

# NEWSLETTER



Institute of Public Finance, HR-10000 Zagreb, Katančičeva 5 Croatia

P.O.Box 320, Phone: (385 1) 4819 363; Fax: 4819 365; e-mail: office@ijf.hr; www.ijf.hr

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Ivica Urban

## The New Income Tax Law: Its Impact on the Distribution of the Tax Burden

### Introduction

Government spending is high in Croatia (about 50% of GDP), and so, hence, is the burden of financing it. Over 80% of this spending is financed from tax revenue. The tax burden is not evenly spread, for citizens with higher incomes bear a higher burden.

The high level of government spending is partially the consequence of the process of the transition to a market economy, during which the number of retired persons has very considerably increased. The consequences of this will neither easily nor speedily be overcome, and the process of the ageing of the population will additionally aggravate the problem. But to a large extent the high government spending is the result of society's lack of trust in the system of market economy to settle the basic economic problems — the allocation of factors in the production of goods and services. Until economists convince the public that leaving this role to the market is to the greatest benefit of the population, it will be impossible to reduce government spending and hence the tax burden.

In the current circumstances sporadic reductions of the burden of any given tax, without a correspon-

ding reduction of expenditure, is only a cosmetic solution. In the centre of attention of this paper, then, is precisely one such case; however, it is of interest to us primarily because the *moves of the government have not produced the proclaimed ends*. The most important change in the Income Tax Law adopted at the end of 2004 was the increase in personal allowance, which was supposed to take some of the tax burden off the most at risk, as they are called, sections of the population, that is, the lowest income groups. As you will see in this text, this did not happen, and I shall explain why. Something did happen, however, which was a slight reduction in the tax burden for those taxpayers with higher incomes. However, in conditions of growing government expenditure the question has to arise as to upon whom the burden of making up the lost fiscal revenues will fall.

Some other changes had nevertheless been hoped for from the new law:

- *Abolition of the highest marginal tax rate of 45%.* The marginal tax rate says what the percentage of every additionally earned kuna goes off to the government in the form of tax. If we include

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contributions for mandatory insurance in the consideration, then the highest marginal rate comes to 62.5%. For example, if an employer determines to increase the total monthly outlay on an employee from 34,000 to 31,000 kuna, of the additional 100 kuna, only 37.5 kuna will accrue to the employee, and the rest will be taken by the state. Nor should it be forgotten that if the employee decides to spend this remainder, an additional 7 or more kuna will be taken by VAT or some other taxes. The trend in the world is to reduce the highest rate in income tax systems. What is more, one of the arguments in favour of tax changes in Croatia was to provide a spur to savings and investment. And it would be the removal of this brake that would most encourage people to work, save and invest more.

- *Abolition of tax breaks.* Above all, these are arbitrary and have a discriminatory effect: two people with the same pre-tax income pay different amount of taxes, because one of them has used some relief and the other has not. And only because she has determined to spend his income in some other way, which the law does not favour. This phenomenon is called horizontal inequity.

A tax system should work as a means to collect the necessary revenue. Welfare aims have to be settled via the expenditure side of the budget. For example, since we already have a system for the distribution of child benefits, then it could be expanded to cover dependent benefits too, and the personal allowance for children and dependents could be completely excluded from the income tax system.

Economic policy objectives like increases in savings could best be achieved by a reduction of the general level of government spending, and not by tax breaks or, for example, subsidised housing savings.

Until 2000, there was practically just a single relief in the income tax system – the personal allowance; but in 2003, we have about a score of them.

- *Different sources of income should have equal treatment in taxation.* The same tax should be paid on a single kuna of income irrespective of whether this income is acquired by labour, capital or property.

