

# REFORMS OF THE SLOVENIAN PERSONAL INCOME TAX SYSTEM

**Mitja Čok**

University of Ljubljana, Faculty of Economics, Kardeljeva pl. 17,  
1000 Ljubljana, Slovenia

*mitja.cok@ef.uni-lj.si (Mitja Čok)*

## **Abstract**

In the last few years Slovenia has introduced changes into its personal income tax (hereinafter: PIT) system which has reduced the tax burden for the majority of taxpayers. It includes higher allowances for children, a broader tax base, and it is based on the worldwide income concept. In addition, the 20% scheduler taxation of capital income equalises Slovenia with several other EU countries which apply relatively modest taxation of capital to keep it within the national tax jurisdiction. Also in line with the EU practice is the abolition of the 50% marginal tax rate and its replacement with a 41% rate. From the individual taxpayer's point of view, on average, all taxpayers are better off due to the reforms. Their after-tax income is now higher than under the system before the PIT reforms. However, the results suggest that the changes clearly increased the after-tax income of taxpayers with a high income while they had only modest consequences for taxpayers with a lower income. The real costs of the PIT reforms are the switch in the government budget which can expect a drop of revenue not only regarding PIT. With the reduction of PIT and the abolition of payroll tax, the effective taxation of labour has fallen and their budget consequences are so far being covered by other taxes.

**Keywords: redistributive effect, income inequality**

## **Presenting Author's biography**

Mitja Čok is an assistant professor at the University of Ljubljana, Faculty of Economics. He is working mostly in the area of taxation and income inequality.



## 1 Introduction

The Republic of Slovenia introduced a modern personal income tax system in 1991 when the new tax law (hereinafter: PIT-1) introduced the taxation of individuals in a way similar to the approach used in Western European countries<sup>i</sup>. The first big changes in the system were introduced in 1994, reducing non-standard tax allowances for certain types of expenses from 10% to 3% and raising tax allowances for dependent family members who were supported by taxpayers. Even though the Supreme Court passed few judges during the 1990s that in turn required a change to some elements of the PIT-1 law according to the Constitution<sup>ii</sup>, the new tax law (hereinafter: PIT-2) was only passed by parliament in 2004 and came into effect on 1 January 2005. The PIT-2 introduced several fresh elements: an explicit worldwide income concept, it broadened the tax base for some income sources, introduced the taxation of bank interest etc. The first amendments to the PIT-2 were already introduced in 2004, before the law actually came into effect (for example, the abolition of the sharp taxation of capital gains deriving from sales of major capital shares in companies) while in December 2005 further changes were introduced to the tax code, including the schedular taxation of interest, dividends and capital gains. These types of income were not taxed with a progressive tax schedule but at a single 20% flat rate. However, the PIT-2 was temporary and only used in the 2005 and 2006 fiscal years. A completely new tax law (hereinafter: PIT-3) was passed by parliament in 2006 and came into effect from 1 January 2007. During 2005 and 2006, broad discussions occurred in Slovenia regarding the tax reform which was characterised by calls to reduce the taxation of labour, which is relatively highly taxed in Slovenia. In comparisons between EU countries one should take into account the different level of overall taxation in individual countries, yet it can be concluded that in Slovenia labour is taxed above the EU average, especially in comparison with the new member states (see Tab. 1).

(Tab. 1 here)

Among the different proposals in Slovenia for how to reduce the tax burden on labour, the combination of an effective reduction of PIT and the abolition of payroll tax prevailed. Payroll tax, which represented EUR 472.3 million in 2004 (1.9% of GDP or 4.4% of general government revenue [1]) is to be gradually abolished by 2009. Even though the idea of a 'flat-tax' was clearly part of the public debate in Slovenia in the process of changing the tax system (especially in 2005) and was included as a key element of the planned tax and social reforms [2], the finally accepted PIT-3 represents a 'classic' PIT code with a progressive schedule and the usual set of tax allowances. In July 2006, a study was completed [3] in which several tax scenarios were examined,

including the 'flat-tax' system. The results suggest options other than the 'flat-tax' would be at least so appropriate for the country's long-term economic development as regards employment, fiscal stability and economic growth. In Slovenia, once again a gradual approach prevailed in the tax reforms and thus it did not follow other Central and Eastern European countries which have taken more radical approaches to their tax reforms<sup>iii</sup>.

