

# NEWSLETTER



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## Who pays income tax in Croatia

The average income tax burden in Croatia is on the decrease. However, the distribution of that lowered tax burden is also changing, i.e. the income tax is getting increasingly progressive, so that higher-income groups are liable to pay more. The income tax lowering leads to either reduced public expenditures or increased rates of other taxes. But this is to the voters to decide what they prefer.

In Croatia politicians most frequently use changes in income tax as a means to provide for equity in the system of taxation, i.e. to shift the tax burden from low-income groups onto higher-income groups. And they are right, for this tax is best adjustable to the purchasing power of taxpayers. It is also a means to correct the "injustice" caused by consumption taxes (VAT and excise taxes), which more strongly affect lower-income citizens and are therefore considered regressive. It is relatively simple to adjust the income tax to the income status of citizens, so that those with higher incomes pay tax at relatively higher rates than those with lower incomes. Therefore, the income tax is considered to be progressive. However, is income tax progressive in Croatia? To be able to make well-argued judgements, a detailed income tax analysis would be necessary.

The income tax was first introduced in Croatia in 1995. Since then it went through several minor changes, but also two major ones: the first occurred in 2001 and the second in 2003.

The first major change had the following structure:

- *Instead of the existing two rates (20% and 35%), three rates were introduced: 15% on the tax base of up to 2,500 HRK, 25% on the difference between 2,500 and 6,250 HRK and 25% on the tax base over 6,250 HRK.*
- *The income tax rate on dividends and shares in profits was 15%. That was the first time after 1994 that a portion of capital income was subject to taxation.*
- *Additional tax relieves were introduced, i.e. for paid life insurance premiums, as well as contributions for additional health insurance and voluntary pension insurance, to the amount of up to 80% of the basic personal allowance (1,000 HRK per month or 12,000 HRK per annum). The benefits can be realized after filing the annual tax return.*
- *Tax deductions were introduced for the payment of wages to newly employed workers in small businesses during a fiscal year.*

Institut za javne financije bavi se ekonomskim istraživanjima i analizama vezanim uz razne vidove javnih financija poput proračuna, poreza, carina i sl. Tom djelatnošću usmjeren je na razne ekonomske, pravne i institucionalne teme važne za zdrav dugoročni ekonomski razvoj Republike Hrvatske. Kako bi se javnosti omogućilo da bolje razumije određena pitanja, Institut za javne financije pokrenuo je Newsletter u kojem se povremeno objavljuju stručne i nezavisne analize ekonomskih pitanja. Stavovi izraženi u člancima objavljenim u Newsletteru izražavaju mišljenja autora koja ne moraju neminovno održavati i mišljenje Instituta kao institucije. Potpuni tekst Newslettera na hrvatskom i na engleskom jeziku nalazi se i na Internet adresi: <http://www.ijf.hr/newsletter>.

The amended income tax system was applied for two years (2001 and 2002). However, the Ministry of Finance decided to introduce additional, more extensive changes in income taxation in 2003, which include:

- An increase in basic personal allowances from 1,250 to 1,500 HRK;
- A change in personal allowances for dependent family members and the areas under a special support of the government;
- A change in the distribution of tax rates and the introduction of a fourth tax rate, i.e.:
  - 15% on the income up to 3,000 HRK;
  - 25% on the income of up to 6,750 HRK;
  - 35% on the income of up to 21,000 HRK;
  - 45% on the income over 21,000 HRK.
- Benefits for the purchase of apartments or family houses (including payments of interest on housing credits), benefits for subtenants (50% of the annual rent paid to the lessor), and benefits for the costs of medical services and orthopedic devices, provided they are not financed from the basic, supplementary or private insurance plans<sup>1</sup>.

It is expected that the announced changes will have a considerable impact on the structure and distribution of income tax in 2003. Given the number of elements of the tax that are subject to change, it is difficult to foresee the developments in the total tax burden and its distribution among individual taxpayers. For a more accurate forecast of the income tax developments in the 2003 we will look at what was happening with this tax from its introduction to the changes introduced in 2001. To what extent does it burden Croatian citizens and can it be considered equitable? We will use the results of the analysis of the collected income tax that has been carried out by the Institute of Public Finance for several years now<sup>2</sup>. We will try to answer the following three questions:

1. Who is liable to pay income tax in Croatia?
2. What is the average income tax burden on Croatian citizens?
3. How is the tax burden distributed among individual income groups?