- *Reformulation of the importance of contributions for obligatory insurance.* The systems of retirement and health insurance are not insurance in the true sense of the word. Persons A and B of the same age and state of health will pay an equal premium for the health insurance policy of an insurance company. But the state health insurance takes a “premium” that is proportional to income, which means that person A with an income that is three times the size of the income of person B pays three times as much for the same service. Because of this, and since outlays are obligatory, state-run health insurance is actually a tax and is in essence not any different from the standard income tax. Retirement insurance is slightly different, because future pensions are, to some extent, contributions-related, but there is still the element of compulsion, i.e., the absence of option: to whom would I rather trust my money?

If some of the changes had been achieved in the new Income Tax Law, it might be possible to speak of tax reform which might lead to a higher quality tax system. As it is, I am left with nothing but to analyse just a case of changes introduced with an objective that has not been achieved.

## **The impact of changes in the Income Tax Law on the amount and distribution of the tax burden**

Who are the winners and losers as a result of the new changes in income tax? When tax is concerned, anyone who pays is a loser. Everyone would rather spend his money in his favourite shop or restaurant, put it into a savings account or buy additional life insurance than put it into the government kitty. If you cannot, or not dare to, conceal your income from the taxman, you must pay tax.

Whether it is just that individual A pays 100,000 kuna tax and individual B pays nothing, of this I shall not debate here. We know that person A does not consider it just, and person B does. And in Croatia, as we shall see, some pay more, and some pay less, tax. Changes in the regulations concerning income tax usually have as their aim the achievement “of a distribution of the tax burden that is as just as possible, and respect for the principle of equality and equity”. Which being translated means that some groups of the population will have to pay

even less tax, and some even more. The recent set of changes of the end of 2004 that came into force this year also had this aim. “Socially sensitive” politicians who pass such changes are always popular in the eyes of majority of the citizens.

## What changes does the new law bring?

You can find more details about the new income tax law in the new Income Tax Law and in every decent magazine that deals with taxes, finances and accounting. Here I shall mention just some of the changes that seem most interesting for analysis:

- the basic personal allowance rose from 1,500 to 1,600 kuna per month;
- the factors for the personal allowance for children, dependents and disability also changed;
- the tax rates remained the same, but the tax brackets were altered;
- from capital income, receipts from dividends were excluded;
- the total amount of reliefs that can be claimed in a single year i) for health care services, ii) for providing for housing and iii) according to premiums for voluntary retirement, additional health care and life insurance of the character of saving is reduced from 36,000 to 12,000 kuna.

## Comparative analysis of the distribution of the tax burden

Do the changes tend to benefit only those taxpayers with lower incomes, or the whole of the population? I shall answer this question with a simulation. According to figures concerning income, allowances and reliefs for taxpayers in 2003, I shall calculate how much tax would be paid according to the old law, and how much according to the new.

But even before the simulation, we are still in the position to answer the following question: who will have the greatest pecuniary benefit from the increase in the personal allowance and other tax reliefs? The answer is:

*The greatest benefit (that is, savings in the form of a smaller amount of tax paid) from the increase in the personal allowance and other tax benefits will accrue to taxpayers with higher incomes.*

This claim certainly requires explanation.

*Personal allowances and other reliefs cannot exceed the amount of income.* The consequence of this is

that taxpayers with higher incomes can use more of their personal allowance and other reliefs.

Let us look first of all at the procedure in which the tax base is derived from income obtained. It is arrived at by taking the personal allowance and other reliefs to which the taxpayer has the right away from the income. Thus

$$\text{tax base} = \text{income} \text{ minus personal allowance} \text{ minus other reliefs}$$

The amount of the personal allowance and other reliefs cannot surpass the amount of income for then the tax base would be negative, and according to the law this is impossible; the smallest possible tax base is 0 kuna.

For example, a taxpayer with an annual income of 17,000 kuna can claim the allowance of at most 17,000, which means that he cannot make use of the full personal allowance, which came in 2003 to 18,000 kuna. Furthermore, the said taxpayer does not have any benefit at all from the introduction or enlargement of any other reliefs (for medical costs for example). Only if he increases his income will he be able to make use of the additional reliefs.