Slovenia has therefore modified its PIT system twice in just a few years. During those processes different categories of taxpayers were influenced in different ways. The Ministry of Finance [6] prepared an analysis of the PIT reform which focuses on different income levels. In this paper we add in socio-economic elements and examine how the PIT changes influenced the particular socio-economic categories of taxpayers which are the 'winners' and 'losers' of the PIT reform. The structure of the paper is as follows: Section 2 outlines the data and methodology, Section 3 describes the main changes to the PIT system during the reforms, the results are presented in Section 4, while the final section offers some concluding remarks.

## 2 Data and methodology

The estimations presented in this paper are calculated using a microsimulation model. The first version of the microsimulation model was developed a few years ago [7, 8], while in 2006 it was adapted to a new database provided for the purposes of tax and social reforms [3]. The results presented in the paper thus derive from the database which contains a sample of 111,705 individuals from 38,513 households. It includes variables from individual PIT records from 2004 and several other socio-economic characteristics (age, education etc.) at both individual and household levels. The database was created from administrative (not survey) databases, administered by the Ministry of Finance, the Ministry of Labour, Family and Social Affairs and the Ministry of Internal affairs and contains high quality data from 2004. As a consequence, all the results are stated in 2004 prices. The microsimulation model is a static model; the calculations are made without taking into consideration any change in taxpayers' behaviour caused by tax changes or consequential macroeconomic second-order effects<sup>iv</sup>. It also assumes a constant economic and demographic structure of the population.

### 3 Main changes to the PIT system during the reforms

The latest PIT code (PIT-3) differs from the previous PIT codes (PIT-1 and PIT-2) in several ways. The main characteristics of all three systems are presented in Tab. 2. To allow comparisons, the tax parameters are expressed in EUR in 2004 prices.

(Tab. 2 here)

The data in Tab. 2 reveal that the most important tax allowance i.e. the general tax allowance which is given to all taxpayers increased in subsequent reforms, as did the tax allowances for children. Seniority, invalidity and voluntary pension insurance allowances did not change substantially. On the other hand, self-employed journalist and culture professionals obtained an additional allowance in 2006 and 2007 while two others, namely the student work allowance and the allowance for different purposes, were reduced and abolished. Regarding the standardised costs which are deducted from gross income before tax allowances and the application of the tax schedule, a substantial reduction was introduced for royalties and thus their effective taxation was increased. Major changes were also introduced to the tax schedule. With the abolition of the 50% marginal tax rate, Slovenia joined the majority of EU member countries which have already reduced their highest marginal tax rates to below 50%<sup>v</sup>.

## 4 Results

### 4.1 Distribution of after-tax income by income deciles, changes in income inequality and consequences for government revenue

Tab. 3 present the distribution of after-tax income for all three simulated years, i.e. changes which are a consequence of the first and second PIT reforms. The data suggest that due to the first reform after-tax income in the first nine deciles slightly rose in 2006 compared with 2004, while the top decile reveals a drop. On the other hand, the second PIT reform increases after-tax income in all income groups. Overall, all income groups are better off under the PIT-3 compared with the PIT-1 which was used in 2004 and before.

(Tab. 3 and Tab. 4 here)

As the data from Tab. 3 show, the average changes to annual after-tax income at the taxpayer level are relatively modest and therefore it is no surprise that income inequality measures also reflect quite minor changes in the distribution of after tax-income. Three different measures: Gini coefficient, squared coefficient of variation and the Atkinson index<sup>vi</sup>, presented in Tab. 4 reveal that the overall inequality first dropped between 2004 and 2006 and increased thereafter, coming close to the 2004 level.

A reduction of PIT at the taxpayer level also means a drop in government revenue. The estimated aggregated amount of PIT is presented in Tab. 5.

(Tab. 5 here)

Assuming the same income pattern from 2004, the government could expect 15.9% less revenue from PIT under the PIT-3 tax code compared with the PIT-1 tax code<sup>vii</sup>. However, the actual reduction of government revenue would be smaller due to economic growth, the changed pattern of income sources and demographic development which have occurred in the period since 2004 and which are not taken into account due to the static nature of the microsimulation model.