### I.

**Every second Croatian citizen is liable to pay income tax.**

**The largest portion of income tax revenues stems from salaries of employees.**

As shown in Table 1, in 2001 2.4 million citizens paid income tax<sup>3</sup>, i.e. by almost every second Croatian citizen. The total number of taxpayers grew over the observed period, so that it was 24% higher in 2001 compared with 1995. However, the distribution of the growth among individual income groups was rather uneven. So, the highest growth was observed in pensioners: their number increased by more than 60% in 2001, compared with the total of 618,499 in 1995. Over the six-year period there were 392,374 new retirements with only 61,665 new employments. This points to a serious deterioration in the dependency ratio. While in 1995 the employers-to-pensioners ratio was 2 to 1, in 2001 it was as low as 1.28 employees to 1 pensioner. Despite the growing burden of pension expenditures placed on employees, the level of pension benefits continues to be relatively low, so that in 2001 almost 70% of pensioners received less than 1,700 HRK. While the total number of pensioners grew by 60% over the six-year period, the number of employed income taxpayers grew by as little as 5% and the number of small businesses by 6.5%.

*Table 1. The number of income taxpayers*

Year	Total	Employees	Pensioners	Small Businesses
1995.	1 952 981	1 236 742	618 499	97 740
1996.	2 003 475	1 250 043	657 728	95 704
1997.	2 053 272	1 266 134	692 295	94 843
1998.	2 284 101	1 300 477	884 186	99 438
1999.	2 354 135	1 277 605	977 324	99 206
2000.	2 367 931	1 268 498	998 936	100 497
2001.	2 413 343	1 298 407	1 010 873	104 063

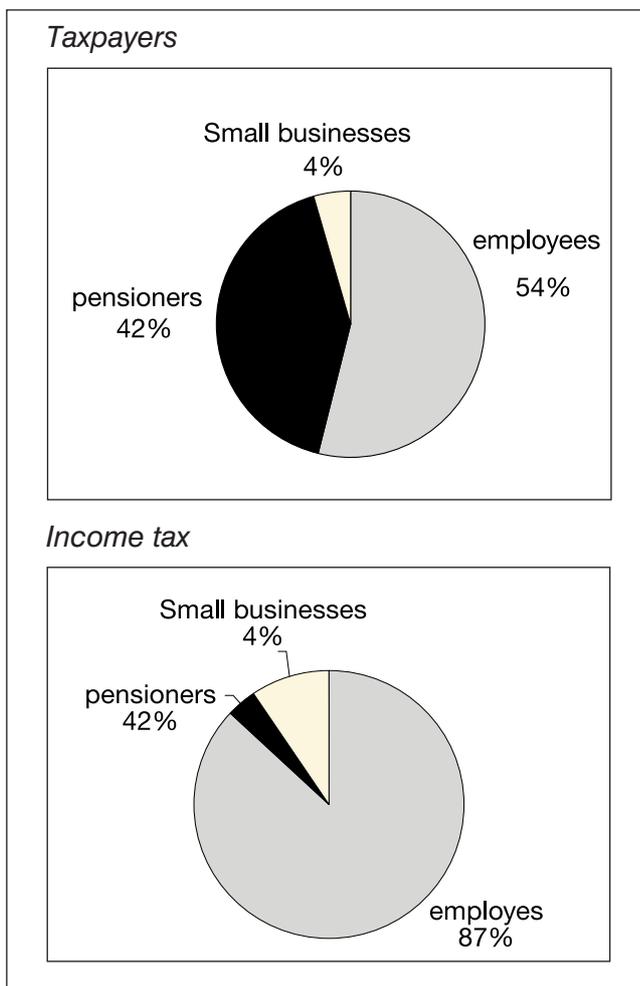
<sup>1</sup> The changes in income tax are quoted from the Law on the Amendments to the Law on Income Tax (Official gazette (Narodne novine), No. 150/2002).

<sup>2</sup> This paper is based on the research project of the Institute of Public Finance named "Income Tax Progressivity in Croatia in the Period from 1995 to 1999", which was financed by the Tax Administration, the Central Agency of the Ministry of Finance. The project results were published in the journal "Financijska teorija i praksa", 2/2001. The Institute continued the research on the progressivity of income tax in 2000 and 2001. For more details on the method and data sources see the above-mentioned project.

<sup>3</sup> In terms of this paper, "income tax" includes both income tax and surtax, which is a part of the local government revenues.