In 2003 about 900,000 of the total one million retired persons had an annual income of less than 30,600 kuna (2,550 kuna p.m.), which was what the personal allowance for pensioners came to. About 500,000 of the total 1.6 million taxpayers who are not retirees had incomes of lower than 18,000 kuna, which means that they did not use up even the basic personal allowance. Thus about 1.4 million taxpayers, of the total 2.6 million there were in 2003, did not use even the basic tax relief – the basic personal allowance.

*Taxpayers with high incomes can more easily spend on the services that the Income Tax Law looks kindly upon.* Additional life, health and pensions insurance and charitable donations are expenditures that can be afforded by persons who have already met the most vital of their necessities, and these are persons with high incomes. I would not like in the slightest to dispute the usefulness, necessity and justification of these activities, but in the context of this analysis, an individual with 18,000 kuna p.a. income simply cannot set aside another 12,000 a year for additional retirement insurance, for instance. It would be something of a feat if he could set aside at least 2,000 kuna, but as we have seen, this would not help him to reduce his tax obligations. On the other hand, an individual with 80,000 kuna will be able to take on several further insurance policies.

But tax reliefs lead to discrimination. They favour certain forms of investment over other forms, and thus individuals who invest an equal amount of money in different forms achieve different rates of return, which in free market conditions would be equal. Thus relative prices are distorted and resources are allocated inefficiently. Also, unfair market competition is created from those businesses that provide products and services the consumption of which can be acknowledged as tax reliefs, unlike those firms whose products once bought cannot be acknowledged as a tax offset<sup>1</sup>. Apart from that, tax reliefs increase the administrative costs of tax collection, reduce the redistributive effect of income tax, lead to corruption and because of all this together decrease the efficiency of the tax system.

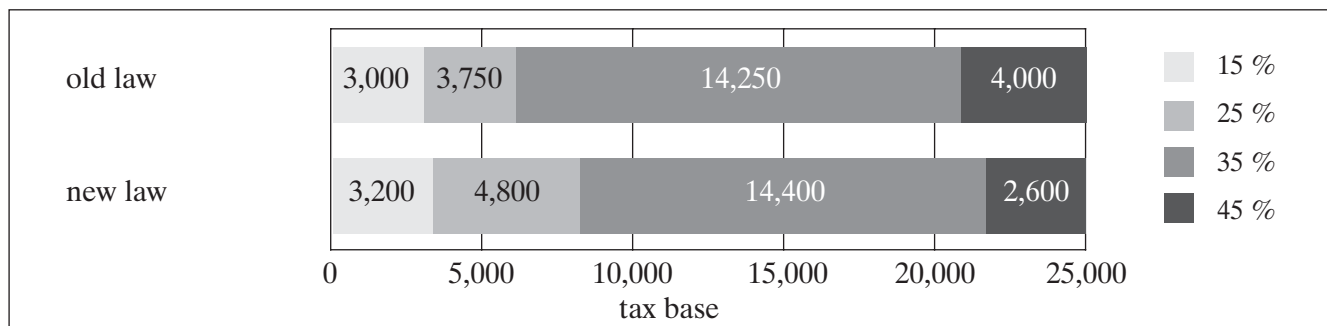
Before an explanation of the third reason, let us look at how the tax liability is calculated from the tax base. The tax base is divided into set parts, each of which is taxed with a different rate. Fig. 1 shows the case of a taxpayer whose monthly base is 25,000

*The reduction of a high-earning individual's tax base reduces the tax liability by a greater amount than it does for an individual with low earnings.* This is a consequence of the graduated manner of taxation according to which fixed parts of the base are taxed according to ascending rates: 15, 25, 35 and 45%. Any taxpayer who gets into the 45% bracket keeps 55 lipa of every kuna of this tax base over 21,000 while 45 lipa go to the government as tax. If he can reduce this base by 1 kuna, he will pay 45 lipa of tax fewer. A taxpayer who is in the 15% bracket will be able to save only 15 lipa of each 1 kuna of relief. The same goes, analogously, for the 25 and 35% brackets.

