

# **Analysis of the Relationship of Professionals towards the Vertical Equity of the Slovenian Tax System and Its Comparison with Croatia, Bosnia and Herzegovina and the USA<sup>1</sup>**

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## **ABSTRACT**

Vertical equity states that taxpayers whose positions are not the same should be treated differently while taking into consideration all the relevant characteristics. The main purpose of using the vertical equity principle is to require the redistribution of income in a way that reduces the income inequality of the society. The presented research aims to check the opinion of Slovenian tax system professionals on the principle of vertical equity. Slovenian results have been compared to a similar analysis carried out in Croatia, and partly with survey results from Bosnia and Herzegovina and the United States of America. The results show that the professional public agrees with the principle of vertical equity in the implementation of tax systems. All of the compared countries are similarly favourable towards vertical equity. However, this is also affected by the current tax arrangements of the individual countries.

*Key words:* *vertical equity, tax system, equitable distribution, Slovenia.*

*JEL:* H23, H30, E62

## **1 Introduction**

The tax system needs to be designed in a way that will not distort economic effectiveness and at the same will ensure a high level of social justice. Progressive income taxation is a result of the practice used in the taxation of

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the economic strength of an individual, where people with a higher income pay a relatively larger amount of tax than people with a lower income. At the same time, people with a higher income participate more in the process of consumption, which is taxed with value added tax (VAT). In this case, the practice of taxing the economic strength of an individual means that people with a higher income pay a larger share of taxes (Ivanov, 2011, pp. 3–4). Tax principles include recommendations for legislators or tax authorities on how to form a tax system so that it will be financially substantial, economically encouraging, socially equitable and technically appropriate in terms of taxation (Pernek, 2001). In practice, this is a real challenge. According to tax principles, the tax system should be designed in a transparent and easy manner, while interfering with the economic decisions of the subjects in the market as little as possible. The establishment of the tax system is also connected to administrative expenses and losses, which are connected to tax evasion, so it is important to design the tax system in such a way that it minimises costs and evasions (Mirrlees, 2011). In addition to the already stated, the decision makers need to consider the goals of the tax policy as a part of the comprehensive policy. There are no tax principles with an absolute value. Modern tax principles differ from past ones in terms of content, despite sharing the same name. This can be particularly seen in the principle of equity, which was understood differently in different times and places. Taxation principles changed under the influence of various circumstances, i.e. economic, cultural and political (Mišetić, 2016).

The principle of equity is a problem that has not yet been solved and is even seen as unsolvable by economists and social philosophers since many books and dissertations have been written about it. It is hard to decide what is fair because everyone has a different view. The realisation of the principle of equity can be carried out by taxation according to the benefit principle or taxation according to the principle of economic viability (Kranjec, 2003). If we wanted to make all taxes fair and make every individual pay only as much for the public goods as used by that very individual, then each individual should only pay for public goods that he/she actually uses. However, in practice, this is hard to achieve, for it is impossible to measure individual needs in terms of public goods.

Two general principles of equity are important for our research (Kranjec, 2003), i.e. the principle of horizontal equity – individuals who are in the same position in terms of individual selected characteristics need to be treated the same way – and the principle of vertical equity – individuals who are in different positions in terms of individual selected characteristics need to be treated differently. The principle of vertical equity means that higher income equity needs to be ensured through the tax system. Therefore, this is a principle that requires the redistribution of income through the tax system.

In the framework of this research, the first extensive survey of tax professionals was carried out. It comprises 92 statements connected to the Slovenian tax system. This article analyses those questions, which show how professionals in Slovenia accept or confirm/reject certain concepts on a theoretical basis. The opinion of professionals is important from at least two aspects connected

to the formation of tax policy. Firstly, the formation of the tax system in a certain environment is strongly subject to the opinion of professionals, since measures that are generally not supported by society mostly do not end up being accepted. Secondly, the manner of redistribution of income via taxes and the amount of redistribution are subject to the relationship towards social inequality. The greater the aversion to inequality, the stronger the role of redistribution in the society and, consequently, the greater the implementation of the principle of vertical equity than the principle of equity of the tax system. This research thus tested 1) how the Slovenian professional public evaluates various theoretical concepts connected to vertical equity and 2) whether the Slovenian professional public prefers the principle more than professional public in other countries, where a similar analysis has been performed. The methods used in this research were interviewing, quantitative statistical analysis of the answers by the groups of professionals and comparative analysis with similar research abroad.

This article is structured in such a way that research from the field of vertical equity and the overview of the research, focused on interviews to check or evaluate tax systems, are introduced first, and followed by the presentation of the methodology. The results of the research are shown descriptively and with an analysis of the correlations with the question of fairness and interviewers' characteristics. Their answers have also been analysed from the perspective of evaluating the opinions of Slovenian professionals on various theoretical principles. The chosen statements were later compared to research in other countries. In the conclusion, general conclusions and potential future research in the field are presented.

## **2 The Principle of Vertical Equity in Research**

As has been previously mentioned, the principle of vertical equity requires the redistribution effects of the tax system, with which a larger part of an income is taken from those with larger income and a smaller part from those with a smaller income. This means that the tax system needs to be progressive. Progressiveness can be achieved through the increase of the average tax rate in accordance with the tax base (Lambert, 2001). Some authors think that this principle can also be met if the net taxes increase in accordance with the pre-tax income (Duclos & Araar, 2006). Research, connected to vertical equity is mainly focused on the analysis of individual tax measures and their effects on the provision of this principle. Urban (2014) divides these research studies into two groups – those that try to determine the effects of individual measures by measuring income prior to and after taxation. On the other hand, there are research studies that focus on the cumulative effect of all instruments at once. The effect of an individual instrument is then evaluated on the basis of the decomposition of the effect of an individual instrument. Most research studies belong to this second group (e.g. Lambert, 1985; Lerman and Yitzhaki, 1985; Rao, 1969). The effect of measures on vertical equity alone was, for example, studied by Ervik (1998), Immervoll et al. (2006) and Zaidi (2009). Research in the field of vertical equity is therefore mostly focused on analysing effects of various changes and measures of tax policy. This group of research

studies also partly includes research studies that focus on measuring the effects of income redistribution but do not explicitly mention the principle of vertical equity. Research studies from this area are not the basis for our research study, so we are not going to present them in detail.