In 2001, employees accounted for more than a half of the total number of taxpayers, pensioners participated with 42% and small businesses with as little as 4%. However, there is a marked discrepancy between the number of taxpayers within a certain group and the actual amount of tax collected. Thus, 87% of employees, 9% of small businesses and 4% of pensioners paid the income tax. As shown in Figure 1, the majority of income tax revenues are derived from wages and much less from pensions or the income of small businesses. Therefore, the greatest emphasis in income tax policy making and providing for equity of taxation is to be placed on salaries, because they account for the largest share of income tax revenues, and relate to the largest number of taxpayers. Roughly 1.3 million salary earners paid almost 5.6 billion HRK income tax in 2001, while around 1 million pensioners paid 230 million HRK (24 times less than employees), and some 100,000 small businesses paid 600 million HRK income tax (10 times less than employees).

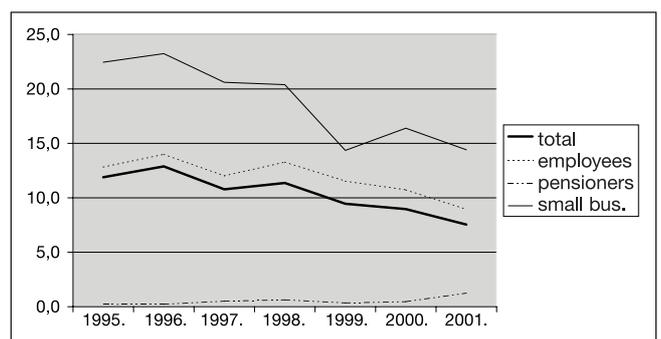
Figure 1. Taxpayers and income tax in 2001



**II.**  
**In 2001, the average income tax rate was 7.5%.**  
**Since 1995, the average income tax burden has been decreasing.**

From the total earned income of 85 billion HRK in 2001, taxpayers paid 6.4 billion tax, i.e. the average tax burden or average tax rate was 7.5%. This is 37% below the level in 1995, when the average income burden was 11.9% and has continually decreased since then (except in 1996). These data prove that the income tax rates set by the law give little indication of the actual tax burden imposed on citizens. Apart from tax rates, the actual tax burden depends on a series of other factors, e.g. the amount of personal allowances, deductions for dependent family members, various kinds of tax relieves etc. It is worth noting that a substantial decreasing of the income tax burden took place in 2001, when the income tax went through the first major change. As a result, the tax burden was lowered by 2.5 percentage points, which was the most significant reduction since the introduction of the income tax in 1995. Figure 2 shows clearly that the average tax burden has lowered for all categories of taxpayers, primarily small businesses. Thus, their income tax liability equaled 22.4% of their earned income 1995, and only 14.4% in 2001. However, despite the sharpest fall in the tax burden on small businesses, they still remain the most burdened category, liable to pay a much larger portion of their income (14.4%) in income tax than employees (8.9%). The income tax burden on pensioners is very small, standing at an average of 0.5%.

Figure 2. The average income tax burden (%)

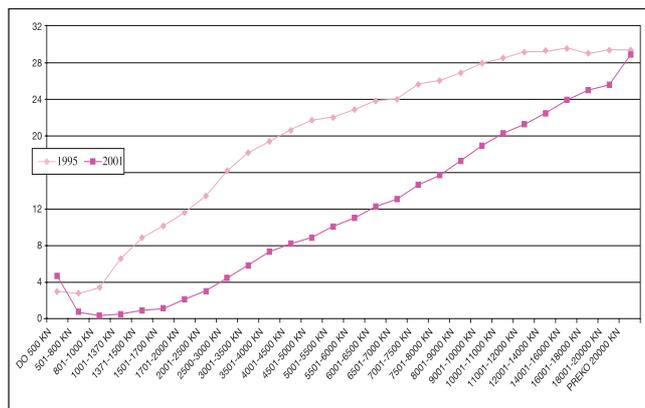


### III.

**As higher-income groups pay relatively larger amounts of income tax, the system can be considered progressive.**

The movement of the average interest rate by income-groups in all observed years points to an increase in the average tax burden on higher income-groups, which means that the income tax system is progressive. The heaviest burden was recorded in the income groups over 20,000 HRK, so that 3,049 taxpayers from these groups were liable to pay 28.9% income tax and surtax in 2001. The lowest burdened was the income group between 800 and 1,000 HRK, liable to pay as little as 0.4% income tax.