## The distribution of the tax burden according to the old law and the new

The basis for the simulation was a sample of 4.4% of the total population of income tax payers in Croatia, of whom in 2003 there were 2.6 million.

Figure 1. The tax base, tax brackets and tax rates in kuna



kuna. The base is divided into four parts, and then each part is taxed at the appropriate rate. The new law increased the “25%” bracket, and the “45%” bracket comes later – after 22,400 kuna, instead of the previous 21,000 kuna. According to the old law, the taxpayer would pay in kuna:

$$3,000 \times 15 + 3,750 \times 25\% + 14,250 \times 35\% + 4,000 \times 45\% = 8,175,$$

while in the new system, he will pay:

$$3,200 \times 15\% + 4,800 \times 25\% + 14,400 \times 35\% + 2,600 \times 45\% = 7,890$$

or 3.5% tax less.

For each taxpayer from this sample we have the information concerning their income from various sources and of the personal allowance claimed and other reliefs.

Table 1 gives a summary review of the distribution of pre-tax income and income tax and surtax in 2003. Pre-tax income is the difference between receipts and expenses, as defined by the Income Tax Law<sup>2</sup>. Total income from all sources came to 88.5 billion kuna. Total tax and surtax (on income tax) came to 7.6 billion kuna. If we divide the second amount with the first, we will obtain the annual rate of taxation for all taxpayers of 8.5%.

<sup>1</sup> The same effect is produced by the housing savings that are supported from the National Budget.

<sup>2</sup> Contributions for obligatory insurance are an expenditure for all taxpayers that pay them. For taxpayers who carry out an independent professional activity (tradesmen, freelance professions, farmers) expenditures are pecuniary outflows for the purpose of obtaining the goods and services necessary for production. For some kinds of income (occasional freelance work, property) standardised costs calculated as a percentage of the receipts are allowed.

I arranged taxpayers in ascending order of annual pre-tax income and put them into ten income brackets in such a way that there is an equal number of taxpayers in each bracket. The column *income brackets* shows the income intervals in which the taxpayers from the given brackets are located. For the creation of these income intervals, I used monthly incomes<sup>3</sup>. Here is an example: the 10% of the people with the lowest incomes (bracket 1) had a monthly income of less than 500 kuna, and they had an aggregate annual income of 714.9 million kuna, and paid 23.5 million kuna of tax and surtax, and so their annual tax rate came to 3.3%. On the other hand, the 10% of the taxpayers with the highest incomes had an income of more than 5,600 kuna a month, and earned 29.3 billion kuna of income, or 33.2% of all income. They paid 5 billion, or 66.5%

of all tax and surtax. For them, the average tax rate came to 17.1%.

As income increase, the average tax rate also rises. This is a proof of the progressivity of the income tax: the tax relatively burdens people with higher incomes more.

In order to be able to provide additional interesting information, I divided the tenth bracket again into 10 equal parts. These figures are to be found in the lower part of Table 1. The new sub-brackets are called 10-1, 10-2 and so on, and contain 1% groups of taxpayers. It is particularly interesting that the highest class (10-10), which consists of the 1% of all taxpayers that have the highest incomes (with over 14,000 kuna month income), pay 2.1 billion kuna, or 28% of all income tax and surtax. The average tax burden is 25.9%.