Research studies connected to the evaluation of opinions on the tax system are closer to our research questions. There is a lot of opinion research on the tax system (e.g. Behrens, 1973; Dornstein, 1987; Ashworth and Heyndels, 1997; Kirchler, 1999; Petersen et al., 2000; McGowan, 2000; Murphy, 2004; McCabe and Stream, 2006; Hammar et al., 2008; Campbell, 2009; Ventry, 2011; Hulse and Vines, 2012; Sanandaji and Wallace, 2014, Borrego et al., 2015). Research studies mostly focus on an individual tax or an individual group of taxes (e.g. taxation of work, companies, etc.), or they focus on the tax system as a whole and not on an individual tax or a group. The results of the majority of the research studies show that experts rarely reach the consensus on tax policy and that several factors influence their opinion. In the framework of our research study, we used a wide-ranging questionnaire on the tax system, intended for the evaluation of the entire tax system, though our analysis focuses on the principle of vertical equity. The questionnaire that we used follows the one that was used in the USA (Lim et al., 2013) and in Croatia (Šimović et al., 2014). The fairness of the tax system was also studied in an opinion research study by Dorenstein (1987), who wanted to figure out how taxpayers see the fairness of the tax distribution. A similar research study was also carried out in Germany by Heinemann & Hennighausen (2010). Other research connected to the taxpayers' opinion and tax fairness is related to individual taxes or groups of taxes.

### 3 Methodology

As mentioned before, we prepared our questionnaire in accordance with the questionnaires used in the USA (NTA, 2013 and Lim et al., 2013) and Croatia (Šimović et al., 2013). The main purpose for using both questionnaires is the easier comparability of results with the stated countries. A similar questionnaire was also used in Bosnia and Herzegovina one year later (Lazović-Pita and Štambuk, 2015). The questionnaire includes 92 statements, which interviewees were able to assess using a Likert scale from 1 (completely disagree with the statement) to 5 (completely agree with the statement). In addition to these 92 statements, the questionnaire also includes a few demographic questions, i.e. on the age, level of education and area of work. For the analysis of the opinion on vertical equity, 33 statements were selected from the set of statements, which can be interpreted in the light of the principle of vertical equity. The questionnaire was intended for the professional public, i.e. tax advisors, academics in the field of taxation and employees of the state tax administration. The survey was conducted at the beginning of 2014. The responsiveness of the tax advisors was the lowest, i.e. 18%, and slightly better among the academics (22.6%). Altogether, 169 interviewees answered the questionnaire. The largest part of the structure consists of tax administration representatives (state sector), i.e. 60.2%, followed by tax advisors (32.5%) and academics (7.2%).

## 4 The Results

### 4.1 Analysis of Selected Statements of Slovenian Professionals in the Framework of Different Theoretical Concepts

As previously mentioned, 33 statements were taken from the whole. They can be included in the interpretation of vertical equity taking into account different theoretical concepts of fairness. Evaluations of the statements are directly compared to the Croatian research, because our aim is to indirectly check whether the development of individual tax systems, despite the same tradition of the tax system in the past, affects the opinion of the experts. We assume that the theoretical basis of the knowledge of the professionals is the same in both countries. The comparison of the median and the structure of the answers to an individual selected statement is shown. In the table, the statements where "social sensitivity" is expected to get lower grades (1 and 2) are shaded, while questions that are directly or indirectly in favour of vertical equity, where a higher level of agreement is expected (grades 4 and 5), are not shaded.

*Table 1. Distribution of Answers (in %), the Median and the Interquartile Range*

The number of the statement and the statements		Answer (%)					Median (IQR)
		1	2	3	4	5	
1. Slovenia needs to impose a property tax.	SVN	17	8	12	24	39	4 (2-5)
	CRO	19	18	9	34	20	4 (2-4)
3. Other types of property should also be taxed (e.g. movable goods, financial assets) so a synthetic wealth tax (net wealth) can be imposed.	SVN	33	10	17	14	26	3 (1-5)
	CRO	21	19	10	25	25	3.5 (2-4.75)
10. Inheritance and gifts should be taxed.	SVN	33	15	19	11	22	3 (1-4)
	CRO	29	20	13	21	17	3 (1-4)
11. Inheritance and gifts should be taxed at a proportional rate.	SVN	28	11	19	16	25	3 (1-5)
	CRO <sup>1</sup>	31	14	11	24	18	3 (1-4)
12. Real estate transfers should be taxed.	SVN	7	7	9	25	51	5 (4-5)
	CRO	8	6	9	38	38	4 (4-5)
13. Property is a necessary additional indicator of economic (tax) capability alongside income.	SVN	11	8	22	24	34	4 (3-5)
	CRO	6	9	11	33	41	4 (3-5)
14. The highest personal income tax rate needs to be reduced (recently set at 50%).	SVN	25	13	16	15	31	3 (1.25-5)
	CRO <sup>2</sup>	24	22	12	18	24	3 (2-4)
15. The lowest personal income tax rate needs to be reduced (now at 16%).	SVN	31	13	13	15	28	3 (1-5)
	CRO <sup>3</sup>	14	15	15	26	30	4 (2-5)
16. Instead of multiple personal income tax rates, we should impose a universal tax rate and retain personal tax allowances.	SVN	52	15	12	7	15	1 (1-3)
	CRO	38	21	15	15	12	2 (1-4)

