2003 personal income tax has been

higher than social insurance payments for employees with 1.5 times the average wage (bold numbers in Table 5B).

Graph 3

Development of the Tax Burden (tax and social security contribution) of the Employee with the Average Wage Multiple in the Czech Republic in 1993 – 2007



Source: Own calculations.

Table 5B also shows the ratio of social insurance delivery to the total employee's delivery. Despite the fact that the ratio of social insurance payments is lowering, since 2003 the burden of social insurance delivery has exceeded the tax delivery burden in the case of employees earning average wage.

2.3. Changes in the Tax Progressiveness

Table 5C and Graph 4 show the tax progressiveness values.

The Graph 4 shows the expected premise about the highest tax progressiveness in the lowest income interspace (from 0.5 to 0.67 average wage multiple) with the exception of 2004 and 2005. The highest PTL in this income interspace is caused by tax construction, i.e. the existence of allowances, or tax credit. The introduction of tax credit in 2006 raised the PTL increase.

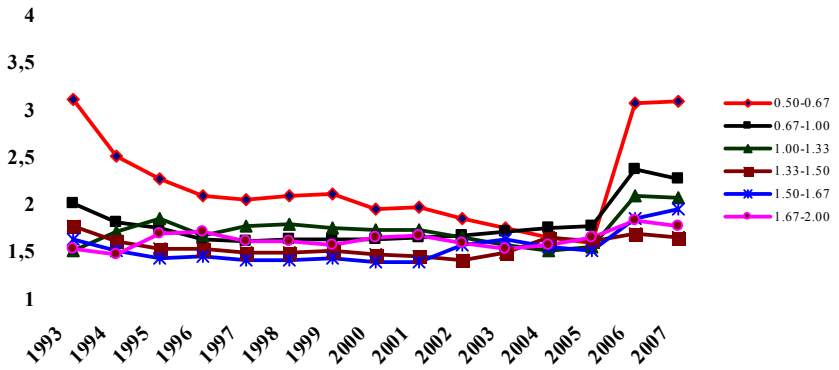
The values showed in Table 5C support the hypothesis concerning no interconnection whatsoever between the tax burden (effective tax rate) and tax progressiveness.[11] The bold numbers in Table 5C show the PTL growth compared to

[11] For reasons of the static and flow character of the value. It can happen that e.g. efficient tax rate will be lowered for two taxpayers from nearby examined intervals, but in that the decline is less for the taxpayer with a higher income, the tax progressiveness will increase paradoxically!

the previous period. In 1998 and 1999 when the tax burden was lowered for all taxpayers, tax progressiveness increased in most cases (bold numbers). Increasing the tax progressiveness is caused by changes of allowances, tax brackets and tax rates. The increase of the tax progressiveness in 2006 with all income groups was caused by introducing tax credits instead of tax allowances, thus the same absolute deduction from the tax liability with all taxpayers.

Graph 4

Development of the Tax Progressiveness of the Employee with the Average Wage Multiple in the Czech Republic in 1993 – 2007



Source: Own calculations.

3. Discussion and Conclusion

For the purposes of the paper, a taxpayer/employee was chosen, who claims only the basic allowances (from 1993 – 2005), or tax credit (in 2006 and 2007) and does not claim any other tax relief or credits (e.g. a single, childless taxpayer or second from the spouse who does not claim any tax relief due to children). The calculations dealing with other types of taxpayers may result in other findings as well, for example, how the tax burden and the tax progressiveness are changed by the number of dependant persons, and how – from the tax view – the existence of children is reflected.

Despite the mentioned barriers analyse unambiguously shows following facts:

- the increasing efficient tax rate trend that was stable (with some exceptions) from 1993 to 2007 was caused by the increase of the average wage and by the fact that the tax system in the Czech Republic was not very flexible; the question is how purposeful this trend was at the beginning of the period (in light of the inbuilt stabilizer);

- the lawful insurance, especially in the case of taxpayers with low income is much more important delivery than the tax proper;
- *there is no interconnection between the efficient tax rate and the tax progressiveness*;[12]
- if allowances are substituted by tax credits, the tax progressiveness increases;
- tax progressiveness in the Czech Republic was highest in the surveyed period in the case of employees with low income.

It was illustrated with particular examples in case of a detailed analysis of tax incidence we have to clearly distinguish the effective tax rate and the tax progressiveness.

The tax progressiveness may be influenced – besides the tax brackets and tax rates – by deductibles and tax allowances. Lowering the tax brackets, or, respectively, introduction of an even tax rate does not necessarily mean lowering the tax progressiveness: in addition, this means rather a limit (or even eliminates) the advantage of join tax applied by married couples (Široký, 2007).

A comparison of the effective tax rates with the indices of interval tax progressiveness showed that the growth of the effective tax burden itself does not influence the changes in the tax progressiveness directly. It results from the analyses performed. Empiric calculations confirmed that while the index of tax burden (effective rate) is a static value, tax progressiveness was assessed as the flow value; also for this reason these indices cannot be interchanged and there is no distinct link between them.[13]

Even though a taxpayer tends not to realize the changes in progressiveness, the increase of progressiveness can contribute to destimulation of work efforts and to a higher degree of substitution between work and leisure time, or to transfer to other types of activities. Therefore, in case of likely tax changes, not only subsequent income should be counted and subjected to tax; the tax progressiveness should be changed accordingly as well.