Table 1. Distribution of pre-tax income and tax burden in 2003

Bracket	Size of bracket <sup>a</sup>	Income brackets <sup>b</sup> (in kuna)	Total annual income	(%)	Total annual tax and surtax	(%)	Average tax rate
1.	2.	3.	4.	5.	6.	7.	8=6:4
1	10	0 to 500	714.9	0.8	23.5	0.3	3.3
2	10	500 to 1,000	2,231.5	2.5	31.6	0.4	1.4
3	10	1,000 to 1,300	3,534.8	4.0	24.2	0.3	0.7
4	10	1,300 to 1,700	4,674.3	5.3	24.4	0.3	0.5
5	10	1,700 to 2,000	5,746.9	6.5	68.4	0.9	1.2
6	10	2,000 to 2,500	7,034.3	8.0	152.1	2.0	2.2
7	10	2,500 to 3,200	8,787.1	9.9	331.3	4.4	3.8
8	10	3,200 to 4,200	11,381.5	12.9	674.6	8.9	5.9
9	10	4,200 to 5,600	15,012.7	17.0	1,205.4	15.9	8.0
10	10	more than 5,600	29,340.7	33.2	5,022.8	66.5	17.1
		<b>Total</b>	<b>88,458.6</b>	<b>100.0</b>	<b>7,558.3</b>	<b>100.0</b>	<b>8.5</b>
10-1	1	5,600 to 5,800	1,759.5	2.0	175.6	2.3	10.0
10-2	1	5,800 to 6,000	1,831.6	2.1	187.6	2.5	10.2
10-3	1	6,000 to 6,300	1,911.4	2.2	197.2	2.6	10.3
10-4	1	6,300 to 6,600	2,013.3	2.3	228.5	3.0	11.3
10-5	1	6,600 to 7,100	2,135.8	2.4	252.5	3.3	11.8
10-6	1	7,100 to 7,700	2,298.9	2.6	298.4	3.9	13.0
10-7	1	7,700 to 8,600	2,534.2	2.9	355.6	4.7	14.0
10-8	1	8,600 to 10,300	2,919.1	3.3	477.7	6.3	16.4
10-9	1	10,300 to 14,000	3,654.1	4.1	731.1	9.7	20.0
10-10	1	more than 14,000	8,172.3	9.2	2,118.7	28.0	25.9

Amounts of income and tax are in million kuna. <sup>a</sup>As share in the total population of taxpayers, <sup>b</sup> Formed according to mean monthly income  
Data source: Ministry of Finance – Tax Administration

<sup>3</sup> For the majority, since they receive wages and pensions, mensal amounts are more readily graspable.

Table 2 Coefficients and amounts of personal allowances according to the old and the new law\*