The number of the statement and the statements		Answer (%)					Median (IQR)
		1	2	3	4	5	
17. We should impose more personal income classes.	SVN	25	10	18	19	27	3 (1-5)
	CRO	21	18	17	24	20	3 (2-4)
18. We should reduce the number of personal income classes.	SVN	46	18	19	5	11	2 (1-3)
	CRO	36	27	22	6	9	2 (1-3)
19. We should reimpose tax reliefs connected to the expenditures of individuals on healthcare services.	SVN	24	5	15	16	36	4 (1.5-5)
	CRO	14	11	7	25	43	4 (2-5)
20. We should reimpose tax reliefs connected to the expenditures of individuals on tackling the housing problem.	SVN	16	5	10	19	49	4 (3-5)
	CRO	14	13	8	25	40	4 (2-5)
21. We should reimpose tax reliefs connected to the expenditures of individuals on life insurances.	SVN	32	11	19	14	24	3 (1-4)
	CRO <sup>4</sup>	16	14	13	21	35	4 (2-5)
23. We should reimpose the relief for donations and replace the currently available allocation of personal income tax for this purpose.	SVN	25	11	21	11	32	3 (1.75-5)
	CRO <sup>5</sup>						
25. All income should be taxed in the same manner (by rates or at a flat rate).	SVN	42	11	16	14	17	2 (1-4)
	CRO <sup>6</sup>	15	14	32	20	18	3 (2-4)
26. Capital income should be taxed at a lower rate than other income.	SVN	36	18	21	13	14	2 (1-4)
	CRO <sup>7</sup>	32	25	19	14	10	2 (1-3)
27. Dividends should be taxed at a lower rate than other income.	SVN	33	21	18	11	17	2 (1-4)
	CRO <sup>8</sup>	13	11	13	26	38	4 (3-5)
42. There should only be one VAT rate.	SVN	63	14	11	4	7	1 (1-2)
	CRO	26	30	12	17	15	2 (1-4)
43. There should be a zero VAT rate for selected goods and services.	SVN	24	7	13	12	44	4 (2-5)
	CRO <sup>9</sup>	11	10	14	30	35	4 (3-5)
45. Some types of food should be taxed at a lower VAT rate.	SVN	5	6	8	16	63	5 (4-5)
	CRO	7	5	7	31	51	5 (4-5)
47. We should increase the standard VAT rate.	SVN	60	21	13	2	3	1 (1-2)
	CRO	74	18	5	1	1	1 (1-2)
48. A higher VAT rate is better than imposing a crisis tax.	SVN	33	10	24	13	21	3 (1-4)
	CRO	32	14	26	17	11	3 (1-4)
49. Lower VAT rate should be used for all food items and not just for selected ones.	SVN	16	13	23	18	30	3 (2-5)
	CRO	14	16	17	28	25	4 (2-4.25)
61. Luxury products should be taxed with excise duty/special tax.	SVN	22	7	19	19	33	4 (2-5)
	CRO	8	9	14	29	40	4 (3-5)
62. Motor vehicles should be taxed with a special tax.	SVN	39	16	23	13	7	2 (1-3)
	CRO	12	17	21	33	18	4 (2-4)
63. Aircrafts and vessels should be taxed with a special tax.	SVN	21	8	22	22	25	3 (2-5)
	CRO	7	10	22	33	28	4 (3-5)

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The number of the statement and the statements		Answer (%)					Median (IQR)
		1	2	3	4	5	
73. Financial transaction tax is an eligible special tax.	SVN	14	7	31	18	28	3 (3-5)
	CRO <sup>10</sup>	19	18	16	27	21	3 (2-4)
74. Tax on the balance sheet of banks is an eligible special tax.	SVN	10	4	34	18	34	4 (3-5)
	CRO <sup>11</sup>	10	9	17	33	30	4 (3-5)
79. The tax burden should be transferred from profit and income to consumption at a larger rate.	SVN	14	22	26	20	16	3 (2-4)
	CRO	8	18	21	33	20	4 (2-4)
84. Untaxed interests promote saving.	SVN	11	9	19	31	29	4 (3-5)
	CRO <sup>12</sup>	26	19	15	18	21	3 (1-4)
85. The non-taxation of capital income promotes investments and economic growth.	SVN	10	14	26	27	23	4 (3-4)
	CRO <sup>13</sup>	10	9	12	30	38	4 (3-5)
91. The principle of equity should be given an advantage over the principle of effectiveness when creating tax policy.	SVN	4	8	14	25	48	4 (3-5)
	CRO	3	7	22	33	34	4 (3-5)

<sup>1</sup> The statement in the Croatian survey is: Taxation of inheritance and gifts should be done progressively, taking into account the amount of the inherited/gifted assets, as well as closeness of relatives (as opposed to the current level, which is at 5%, excluding the closest relatives).

<sup>2</sup> In 2014 this was reduced from 45% to 40%.

<sup>3</sup> In 2014 this was reduced from 15% to 12%.

<sup>4</sup> This statement is listed under number 23 in the Croatian analysis. We should reimpose personal tax relief on the basis of complementary health insurance and private medical insurance premiums (additional personal exemption).

<sup>5</sup> The Croatian survey does not include this statement.

<sup>6</sup> This statement is listed under number 27 in the Croatian survey.

<sup>7</sup> Capital income should be taxed lower than income from work. This statement is listed under number 28 in the Croatian survey.

<sup>8</sup> Dividends should be taxed in the framework of personal income tax.

<sup>9</sup> With our entry into the EU, we should have kept a zero VAT rate for selected goods and services.

<sup>10</sup> Financial transaction tax should be imposed.

<sup>11</sup> A tax on the balance sheets of banks should be imposed.

<sup>12</sup> Interest on saving and securities should be taxed in the framework of personal income tax.

<sup>13</sup> Financial capital interest should be taxed in the framework of personal income tax.

Source: Survey of professionals in the Slovenian tax system and the Croatian tax system (Blažič, Šimović and Štambuk, 2014)

From the comparative analysis of answers by Slovenian and Croatian professionals, we can establish that these answers do not differ significantly. Both Slovenian and Croatian professionals show a similar positive relationship towards vertical equity. In most of the cases, the unshaded questions have a median of 4 and the shaded a median of 2. Both Slovenian and Croatian professionals think that the principle of equity should be given an advantage over the principle of effectiveness when creating tax policy (median 4).

From the comparison, it can be concluded that despite differences in tax arrangement, these differences are not significant enough to create different evaluations of the selected statements between the two groups of experts. The biggest difference can be seen in the taxation of dividends and motor vehicles, which are the most differently taxed areas in the two countries.