### 4.2 Distribution of after-tax income by education

Tab. 6 reveals the distribution of after-tax income using the aggregation of taxpayers in five categories regarding their education.

(Tab. 6 here)

The results clearly confirm a correlation between the level of education and the level of income. More educated taxpayers report a substantially higher income; as the data in Tab. 6 show, the average annual income of a taxpayer with at least a university education is 2.5 times higher than the income of a taxpayer who has completed primary school or lower education (EUR 16,792 vs. EUR 6,476). Regarding the PIT reforms, the first reform mostly improved the income position of the first two education groups, while the second PIT reform provided bigger income difference also to more educated taxpayers.

### 4.3 Distribution of after-tax income by number of children

To estimate the effects of the PIT reforms on taxpayers with children, a different approach is applied, i.e. the effects of the tax reforms are estimated at the level of households so as to take into consideration the precise number of children. In practice, some parents share tax allowances for children during the tax year and thus only taking into account the number of claimed tax allowances for children from tax returns would lead to overestimating the number of children at the household level.

(Tab. 7 here)

Tab. 7 thus includes average household after-tax income, with households being separated into five categories regarding the number of children in the household. A child is defined as someone below 18 or 26 years if they are a full-time student. The data reveal that the majority of households do not have children – pensioners households prevail here. Among the others, most of them have one child while only 0.3% of households from the sample have five or more children. The figures reveal that no single category of

households is worse off (regardless of the number of children) and thus confirm the above results.

## 5 Conclusion

In just three years Slovenia changed its PIT system twice. The final result is a tax code which fulfils the major demands from the 1990s which initially induced the PIT reforms. It includes higher allowances for children, a broader tax base, and it is based on the worldwide income concept. In addition, the 20% scheduler taxation of capital income equalises Slovenia with several other EU countries which apply relatively modest taxation of capital to keep it within the national tax jurisdiction. Also in line with the EU practice is the abolition of the 50% marginal tax rate and its replacement with a 41% rate. From the individual taxpayer's point of view, on average, all taxpayers are better off. Their after-tax income is now higher than under the system before the PIT reforms. However, the distribution of this benefit is clearly in favour of those with the highest incomes, who are also individuals with a better education. The real costs of the PIT reforms are the switch in the government budget which can expect a drop of revenue not only regarding PIT, but also from another important labour tax – payroll tax, which is to be abolished by 2009. With the reduction of PIT and the abolition of payroll tax, the effective taxation of labour has fallen and their budget consequences are so far being covered by other taxes. At the moment, the country's solid economic growth along with the favourable international environment enable the generation of enough government revenue from other taxes, while a further cut in other labour taxes (social security contributions) seems less possible in the light of the predicted demographic changes in Slovenian society.

## 6 References

- [1] Ministry of Finance. Bulletin of Government Finance, No. 2, February 2007. Ministry of Finance. 2007.
- [2] Odbor za reforme: Usmeritve ekonomskih in socialnih reform za povečanje gospodarske rasti in zaposlenosti. Government of the Republic of Slovenia. 2005.  
[http://www.svr.gov.si/fileadmin/srs.gov.si/pageuploads/Fotografije/reforme\\_obrazlozitev.pdf](http://www.svr.gov.si/fileadmin/srs.gov.si/pageuploads/Fotografije/reforme_obrazlozitev.pdf).
- [3] B. Majcen, A. Bayar, C. Mohora, M. Čok, M. Opese and N. Kump N. Analiza kompleksnih sektorskih in makro učinkov davčne reforme in reforme socialnih transferjev z uporabo dinamičnega modela splošnega ravnotežja slovenskega gospodarstva. Inštitut za ekonomska raziskovanja. 2006.
- [4] H. Blažič. Potrošnja kao mjera jednakosti: primjer Hrvatske. *Financijska praksa*, 23: 355-374, 1999.
- [5] International Bureau of Fiscal Documentation. European Tax Handbook. International Bureau of Fiscal Documentation. 2006.
- [6] Ministry of Finance. Finančni učinki predloga zakona o dohodnini. Ministry of Finance. 2006.  
[http://www.gov.si/mf/slov/dav\\_reforma/analiza\\_finančni\\_ucinki\\_dohodnine\\_v2.pdf](http://www.gov.si/mf/slov/dav_reforma/analiza_finančni_ucinki_dohodnine_v2.pdf).
- [7] M. Čok, N. Stropnik and T. Stanovnik. Denarna socialna pomoč v Sloveniji. Inštitut za ekonomska raziskovanja. 2004.
- [8] M. Čok. A Microsimulation Model for Slovenia's Personal Tax System. *Economic and Business Review*, 4: 75-92, 2002.
- [9] G. Redmond, H. Sutherland and M. Wilson M. The Arithmetic of Tax and Social Security Reform. A User's Guide to Microsimulation Method and Analysis. Cambridge University Press. 1998.
- [10] EU Commission. Structures of the Taxation Systems in the European Union: 1995-2004. EU Commission. 2006.
- [11] F. A. Cowell. Measuring Inequality, Oxford. Philip Allan. 1997.
- [12] Zveza računovodij, finančnikov in revizorjev Slovenije. Zbirka predpisov o dajatvah. Zveza računovodij, finančnikov in revizorjev Slovenije. 2007.