	coefficient of personal allowance		amount of personal allowance		change in the amount (%)
	before	now	before	now	
	1.	2.	3.	4.	5=4/3
taxpayer	1.00	1.00	18,000	19,200	6.7
taxpayer + dependent	1.40	1.50	25,200	28,800	14.3
taxpayer + dependent + partial disability	1.65	1.80	29,700	34,560	16.4
taxpayer + dependent + 100% disability	1.65	2.50	29,700	48,000	61.6
taxpayer + disabled child	1.25	1.30	22,500	24,960	10.9
taxpayer + 100% disability	1.25	2.00	22,500	38,400	70.7
taxpayer + 1 child	1.42	1.50	25,560	28,800	12.7
taxpayer + 1 child + dependent	1.82	2.00	32,760	38,400	17.2
taxpayer + 1 child + dependent+ partial disability	2.07	2.30	37,260	44,160	18.5
taxpayer + 1 child + dependent+ 100% disability	2.07	3.00	37,260	57,600	54.6
taxpayer + 1 child + partial disability	1.67	1.80	30,060	34,560	15.0
taxpayer + 1 child + 100% disability	1.67	2.50	30,060	48,000	59.7
taxpayer + 2 children	2.01	2.20	36,180	42,240	16.7
taxpayer + 2 children + dependent	2.41	2.70	43,380	51,840	19.5
taxpayer + 2 children + dependent+ partial disability	2.66	3.00	47,880	57,600	20.3
taxpayer + 2 children + dependent+ 100% disability	2.66	3.70	47,880	71,040	48.4
taxpayer + 2 children + partial disability	2.26	2.50	40,680	48,000	18.0
taxpayer + 2 children + 100% disability	2.26	3.20	40,680	61,440	51.0
taxpayer + 3 children	2.85	3.20	51,300	61,440	19.8
taxpayer + 3 children + dependent	3.25	3.70	58,500	71,040	21.4
taxpayer + 3 children + dependent+ partial disability	3.50	4.00	63,000	76,800	21.9
taxpayer + 3 children + dependent+ 100% disability	3.50	4.70	63,000	90,240	43.2
taxpayer + 3 children + partial disability	3.10	3.50	55,800	67,200	20.4
taxpayer + 3 children + 100% disability	3.10	4.20	55,800	80,640	44.5
taxpayer + 4 children	4.02	4.60	72,360	88,320	22.1
taxpayer + 4 children + dependent	4.42	5.10	79,560	97,920	23.1
taxpayer + 4 children + dependent+ partial disability	4.67	5.40	84,060	103,680	23.3
taxpayer + 4 children + dependent + 100% disability	4.67	6.10	84,060	117,120	39.3
taxpayer + 4 children + partial disability	4.27	4.90	76,860	94,080	22.4
taxpayer + 4 children + 100% disability	4.27	5.60	76,860	107,520	39.9
taxpayer in ASNC – Group 1	1.00	1.00	45,000	46,080	2.4
taxpayer in ASNC – Group 2	1.00	1.00	36,000	38,400	6.7
taxpayer in ASNC – Group 3	1.00	1.00	27,000	28,800	6.7
taxpayer in hill and mountain regions	1.00	1.00	27,000	28,800	6.7

\*Author's calculations

ASNC – areas of special national concern

## Results of the simulation

I decided in the simulation to include four elements to which the changes in the law referred:

- *Increase of the basic personal allowance from 1,500 to 1,600 kuna p.m.*
- *Change in the factors of the personal allowance.* As can be seen from Table 2, the coefficients now look more favourably on families with a larger number of children and dependents. The coefficients of taxpayers with 100% disabilities have risen the most, and they actually constitute a new category. To obtain the total annual personal allowance, the coefficient of personal allowance is multiplied by the new amount of the basic personal allowance. Column 4 shows the percentage changes of the amounts of personal allowance for individual categories of taxpayer. The average unweighted growth of personal allowance is 26.4%.
- *Changes in the tax brackets* (see the previous account).
- *Exclusion of receipts from dividends from taxation<sup>4</sup>.* Income of this kind came in 2003 to about 1.8 billion kuna. It was taxed at a rate of 15% and brought in, together with its associated surtax, about 300 million kuna. It is interesting to observe the distribution of this income. I could have shown it with a full table like Table 1, but in this case it would be a needless waste of space. For as Table 3 shows, the upper 1% of the taxpayers with the highest incomes earned 87.2% of the total income from dividends and profit shares. The consequence of abolishing tax on this kind of income is equivalent to reducing the tax burden for this group of taxpayers.

One of the changes that I mentioned above is the limitation of the said reliefs to a maximum amount of 12,000 kuna p.a. Why was this relief not included in the simulation? The reason is simple – the effect of this change on the total distribution of the tax burden would be negligible. One or more of these reliefs was used by about 390,000 taxpayers. The total amount of the reliefs claimed was 990 million kuna. However, only 17,000 taxpayers used these reliefs in amounts more than 12,000 kuna.

Table 3. Distribution of income from dividends and shares in profit in 2003

Bracket	Size of bracket <sup>a</sup> (%)	Income brackets <sup>b</sup> (in kuna)	Annual income from capital (million kuna)	(%)
	99	less than 14,000	231.0	12,8
10-10	1	more than 14,000	1,568.3	87,2

<sup>a</sup> As percentage of the total population of taxpayers

<sup>b</sup> Formed according to the mean monthly income

The total amount that exceeds the 12,000 kuna threshold for these 17,000 people came to no more than about 28 million kuna. We can conclude that the measure of limiting this relief would have a very minor effect in 2003.