*Slika 3. Prosječno opterećenje porezom na dohodak po dohodovnim sredstvima*

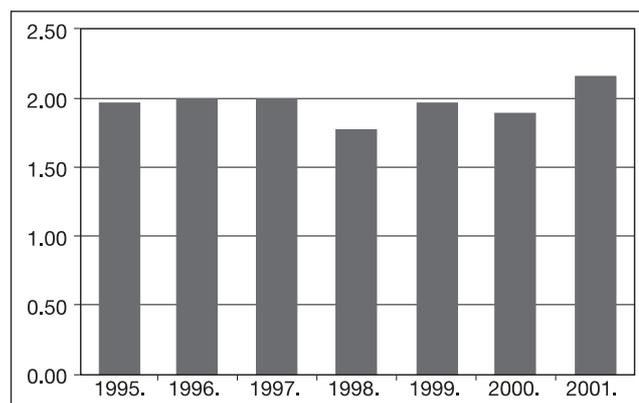


As shown in Figure 3, of the total of 28 income groups, in 2001 the income tax burden was lowered in as many as 27 of them compared with 1995. During that period the average income tax burden fell from 11.9% to 7.5%. However, the lowered tax burden was not evenly distributed among the income groups. The most severe reduction was observed in the income group up to 2,000 HRK (between 80% and 90%). The smallest reduction related to the highest income groups, i.e. those over 14,000 HRK, with as "small" as 20% income tax reduction in 2001 compared with 1995. The income tax burden on the highest income groups, i.e. those earning over 20,000 HRK remained stagnant. In 2001 their income tax

burden remained at the level from 1995, i.e. about 29%. All this suggests that in the period from the introduction of the income tax to the present its burden on the poor has decreased while it has been relatively heavier on the rich. On the average, everybody was liable to pay less, but the lowered burden was more pronounced in lower income groups than in higher-income groups. In other words, the income tax has become increasingly progressive.

While the developments in the average burden by income groups speak in favor of an increasing progressivity of the income tax, the total progressivity of the system is still unknown. To establish it, we have used the measure of total tax elasticity, which shows the degree of progressivity of the entire income tax system.<sup>4</sup> A tax system is proportional if the tax elasticity equals 1. A tax system is progressive if the elasticity is more than 1 and it is regressive if the elasticity is less than 1. The measurement results suggest that the Croatian income tax system is progressive, because in 2001 the total tax elasticity was 2.16. If the total tax elasticity of 1 is a characteristic of a proportional tax system then a tax system with a twice as high elasticity is indeed progressive. As shown in Figure 4, the income tax system has always been progressive, i.e. its elasticity has always been more than 1. Due to the changes in income tax introduced in 2001, the system became even more progressive, so that the total tax elasticity grew from 1.91 in 2000 to 2.16 in 2001.

*Figure 4. Income tax elasticities in Croatia; all income groups, period 1995-2001*



<sup>4</sup> Tax elasticity is defined as the ratio of the relative change in tax to the relative change in income within one income group. A special method is used to calculate the total tax elasticity for the entire tax system. For a more detailed description of the method, see *Financijska teorija i praksa*, No.2/2001.

Now, to what extent is the Croatian income tax system progressive compared with the systems in other countries? The data in Table 2 suggest that the Croatian income tax system with its total tax elasticity of more than 2, converges with the progressive systems of Scandinavian countries like Sweden, Finland and Norway. Consequently, the system is equally progressive as the systems in socially most sensitive European countries. The changes in income tax to be introduced in 2003 will probably further contribute to the progressivity of the system. However, given the large number of changes, judgments should rely on real data and not the provisions of the law. In slightly more than a year data on income tax will be available and we'll be able to show whether the income tax system is really moving towards increased progressivity, i.e. is it going to become more equitable, in accordance with the legislator's wishes. Yet it should be emphasized that an optimum equity does not exist. It is the citizens who decide on the equity of their own income tax system in the political process of voting, either directly - by voting papers or indirectly - through their repre-

sentatives in the parliament. However, the concept of equity is different in each society. Like beauty, equity is "in the eye of the beholder".

Table 2. Total tax elasticities in selected countries

Country	Year	Total tax elasticity
Australia	1979/80.	1,67
Austria	1976.	1,75
Belgium	1977.	1,67
Canada	1979.	1,65
Denmark	1980.	1,52
Finland	1979.	2,34
Germany	1978.	1,64
Greece	1979.	1,86
Ireland	1979/80.	1,76
Japan	1980.	1,88
the Netherlands	1975.	1,73
New Zealand	1976.	1,83
Norway	1979.	2,41
Sweden	1979.	2,33
USA	1980.	1,55
Croatia	2001.	2,16

Source: Tax Elasticities of Central Government Personal Income Tax Systems, 1984, OECD, Paris.

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