If we want to analyse the answers in the light of theoretical contexts, it needs to be emphasised that in some aspects it is reasonable to analyse individual groups of questions. In the theory, there is a prevalent opinion that redistribution should take place exclusively through direct income taxes and social transfers (Mirrlees et al, 2011). Despite this relatively easy definition, this does not mean that redistribution through direct income tax is easy, since there are many questions on how and if income should be taxed progressively, whether all types of income should be treated the same, how we should consider the property (both saved and inherited) of an individual in this type of taxation, etc. If we analyse the assessments of selected statements in this light, we can quickly assume the following: Slovenian experts mostly agree with the progressive taxation of income, the equal taxation of capital and work, and the inclusion of property in the process of redistribution. Slovenian experts also take the view that a part of the redistribution needs to be transferred to consumer taxes. Furthermore, each aspect is presented in detail.

In Slovenia, the percentage of experts who agree with lowering tax rates is about the same as the percentage of experts who agree with retaining the highest tax rate. However, these experts are more favourable towards additional exemptions for those with lower income. From the results, we can also assume that the number of tax classes is sufficient. The analysis shows that progressiveness has a great deal of support. In the theoretical context, progressiveness is supported by various empirical research studies, since the progressive taxation of income is the traditional way of putting the principle of vertical equity into effect. Despite this, supporters warn that the right level of progressiveness is hard to achieve (Musgrave, 2005). Supporters of 'lower' progressiveness emphasise that, when defining the level of progressiveness, one must consider the fact that there is a trade-off between the redistribution of income and the incentive for work (Mirrlees et al., 2011; Auerbach and Hassett, 2014; Picketty, 2014). Other research studies also emphasise that the right level of progressiveness is hard to achieve and that an inappropriate combination of taxation and social transfers can lead to unwanted income inequality after taxation. According to some research studies, this is also present in Slovenia (Čok et al., 2013). In theory, an important aspect of the right level of progressiveness also depends on the aversion to income inequality. Considering the assessments of statements, connected to the taxation of income and property, as well as expenditure and luxury goods, we can assume that the aversion of experts to income inequality is relatively high and thus professionals in Slovenia support greater progressiveness.

Just like various theorists (e.g. Mirrlees et al., 2011; Auerbach and Kotlikoff, 1987; Auerbach and Hassett, 2014), Slovenian experts are inclined towards the equal treatment of all income sources, which includes capital income. This opinion is supported by the belief that the non-taxation of capital could lead to an unwanted transfer of tax burden from capital to work. This opinion opposes some other theoretical contexts, since other theorists (e.g. Atkinson and Stiglitz, 1976; Chamley, 1986) are in favour of a zero capital income tax rate. The modern trends of the dual taxation of capital income show that

the practice is increasingly inclined towards the lower taxation of capital, particularly due to easier capital flight to jurisdictions with lower taxation. In addition to tax competition, another reason for the lower taxation of capital income is the belief that lower taxation promotes savings and investments, however, it has to be stressed that this may lead to the redirection of payments towards capital income and not towards income from work, which could, again, lead up to unwanted redistributive effects.

The principle of vertical equity in the context of property taxation has the largest number of disparities in theory. The trends of property taxation have been more or less directed into the cancellation of such taxes in recent years. The same goes for inheritance and gift tax, which is classified as property tax. However, the financial crisis promoted the revival of property taxes. One of the intended anti-crisis measures on the EU level was the implementation or increase of property taxes (EC, 2013). On the other hand, supporters of property taxation are in favour of the implementation of a generic property tax. Thus, Piketty (2014) advocates this opinion in his theory that social inequality is to a large extent the result of a combination of unequal capital ownership, a high savings rate (which comes from capital income) and a high rate of substitution between capital and work, which enables the accumulation of capital. Property taxes therefore effectively tax the safe rate of yield on investments. On the other hand, critics of property taxation are of the opinion that the accumulation of capital needs to be prevented with the help of increased progressiveness (Auerbach and Hassett, also Piketty et al. (2014) in another research project). Given the assessment of the statements, Slovenian experts are increasingly inclined towards this theoretical context. Despite the fact that the majority supports the property tax, their inclination towards the property tax ends here. The opinion of the majority is that taxation using a synthetic property tax is irrelevant. The same goes for consideration of property in the process of redistribution and for the opinion on the use of special taxes for an individual type of property. This corresponds to the relationship towards inheritance and gift taxes, which are not seen as a special instrument in the process of redistribution. It is interesting, however, that the professionals support the use of luxury taxes. Considering the assessed statements on property taxation, we might assume that Slovenian experts are more in favour of implementing the principle of vertical equity through increased progressiveness in income taxation than through additional taxation of property resulting from the income. Consequently, they are also in favour of the equivalent taxation of all income.

The opinion of Slovenian experts on the implementation of the principle of vertical equity through consumption tax is highly favourable towards the theoretical context that advocates the existence of exemptions and reduced VAT rates due to the regressive effect of taxes on consumption. From the perspective of a life cycle of consumption and acquiring income, a multi-level taxation of consumption is a better solution from the viewpoint of the redistribution of the tax burden (see Auerbach and Kotlikoff, 1987; Altig et al., 2001, Mirrlees et al., 2011). The critics reject this thesis because

they think that the regressive effect and the consideration of a life cycle are focused too much on the available income (Bettendorf and Cnossen, 2014). In the taxation of consumption, it is far more important to consider expenses related to consumption, which are more stable from the viewpoint of a life cycle. Bettendorf and Cnossen (2014) proved on the basis of data for the Netherlands that those with a higher income have 1.8 times greater benefits from a lower tax rate than those who are poorer (in terms of EUR). On the other hand, the loss of profit in the budget is very high due to the reduced rate and does not outweigh the redistribution effect. Both reached the conclusion that redistribution is more reasonable through income taxes and the system of social transfers, not through consumption taxes, which is similar to the already stated theorists' opinions. Slovenian experts do not advocate this concept from this viewpoint, when it involves consumer taxes, although they advocate this concept when it involves property taxes.