Finally, the simulation was carried out in the following manner: data about the personal allowance from 2003 were transformed into the amounts that would hold good according to the new law. Then the tax base was calculated, and at the end, the income tax, according to the newly defined tax brackets. Income from dividends was excluded from the calculation of the base. According to the rate of surtax, the surtax too was worked out. The whole of the simulation shows what the tax burden would have been in 2003 if the new law (of 2005) had been in force then.

The results are shown in Table 4, which is like Table 1. Columns 4 and 5 contain the amounts of annual tax and surtax per taxpayer, according to the old and according to the new law. For example, taxpayers from Bracket 6, who earned a monthly income before taxation of between 2,000 and 2,500 kuna paid in the whole of 2003 an average 585 kuna of tax and surtax. In the new law, they would pay 493 kuna, or 93 kuna less than according to the old law. Column 6 presents the average annual savings via the lower payment of tax, thanks to the new law. It rises with income – from 6 kuna for the first 10% of the taxpayers, all the way up to 13,227 kuna for the 1% of taxpayers with the highest incomes.

Table 5 gives us the average tax rates before and after the changes. For all the income brackets, the average rate has been reduced, but to a much

<sup>4</sup> Corporate profit (at company level) is taxed with profit tax, the rate of which comes to 20%. From 2001 to 2004 we had the case of double taxation, because on dividends paid out, income tax (at individual level) was also levied.

Table 4. Results of the simulation: changes in the tax burden as a result of the new law

Bracket	Size of bracket <sup>a</sup> (%)	Income brackets <sup>b</sup> (in kuna)	Annual tax and surtax per taxpayer (old law)	Annual tax and surtax per taxpayer (new law)	Difference
1.	2.	3.	4.	5.	6=5-4
1	10	0 to 500	90	84	-6
2	10	500 to 1,000	122	113	-9
3	10	1,000 to 1,300	93	86	-7
4	10	1,300 to 1,700	94	73	-21
5	10	1,700 to 2,000	263	208	-55
6	10	2,000 to 2,500	585	493	-92
7	10	2,500 to 3,200	1,275	1,056	-219
8	10	3,200 to 4,200	2,597	2,228	-369
9	10	4,200 to 5,600	4,640	4,115	-525
10	10	more than 5,600	19,335	16,913	-2,422
		<b>Total:</b>	<b>2,910</b>	<b>2,537</b>	<b>-373</b>
10-1	1	5,600 to 5,800	6,759	6,041	-718
10-2	1	5,800 to 6,000	7,220	6,485	-735
10-3	1	6,000 to 6,300	7,592	6,794	-798
10-4	1	6,300 to 6,600	8,794	7,916	-878
10-5	1	6,600 to 7,100	9,719	8,733	-986
10-6	1	7,100 to 7,700	11,488	10,480	-1,008
10-7	1	7,700 to 8,600	13,691	12,569	-1,122
10-8	1	8,600 to 10,300	18,388	16,653	-1,735
10-9	1	10,300 to 14,000	28,143	25,123	-3,020
10-10	1	more than 14,000	81,560	68,333	-13,227

<sup>a</sup> As percentage of the total population of taxpayers

<sup>b</sup> Formed according to mean monthly income

greater extent for the top 1% of taxpayers (from 25.9 to 21.7%, or by 4.2 percentage points).

At the end we wonder if the system has become more progressive than it was before. The answer can be obtained by comparing the shares in the totally paid tax and surtax. According to the old law (Table 5, column 6) and the new law (column 7). The proportion of the total tax and surtax paid by the 9th and 10th brackets<sup>5</sup> has slightly risen, has reduced for brackets from 5 to 8, and has remained the same for brackets 1 to 4. According to this we can conclude that income tax is slightly more progressive than it was before the changes in the statute.