## Endnotes

<sup>i</sup> In the previous personal income tax system only certain categories of taxpayers (mostly the self-employed) had to submit tax returns. For those who were not self-employed, taxes were paid directly by their employers (which were mostly publicly-owned companies or institutions) and hence in practice such people did not have any contact with the tax authorities.

<sup>ii</sup> The most important element of the judges opinions was that the tax allowances for children were not high enough.

<sup>iii</sup> In Croatia, the personal income tax legislation in 1994 introduced the ‘consumption-based tax’ concept [4], which was later modified to become a conventional PIT system. Several other Central and Eastern European countries: Latvia, Estonia, Lithuania, Slovakia, Romania, Russia, Serbia, Ukraine and Georgia decided on the ‘flat-tax’ concept of PIT [5].

<sup>iv</sup> These effects should be modelled when a significant change in behaviour is expected or when a new policy aims to change some behaviour. However, modelling the behaviour is a complex issue and due to the many interrelated factors involved it is unclear if this additional work would be justified by an improvement in reliability [9].

<sup>v</sup> In 2004 only seven EU member countries, including Slovenia, retained 50% or higher marginal tax rates [10].

<sup>vi</sup> All three measures are calculated according to [11].

<sup>vii</sup> The actual amount of PIT in 2004 was 0.5% higher compared with our simulation (EUR 1,596 million [1] vs. the simulated EUR 1,588 million). This difference stems from the assumptions built into the microsimulation model and the fact that the model uses a sample rather than the whole population of taxpayers.

## Annex

Tab. 1: Taxes on labour in 2004

	<b>Total taxes on labour<sup>1</sup></b> <b>(% of GDP)</b>	<b>Personal income tax<sup>2</sup></b> <b>(% of GDP)</b>	<b>Implicit tax rate on employed labour<sup>3</sup></b> <b>(in %)</b>
EU-25 (average) <sup>4</sup>	18.5	8.6	35.9
EU-15 (average)	20.1	10.4	36.5
NMS-10 (average)	15.9	5.7	34.7
<b>Slovenia</b>	<b>21.6</b>	<b>5.9</b>	<b>37.8</b>

1 - Taxes on labour include personal income tax, social security contribution, wage bill and payroll taxes.

2 - Personal income tax is levied on capital and labour income at the individual level while labour income represents the biggest share of the tax base.

3 - The implicit tax rate on employed labour is defined as the sum of all direct and indirect taxes and employees' and employers' social contributions levied on employed labour income divided by the total compensation of employees working in the economic territory.

4 - Arithmetic average.

Source: [10].