#### **4.2 The Influence of Education, Age and Sector of Employment on the Assessments of the Chosen Statements**

Assessments from Slovenian experts were also evaluated with the help of the demographical characteristics of the interviewees. We were interested in whether age, level of education and sector of employment affect the assessment of an individual analysed statement. For this purpose, we used the Spearman's correlation test. Spearman's correlation test with age shows that age is an unimportant variable in this analysis, since the correlation was only present in four questions. The correlation was so low that it was insignificant. The higher the level of education, the less the interviewees were expected to be favourable towards vertical equity, since pay increases with the level of education. This leads to a reduced personal interest in the redistributive function of taxes. The results confirm that with as the level of education increases, people are slightly less favourable towards vertical equity, which is presented in a negative correlation. On the other hand, the sector of employment proved to be a more determinative factor. The correlation analysis is then controlled by the sector of employment. In Table 2, the results of Spearman's coefficient of correlation ranges are shown for the answers to all questions, where a correlation with education has been confirmed. In the last column, we additionally checked the links to the fields of work. These links are presented with the labels YES and NO. The label NO means that there is no statistically characteristic connection with education in any sector, whereas the label YES means that there is a statistically characteristic connection with education in at least one sector.

**Table 2. Spearman's Rank Correlation Coefficient for the Statements in Which Correlation with the Level of Education is Approved (with Significance by Sector)**

Statement	$r_s$	Sig. by Sector
10. Inheritance and gifts should be taxed.	.297**	YES
11. Inheritance and gifts should be taxed at a proportional rate.	.214**	NO
12. Real estate transfers should be taxed.	.255**	YES
14. The highest personal income tax rate needs to be reduced (recently set at 50%).	.169*	YES
16. Instead of multiple personal income tax rates, we should impose a universal tax rate and retain personal tax allowances.	-.210**	YES
19. We should reimpose tax reliefs connected to the expenditures of individuals on healthcare services.	-.245**	YES
20. We should reimpose tax reliefs connected to the expenditures of individuals on tackling the housing problem.	-.211**	YES
21. We should reimpose tax reliefs connected to the expenditures of individuals on life insurances.	-.187*	YES
23. We should reimpose the relief for donations and replace the currently available allocation of personal income tax for this purpose.	-.214**	YES
47. We should increase the standard VAT rate.	-.212**	YES
49. Lower VAT rate should be used for all food items and not just for selected ones.	-.199*	NO
62. Motor vehicles should be taxed with a special tax.	.163*	NO

\*The correlation is important at the 0.05 level (2-tailed).

\*\* The correlation is important at the 0.01 level (2-tailed).

Source: Survey on the opinion of tax experts on the tax system, 2014

To check whether there are any differences in the evaluation of certain statements among the three main sectors of work (public sector, private sector and academic community), a nonparametric Kuskal-Wallis test was performed. For those variables where a significant difference has been confirmed, a comparison by sectors has been made with the help of a post hoc Dunn's test with Bonferroni's correlation, which has been used to check, whether the sample means (medians) statistically differ from each other (Table 3).

**Table 3.** Median by Sectors, Kruskal-Wallis test and Bonferroni Test for Questions, where Differences between Sectors are Approved

Statement	Sector			K-W	
	PR	PU	A	H	P
3. Other types of property should also be taxed (e.g. movable goods, financial assets) so a synthetic wealth tax (net wealth) can be imposed.	1.50 <sup>a</sup>	4.00	1.00 <sup>a</sup>	19.8	0.000
14. The highest personal income tax rate needs to be reduced (recently set at 50%).	4.50 <sup>b</sup>	3.00 <sup>a</sup>	4.00 <sup>ab</sup>	16.5	0.000
17. We should impose more personal income classes.	2.00 <sup>b</sup>	4.00 <sup>a</sup>	2.50 <sup>ab</sup>	12.2	0.002
18. We should reduce the number of personal income classes.	2.00 <sup>b</sup>	1.00 <sup>a</sup>	1.50 <sup>ab</sup>	6.8	0.034
26. Capital income should be taxed at a lower rate than other income.	3.00 <sup>a</sup>	2.00	3.00 <sup>a</sup>	24.9	0.000
27. Dividends should be taxed at a lower rate than other income.	3.00 <sup>b</sup>	2.00 <sup>a</sup>	2.00 <sup>ab</sup>	19.5	0.000
61. Luxury products should be taxed with excise duty/special tax.	3.00 <sup>a</sup>	4.00	1.00 <sup>a</sup>	25.4	0.000
62. Motor vehicles should be taxed with a special tax.	1.00 <sup>b</sup>	3.00 <sup>a</sup>	2.00 <sup>ab</sup>	9.9	0.007
63. Aircrafts and vessels should be taxed with a special tax.	2.00	4.00 <sup>a</sup>	4.00 <sup>a</sup>	25.9	0.000
85. The non-taxation of capital income promotes investments and economic growth.	4.00 <sup>bc</sup>	3.00 <sup>ab</sup>	3.00 <sup>ac</sup>	6.4	0.041
91. The principle of equity should be given an advantage over the principle of effectiveness when creating tax policy.	5.00 <sup>b</sup>	4.00 <sup>ab</sup>	3.00 <sup>a</sup>	6.7	0.034

PR – private sector, PU – public sector, A – academic community

Source: Survey on the opinion of tax experts on the tax system.

The results of the Kruskal-Wallis test show that there are statistically distinctive differences in the evaluation of over a third of the questions. From the table, it is evident that the answers by the private sector differ from those provided by the other two sectors, except for the question of the non-taxation of capital income. It is followed by the public sector and then by the academic community. The academic sector mostly appears in pairs, which is perhaps a consequence of the small number of interviewees from this sector. By analysing data by sectors, it has been pointed out that the academic sector is not exactly favourable towards redistribution and shows a smaller aversion towards inequality in society. For the majority of questions, where grades should have been higher, they used lower grades and vice versa. Our interpretation of this result needs to be cautious, particularly because the result could be a reflection of the small number of answers of this group of interviewees. It is interesting that the private sector seems more favourable towards equitable distribution, while it is expressed the most in the public sector. Therefore we can say that the public sector advocates the most for equitable distribution, which is also a reflection of the work and the mission of public employees. If we compare these results with those from the Croatian

analysis, we can discover that vertical equity is shown in all three Croatian sectors too. The difference is that the assessments of statements are more definite than the Slovenian ones. Even in Croatia, the academic sector is least favourable towards vertical equity, though their favourability towards the latter is still greater than with Slovenian academics (Blažić, Šimović and Štambuk, 2014).