Due to the authors the adopted methodology can be used for tax systems in other states for possible comparison. The Slovakia analyse, where the conditions of flat tax rate are stable would be interesting. It is important to realise the major differences in the personal income tax construction in particular countries during the comparison which make the objective ETR determination quite complicated.

[12] See previous footnote.

[13] Results confirm the presumption that was the base for this research. It can happen that e.g. the efficient tax rate will decrease for both two taxpayers in the nearby interspaces of the research but by the fact that the decrease will be lower for the taxpayer with the higher income the tax progressiveness will increase paradoxically.

Table 5A

Tax Burden (Effective Tax Rate) in the Czech Republic in 1993 – 2007 (only Tax) in Percentage

Year / Interval	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
0.50	4.17	5.15	5.66	6.28	6.38	**6.26**	**6.22**	6.65	**6.62**	7.07	7.49	7.90	8.22	**4.56**	4.81
0.67	6.41	7.14	7.51	8.02	8.10	**8.01**	**7.97**	8.28	**8.27**	8.60	8.92	9.23	9.46	**6.96**	7.38
1.00	8.57	9.08	9.38	9.70	9.75	**9.70**	**9.67**	10.03	10.06	10.56	11.05	11.53	11.89	**10.16**	10.51
1.33	9.68	10.69	11.36	11.36	11.65	**11.61**	**11.52**	11.88	11.90	12.29	12.66	13.01	13.51	**12.95**	13.33
1.50	10.52	11.44	12.05	12.05	12.32	**12.28**	**12.19**	12.52	12.54	12.87	13.37	13.99	14.46	**13.96**	14.33
1.67	11.22	12.04	12.58	12.60	12.84	**12.81**	**12.73**	13.03	13.05	13.64	14.23	14.79	15.21	**15.17**	15.72
2.00	12.22	12.98	14.03	14.11	14.16	**14.13**	**13.96**	14.45	14.50	15.01	15.50	16.19	16.89	17.28	17.74

Table 5B

Tax Burden (Effective Tax Rate) in the Czech Republic in 1993 – 2007 (Tax and Social Security Contribution) in Percentage

Year / Interval	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
0.50	17.67	18.40	18.91	18.78	18.88	18.76	18.72	19.15	19.12	19.57	19.99	20.40	20.72	17.06	17.31
0.67	19.91	20.39	20.76	20.52	20.60	20.51	20.47	20.78	20.77	21.10	21.42	21.73	21.96	19.46	19.88
1.00	22.07	22.33	22.63	22.20	22.25	22.20	22.17	22.53	22.56	23.06	23.55	24.03	24.39	22.66	23.01
1.33	23.18	23.94	24.61	23.86	24.15	24.11	24.02	24.38	24.40	24.79	**25.16**	**25.51**	**26.01**	**25.45**	**25.83**
1.50	24.02	24.69	25.30	24.55	24.82	24.78	24.69	**25.02**	**25.04**	**25.37**	**25.87**	**26.49**	**26.96**	**26.46**	**26.83**
1.67	24.72	25.29	25.83	**25.10**	**25.34**	**25.31**	**25.23**	**25.53**	**25.55**	**26.14**	**26.73**	**27.29**	**27.71**	**27.67**	**28.22**
2.00	25.72	26.23	**27.28**	**26.61**	**26.66**	**26.63**	**26.46**	**26.95**	**27.00**	**27.15**	**28.00**	**28.69**	**29.39**	**29.78**	**30.24**

Table 5C

Progressiveness of the Tax Liability (only Tax) in the Czech Republic in 1993 – 2007 in Particular Income Intervals

Year / Interval	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
0.5-0.67	3.1231	2.5269	2.2893	2.0939	2.0577	**2.0980**	**2.1102**	1.9662	**1.9785**	1.8548	1.7519	1.6617	1.5951	**3.0746**	**3.1047**
0.67 – 1.0	2.0202	1.8227	1.7547	1.6350	1.6190	**1.6380**	**1.6475**	1.6394	**1.6570**	**1.6900**	**1.7241**	**1.7530**	**1.7772**	**2.3899**	2.2855
1.0 – 1.33	1.5189	**1.7117**	**1.8511**	1.6880	**1.7852**	**1.7959**	1.7687	1.7428	1.7380	1.6598	1.5854	1.5200	**1.5507**	**2.1070**	2.0819
1.33 – 1.5	1.7719	1.6232	1.5309	**1.5344**	1.5033	**1,5092**	**1.5190**	1.4742	1.4680	1.4225	**1.4970**	**1.6607**	1.6219	**1.6907**	1.6580
1.5 – 1.67	1.6494	1.5162	1.4341	**1.4552**	1.4222	1.4201	**1.4346**	1.3990	**1.3994**	**1.5865**	**1.6306**	1.5652	1.5108	**1.8501**	**1.9546**
1.67 – 2.0	1.5398	1.4704	**1.7012**	**1.7259**	1.6191	**1.6266**	1.5861	**1.6603**	**1.6776**	1.6056	1.5393	**1.5721**	**1.6655**	**1.8451**	1.7795

Source: Own calculations.

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