Tab. 2: Parameters of PIT codes (in EUR in 2004 prices)

	2004 (PIT-1)	2006 (PIT-2)	2007 (PIT-3)
Tax allowances (EUR):			
- general	1,474	2,460	2,665
- children (1 <sup>st</sup> / 2 <sup>nd</sup> / 3 <sup>rd</sup> )	1,340/2,010/2,680	1,974/2,145/2,861	1,966/2,138/3,565
- seniority (65+ years)	1,072	1,144	1,147
- invalidity	13,399	14,276	14,250
- student work	5,359	4,988	2,665
- self-employed journalist and culture professionals	No	3,664	3,569
- voluntary pension insurance <sup>1</sup>	2,181	2,284	2,275
- allowance for different purposes (in %) <sup>2</sup>	3	2/4	no
Standardised cost (%):			
- contractual work (including student work)	10%	10%	10%
- royalties	40%	10%	10%
- rents	40%/60%	40%	40%
Tax schedule:			
- number of tax brackets	5	5	3
- marginal tax rates (%)	17/37/40/45/50	16/33/37/41/50	16/27/41
Schedular taxation of interest, capital gains, dividends	No	Yes	Yes

1 - In all three years these tax allowances cannot be higher than 5.844% of an individual taxpayer's annual gross wage or cannot exceed the amount mentioned in Tab.2.

2 - The allowance for different purposes is defined as the sum of a taxpayer's expenses for selected purchases such as the acquisition of books or government securities. It cannot exceed 3% (2% / 4%) of an individual taxpayer's tax base.

Source: [12].

Tab. 3: Distribution of average annual after-tax income, by income deciles (in EUR in 2004 prices)

Decile	2004 (PIT-1)	2006 (PIT-2)	2007 (PIT-3)	I <sub>2006/2004</sub>	I <sub>2007/2004</sub>
1.	3,348	3,488	3,511	104.2	104.9
2.	4,918	5,089	5,115	103.5	104.0
3.	5,745	5,927	5,952	103.2	103.6
4.	6,581	6,775	6,805	103.0	103.4
5.	7,471	7,622	7,737	102.0	103.6
6.	8,441	8,587	8,778	101.7	104.0
7.	9,604	9,747	9,999	101.5	104.1
8.	11,129	11,253	11,607	101.1	104.3
9.	13,410	13,445	13,882	100.3	103.5
10.	22,857	22,731	23,232	99.5	101.6

Source: own calculations.

Tab. 4: Income inequality measures, average annual after-tax income

Inequality measure	2004 (PIT-1)	2006 (PIT-2)	2007 (PIT-3)	I <sub>2006/2004</sub>	I <sub>2007/2004</sub>
Gini	0.2980	0.2906	0.3010	97.5	101.0
I <sub>2</sub>	0.4569	0.4343	0.4482	95.1	98.1
Atkinson ( $\varepsilon = 2$ )	0.2506	0.2405	0.2466	96.0	98.4

Source: own calculations.

Tab. 5: Aggregated amount of PIT (in EUR million in 2004 prices)

	2004 (PIT-1)	2006 (PIT-2)	2007 (PIT-3)	I <sub>2006/2004</sub>	I <sub>2007/2004</sub>
Amount of PIT	1,588	1,494	1,333	94.2	84.1

Source: own calculations.

Tab. 6: Distribution of average after-tax income, by education (in EUR in 2004 prices)

Education	Share of taxpayers	2004 (PIT-1)	2006 (PIT-2)	2007 (PIT-3)	I <sub>2006/2004</sub>	I <sub>2007/2004</sub>
1.	15.6%	6,245	6,410	6,476	102.6	103.7
2.	23.0%	7,081	7,247	7,348	102.3	103.8
3.	33.2%	8,994	9,105	9,311	101.2	103.5
4.	8.8%	12,564	12,653	13,001	100.7	103.5
5.	12.4%	16,358	16,375	16,792	100.1	102.6

Education:

- 1 - primary school or less
- 2 - lower cycle secondary school
- 3 - upper cycle secondary school
- 4 - non-university higher education

---

5 - university education or more

*Source:* own calculations.

Tab. 7: Distribution of the average household's after-tax income, by number of children (in EUR in 2004 prices)

Number of children	Share of households	2004 (PIT-1)	2006 (PIT-2)	2007 (PIT-3)	I <sub>2006/2004</sub>	I <sub>2007/2004</sub>
0	41.5%	16,835	16,840	17,151	100.0	101.8
1	28.5%	18,729	18,984	19,358	101.4	102.0
2	25.2%	19,593	19,873	20,238	101.4	101.8
3	4.0%	20,581	20,776	21,164	101.0	101.9
4	0.5%	23,451	23,584	24,108	100.6	102.2
5 or more	0.3%	23,292	23,747	24,267	102.0	102.2

*Source:* own calculations.