A more in-depth analysis of the assessments of statements shows some other findings too. We can discover that the public sector agrees with the statement that other types of property should be taxed, as well as the so-called synthetic property tax. The private sector (median 1.5) and the academic community (median 1) oppose this. Both the academic and the private sector agreed that the highest personal income tax rate should be reduced, resulting from the better-paid work in comparison with the private sector. This is in line with some theoretical assumptions that reducing the highest marginal tax rates on income encourages employment and entrepreneurial risk on the part of the most educated workers, who, based on that and along with a lower tax rate, contribute more tax income than before. The view on the last question, that the principle of equity should be given an advantage over the principle of effectiveness when creating tax policy, is very interesting. The private (median 5) and the public sector (median 4) agree with this question, whereas the academic sector seems more neutral (median 3).

#### **4.3 A Comparison of the Results with Similar Research Studies in the USA, Croatia and BiH**

A comparative analysis was intended to be performed with the results of the USA and BiH surveys. They used a similar questionnaire. Unlike the Slovenian, Croatian and Bosnian questionnaires, the American questionnaire merely includes the experts' agreements and disagreements with the statement and not a scale (Lim et al., 2013). The results for Bosnia and Herzegovina are shown separately for the two federal units, i.e. for the Federation of Bosnia and Herzegovina (FB&H) and for Republika Srpska (RS) (Lazović-Pita and Štambuk, 2015). A comparison of all the selected statements among all the countries is shown in table 4.

**Table 4. Comparison of Selected Questions in Selected Countries**

Statement		Answer (%)		
		NO	Neutral	YES
13. Property is a necessary additional indicator of economic (tax) capability alongside income.	SVN	19	22	58
	CRO	15	11	74
	FB&H	8	10	82
	RS	6	13	81
	USA	40		60
14. The highest rate of personal income tax needs to be reduced.	SVN	38	16	46
	CRO	46	12	42
	FB&H			They have a universal 10% rate.
	RS			
	USA	80		20
26. Capital income should be taxed at a lower rate than other income.	SVN	54	21	27
	CRO	57	19	24
	FB&H	53	19	28
	RS	54	23	23
	USA	62		38
27. Dividends should be taxed at a lower rate than other income.	SVN	54	18	28
	CRO*	24	13	64
	FB&H	34	16	51
	RS	22	14	64
	USA	64		36
79. The tax burden should be shifted from the profit and the income to consumption at a higher rate.	SVN	36	26	36
	CRO	26	21	53
	FB&H	39	17	44
	RS	45	15	40
	USA	59		41
84. Untaxed interests promote saving.	SVN	20	19	60
	CRO**	45	15	39
	FB&H	20	12	68
	RS	11	10	79
	USA	37		63
91. The principle of equity should be given an advantage over the principle of effectiveness when creating tax policy.	SVN	12	14	73
	CRO	10	22	67
	FB&H	19	19	62
	RS	33	33	34
	USA	16		84

SVN – Slovenia, CRO – Croatia, FB&H – Federation of Bosnia and Herzegovina, RS – Republika Srpska (an entity in BiH). \* The Croatian analysis has a different statement: Dividends should be taxed in the framework of personal income tax. \*\* The Croatian analysis states: Interests and securities should be taxed in the framework of personal income tax.

Source: own source for Slovenia, Blažič, Šimović & Štambuk (2014) for Croatia, Lazović-Pita & Štambuk (2015) for Bosnia and Herzegovina, and Lim et al. (2013) for the USA.

It has been agreed in Slovenia, Croatia and Bosnia and Herzegovina that property is a necessary additional indicator of economic (tax) capability alongside income. The highest level of consent has been reached in FB&H and the lowest in Slovenia, where the assessment of statements that should support this viewpoint is low or neutral. 60% of interviewees from the USA think that property should be taxed. Many experts in Slovenia agree with lowering the highest rate of personal income tax, but not distinctly. In terms of comparison, it is logical, however, that in Slovenia this level is the highest among the countries in comparison. Not all the experts from the countries in comparison agree that capital income should be taxed at a lower rate than other income. Even in the USA, only 38% of experts supported this statement. Slovenian professionals do not agree that dividends should be taxed at a lower rate than other income, whereas the Bosnian experts support this. The latter is probably also the result of the fact that dividends are not taxed in their current regulation. The tax burden should be shifted from profit and income to consumption at a higher rate. Slovenian experts are neutral about this statement. Croatian experts, however, supported this statement with 53% a slightly lower support (44%) can be found in the FB&H, whereas in RS 45% of interviewees did not support this statement. Even the research in the USA included questions shifting the tax burden, which was not supported by the majority. Only 4% of interviewees supported the exclusion of capital income from taxation. Slightly more interviewees, but still in a minority (41%), supported the replacement of the current income tax with VAT. The results are logical in this case, since the USA tax system is already favourable for profit and income. Untaxed interests encourage savings, which was agreed in all the countries compared. The American experts supported the statement that savings taxes are reducing personal savings by 63%. 45% of the Croatian experts do not agree that interests and securities should be taxed in the framework of personal income tax.

In Slovenia, Croatia and FB&H, experts gave the principle of equity the advantage over the principle of effectiveness. The greatest support was given by the Slovenian experts. Professionals were divided in RS and did not support either equity or effectiveness. American professionals think that income distribution is a legitimate role of the country and needs to be more even. The comparison between the opinions of experts from different countries shows that experts generally support the vertical equity of tax systems, but their statements also reflect the current regulation of individual countries, so the estimation and comparison of statements by individual countries need to be interpreted in the light of the tax system in which the experts work.

## **6 Conclusion**

Both research questions can be answered with an analysis of the opinion on statements connected to vertical equity among Slovenian experts. Similar to other professional public abroad, the Slovenian professional public is in favour of achieving the principle of vertical equity in the tax system. By this, they are more in favour of those theories that defend the redistribution of income through the same taxation of all income, the greater progressiveness

of these taxes, as well as the progressiveness of consumption tax. Generally, they support an opinion stating that it is important to consider the property of an individual, but particularly in the taxation of luxury goods and real estates. The stronger agreement or disagreement with some statements in comparison to other foreign experts is mostly a result of various orders in individual countries. For example, advocating the reduction of the highest marginal tax rate in personal income tax comes from the fact that it is at the highest rate in Slovenia compared to the other analysed countries. The diversity of agreement with individual statements not only expresses favourability or unfavorability to vertical equity, but also criticism of the existing system in terms of inappropriate redistribution.