## Conclusion

The income tax burden in Croatia is not evenly spread. Thanks to the personal allowance system, half of the taxpayers practically do not actually pay tax at all. On the other hand, the 10% of the taxpayers with the highest incomes bear two thirds of the tax burden. The average tax rate rises with income, which means that the tax is progressive.

Using data concerning the incomes of income tax payers in 2003, we calculated how much income tax and surtax they would pay according to the provisions of the new law. Changes in the Income Tax Law that have been enforced since the beginning of

<sup>5</sup> This goes for the 10th bracket as a whole, but since we additionally divided it, we can note one exception: the percentage of the whole of the tax paid by the highest earning 1% of taxpayers was reduced from 28 to 26.9.



2005 had as one of their aims to achieve a “more equitable” distribution of the tax burden, and this meant to achieve still greater progressivity. As our analysis as shown, this has actually occurred, to a slight extent, as a result of the increase of the proportion of the total tax paid by the 20% of taxpayers with the highest pre-tax incomes.

Taxpayers with higher incomes will have greater savings (in the shape of smaller tax payments) from the increase in the personal allowance. They will make further savings as a result of the abolition of the taxation of income from dividends and profit shares. The savings of taxpayers with lower incomes is actually inconsiderable.

One more conclusion inevitably comes to mind: the increase of the personal allowance cannot be a measure to increase the standard of living of individuals with low incomes, because their income is actually lower than the personal allowance. The result of the increase of the personal allowance is a reduction of the liabilities of all the other taxpayers.

Since the expenses of the government are not falling, but rise year by year, a reduction of potential revenue from income tax as a result of changes in the legislation will have to be made up by an increase in some other fiscal revenues.

Table 5. Results of the simulation: average tax rate and distribution of the tax burden

Bracket	Size of bracket <sup>a</sup> (%)	Income brackets <sup>b</sup> (in kuna)	Average tax rate (old law)	Average tax rate (old law)	Percentage in total tax (old law)	Percentage in total tax (new law)
1.	2.	3.	4.	5.	6.	7.
1	10	0 to 500	3.3	3.1	0.3	0.3
2	10	500 to 1,000	1.4	1.3	0.4	0.4
3	10	1,000 to 1,300	0.7	0.6	0.3	0.3
4	10	1,300 to 1,700	0.5	0.4	0.3	0.3
5	10	1,700 to 2,000	1.2	0.9	0.9	0.8
6	10	2,000 to 2,500	2.2	1.8	2.0	1.9
7	10	2,500 to 3,200	3.8	3.1	4.4	4.2
8	10	3,200 to 4,200	5.9	5.1	8.9	8.8
9	10	4,200 to 5,600	8.0	7.1	15.9	16.2
10	10	more than 5,600	17.1	15.0	66.5	66.7
		<b>Total:</b>	<b>8.5</b>	<b>7.4</b>	<b>100.0</b>	<b>100.0</b>
10-1	1	5,600 to 5,800	10.0	8.9	2.3	2.4
10-2	1	5,800 to 6,000	10.2	9.2	2.5	2.6
10-3	1	6,000 to 6,300	10.3	9.2	2.6	2.7
10-4	1	6,300 to 6,600	11.3	10.2	3.0	3.1
10-5	1	6,600 to 7,100	11.8	10.6	3.3	3.4
10-6	1	7,100 to 7,700	13.0	11.8	3.9	4.1
10-7	1	7,700 to 8,600	14.0	12.9	4.7	5.0
10-8	1	8,600 to 10,300	16.4	14.8	6.3	6.6
10-9	1	10,300 to 14,000	20.0	17.9	9.7	9.9
10-10	1	more than 14,000	25.9	21.7	28.0	26.9

<sup>a</sup> As percentage of total population of taxpayers.

<sup>b</sup> Formed according to average monthly income

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ZAGREB**

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