On the other hand, there are restrictions to opinion polls on the tax system. Opinion polls on tax systems generally reach the conclusion that feelings of relative deprivation are the main source of dissatisfaction with taxes and the tax system. This means that the inequality of taxes is seen particularly from the perspective of personal interest. No tax system could actually be seen as fair and perfectly satisfactory, since it is directly connected to the individual who is answering the poll. This can partly be seen in our findings, since assessments of statements are, as has been mentioned before, also an expression of the actual state of an actual tax system, about which the professional public is able to judge even in the light of comparison with other regulations. In the framework of our own analysis, we can therefore discover that in addition to personal interests, political trust has an important impact on the opinion. Like other research studies about tax systems, our research study includes findings about the influence of education and the position in the society (similar to research studies, such as Dornstein, 1985; Hammar, Jagers & Nordblom, 2008). Despite that, in our future research studies, we could carry out a survey among the professional public from the perspective of their opinion on an individual theory or an individual empirical research study, and then compare them with the assessment of a concrete tax system. In this way, we could partly limit the effect of the subjectivity of the given assessments.

An interesting finding in the Slovenian research is that favourability towards vertical equity is also influenced by the sector from which the experts originate. The greatest favourability towards vertical equity comes from the state sector, which is also the main decision maker, lawmaker and creator of the tax system as such. It is this particular group of experts that looks at statements connected to vertical equity in a broader way, for, in addition to providing redistribution, it indirectly takes into account the ability to implement the tax system and is thus less critical to the regulation. On the other hand, the private sector evaluates the tax system more "objectively" from the perspective of vertical equity. It stands up for redistribution, but only within certain "fair" frameworks.

Both in theory and in practice, different approaches towards vertical equity exist, just like the different levels of support for vertical equity. In the future, it would be interesting to obtain the opinion of the professional public on the European level to see which theory it is more inclined to and how this affects

the formation of their national tax systems. This means that in future research studies, we would approach from the other side and study the influence on the formation of the systems that we have in practice.

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## References:

- Altig, D., Auerbach, A.J., Koltikoff, L.J., Smetters, K.A. and Walliser, J. (2001). Simulating Fundamental Tax Reform in the United States. *American Economic Review*, 91(3), 574-595. DOI: 10.1257/aer.91.3.574
- Ashworth, J. and Heyndels, B. (1997). Politicians' Preferences on Local Tax Rates: An Empirical Analysis. *European Journal of Political Economy*, 13(3), 479-502.
- Atkinson, A. B. Stiglitz, J.E. (1976). The Design of Tax Structure: Direct versus Indirect Taxation. *Journal of Public Economics* 6(1), 55-75.
- Auerbach, A. J. and Kotlikoff, L.J. (1987). *Dynamic Fiscal Policy*. Cambridge: Cambridge University Press.
- Auerbach, A.J. and Hassett, K. (2014). *Capital Taxation in the 21<sup>st</sup> Century*. Paper presented at the American Economic Association meetings, Boston, January 2015.
- Behrens, J.O. (1973). The Public and the Publicans Talk Taxes. *National Tax Journal*, 26(2), 221-232.
- Bettendorf, L. and Cnossen, S. (2014). The Long Arm of the European VAT, Exemplified by the Dutch Experience. *CESIFO Working Paper no. 4730*, Category 1: Public Finance. Available at [Twww.CESifo-group.org/wp](http://www.CESifo-group.org/wp).
- Blazić H., Šimović H. and Štambuk A. (2014). Mjesto socialne politike u poreznoj politki RH: Anketa poreznih stručnjaka, *Revija za socialnu politiku*, Ekonomski Fakultet Sveučilišta u Rijeci. doi: 10.3935/rsp.v21i3.1216
- Borrego, A.C., Loo, E.C., Lopes, C.M.M. and Ferreira, C.M.S. (2015). Tax professionals' perception of tax system complexity: Some preliminary empirical evidence from Portugal. *eJournal of Tax Research*, 13(1), 338-360.
- Campbell, Andrea L. (2009). How Americans Think About Taxes: Lessons from the History of Tax Attitudes. NTA Proceedings of the 102<sup>nd</sup> Annual Conference on Taxation, 157-164.
- Chamley, C. (1986). Optimal Taxation of Capital Income in General Equilibrium with Infinite Lives. *Econometrica*, pp. 607-622.
- Čok, M., Urban, I., and Verbič, M. (2013). Income Redistribution Through Taxes and Social Benefits: The Case of Slovenia and Croatia. *Panoeconomicus*, 60(5), pp. 667-686.
- Dornstein, M. (1987). Taxes: Attitudes and Perceptions and their Social Bases. *Journal of Economic Psychology*, 8(1), 55-77.
- Duclos, J-Y., Araar, A. (2006). *Poverty and equity: measurement, policy and estimation with DAD*. New York: Springer.
- Ervik, R. (1998). The redistributive aim of social policy: a comparative analysis of taxes, tax expenditure transfers and direct transfers in eight countries. *Luxembourg Income Study Working Papers Series*, 185, 1-53.
- European Commission (2013). *Tax reforms in EU Member States - Tax policy challenges for economic growth and fiscal sustainability: 2013 Report*. Directorate General for Taxation and Customs Union, Directorate General for Economic and Financial Affairs. doi: 10.2765/40142
- Hammar, H., Sverker C. J. and Nordblom, K. (2008). Attitudes towards Tax Levels: A Multi-Tax Comparison. *Fiscal Studies*, 29(4), 523-543.
- Heinemann, F. and Hennighausen, T. (2010). *Don't tax me? Determinants of individual attitudes toward progressive taxation*. Mannheim: Zentrum für Europäische Wirtschaftsforschung (ZEW).

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- Hulse, D., Stephenson, T. and Vines, C. (2012). Do Consequences Matter? Survey V. Experimental Results in a Tax Setting. *Journal of Legal, Ethical and Regulatory Issues*, 15(1), 79-92.
- Immervoll, H., Levy, H., Lietz, C., et al (2006). *Household incomes and redistribution in the European Union: quantifying the equalizing properties of taxes and benefits. The distributional effects of government spending and taxation*. Palgrave Macmillan: Hounds-mills, Basingstoke, Hampshire, pp 35–165.
- Ivanov, M. (2011). Porezna presija i blagostanje u socialnoj državi. *Ekonomija Economics*, 18, 1-21.
- Kirchler, E. (1999). Reactance to Taxation: Employers' Attitudes towards Taxes. *Journal of Socio-Economics*, 28(2), 131-139.
- Klopčič, J. (2017). *Vertikalna izenačenost dakov v očeh stroke in državljanov*. Magistrsko delo. Ljubljana: Fakulteta za upravo, 86 str.
- Kranjec, M. (2003). *Davki in proračun*. Ljubljana: Fakulteta za upravo.
- Lambert, P.J. (1985). On the redistributive effect of taxes and benefits. *Scottish Journal of Political Economy*, 32, 39–54. doi:10.1111/j.1467-9485.1985.tb00786.x
- Lambert, P.J. (2001). *The distribution and redistribution of income*, 3<sup>rd</sup> edn. Manchester University Press, UK
- Lerman, R. and Yitzhaki, S. (1985). Income inequality effects by income source: a new approach and applications to the United States. *The Review of Economics and Statistics*, 67, 151–156. doi:10.2307/1928447
- Lim, D., Slemrod, J. and Wilking, E. (2013). Expert and Public Attitudes towards Tax Policy: 2013, 1994, and 1934. *National Tax Journal*, 66(4), 775-806.
- McCabe, B. C. and Stream, C. (2006). The Chicken or the Egg: A Recent History of Public Opinion and Tax Reform in Florida. *Journal of Public Budgeting, Accounting & Financial Management*, 18(2), 167-191.
- McGowan, J.R. (2000). The Effect of Political Affiliation on Taxpayers' Attitudes Toward Alternative Tax Systems. *Journal of the American Taxation Association*, 22(1), 111-128.
- Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Johnson, P., Myles, G., Poterba, J. (2011). The Mirrless Review: Conclusions and Recommendations for Reform. *Fiscal Studies*, 32(3), 331-359.
- Mišetić, J. (2016). Poslijediplomski specijalistički rad. *Analiza implementacije načela pravednosti u poreznom sustavu Republike Hrvatske*. Zagreb: Ekonomski fakultet.
- Murphy, K. (2004). An Examination of Taxpayers' Attitudes towards the Australian Tax System: Findings from a Survey of Tax Scheme Investors. *Centre for Tax System Integrity (CTS) Working Paper No. 46*, Research School of Social Sciences, Australian National University, Canberra, available at <http://regnet.anu.edu.au/>
- Musgrave, R. A. (2005). Fairness in taxation. In J. J. Cordes, R. D. Ebel & J. G. Gravelle (Eds.), *The Encyclopedia of Taxation & Tax Policy*. 2<sup>nd</sup> ed. Washington, D.C.: The Urban Institute Press, pp. 135-138.
- National Tax Association (2013), *Opinion Survey 2013*.
- Pernek, F. (2001). *Finančno pravo in javne finance. Posebni del*. Maribor: Pravna fakulteta.
- Piketty, T. (2014). *Capital in the Twenty-first Century*. Harvard: Harvard University Press

- Piketty, T., Saez, E., and Stantcheva, S. (2014). Optimal Taxation of Top Labor Incomes: A Tale of Three Elasticities. *American Economic Journal: Economic Policy*, 6(1), 230-71.
- Rao, V.M. (1969). Two decompositions of concentration ratio. *Journal of the Royal Statistical Society*, 132(3).418–425. doi:10.2307/2344120
- Sanandaji, T. and Wallace, B. (2011). Fiscal Illusion and Fiscal Obfuscation Tax Perception in Sweden. *The Independent Review*, 16(2), 237–246.
- Šimović, H., Blažić, H. and Štambuk, A. (2014). Perspectives of Tax Reforms in Croatia: Expert Opinion Survey. *Financial Theory and Practice*, 38(4), 405-439.
- Urban I. (2014). Contributions of taxes and benefits to vertical and horizontal effects. *Social Choice and Welfare*, 42,619–645. DOI 10.1007/s00355-013-0747-x
- Ventry, Dennis J. (2011). Americans Don't Hate Taxes, They Hate Paying Taxes. *University of British Columbia Law Review*, 44(3), 835-889.
- Zaidi. S. (2009). *Main drivers of income inequality in central European and Baltic countries—some insights from recent household survey data*. World Bank: Policy Research Working Paper 1–29. doi:10.1596/1813-9450-4815

**POVZETEK**

**1.01 Izvirni znanstveni članek**

## **Analiza odnosa strokovnjakov do vertikalne izenačenosti davčnega sistema v Sloveniji in primerjava s Hrvaško, BiH in ZDA**

Vertikalna izenačenost pravi, naj se zavezanci, ki niso v enakem položaju, obravnavajo različno, pri tem pa je treba upoštevati vse relevantne značilnosti. Glavni namen uporabe principa vertikalne izenačenosti je v tem, da zahteva redistribucijo dohodka tako, da se zmanjša dohodkovna neenakost v družbi. S predstavljenim raziskavo smo želeli preveriti, kakšno je mnenje strokovnjakov s področja davčnega sistema v Sloveniji o principu vertikalne izenačenosti. Rezultati za Slovenijo so primerjani s podobno analizo, opravljeno v Hrvaški, ter deloma tudi z rezultati anket v Bosni in Hercegovini ter Združenih državah Amerike. Rezultati kažejo, da se strokovna javnost strinja z načelom vertikalne izenačenosti pri postavitev davčnih sistemov. Naklonjenost je podobna v vseh primerjanih državah, vendar pa na to vplivajo tudi trenutne davčne ureditve posameznih držav.

*Ključne besede:* *vertikalna izenačenost, davčni sistem, pravična porazdelitev, Slovenija.*