This paper presents the views of Croatian citizens about some of the most relevant aspects of the tax system. The research builds on previous broader research into the views of tax experts in Croatia. The current research objectives include: revealing citizens' views about the most important tax issues, establishing the influence of demographic characteristics and attitudes towards redistribution on their answers, and the comparison of their views with those of tax experts. On the one hand, citizens mostly advocate the abolishment of inheritance and gifts taxation, as well interest taxation, but on the other hand, they advocate the introduction of bank taxation and junk food taxation. They are in favour of broadening the reduced VAT rate to encompass all foodstuffs. The regression results suggest a strong influence of the redistributive notion of the tax system, followed by real estate ownership, income level, education level and work status. Comparison with the answers of professionals reveals a statistically significant difference. The paper should contribute to the awareness of public acceptance of the tax system and policy and provide some guidance about their changes.

Keywords: tax system, Croatia, citizens, opinion survey, professionals

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Polling citizens’ opinion on the tax system is rather common in developed countries (e.g. McGowan, 2000; National Public Radio/Kaiser Family Foundation/Kennedy School of Government (NKK), 2003; Hammar, Jagers, & Nordblom, 2008; Campbell, 2009; Bowman & Rugg, 2012; Lim, Slemrod, & Wilking, 2013), while in transition and post-transition countries, such research is rather scarce (e.g. Domonkos, 2015; Klun, Štambuk, & Stare, 2016).

The main goal of this research is to establish citizens’ views about the most important elements of the tax system in Croatia in order to provide a reliable foundation for the tax system and policy changes, along with the existing views of tax experts. The main motivation for the research is to establish whether the opinions of Croatian tax experts can be confirmed by citizens, in order to see whether the existing tax system and some of its debated changes have the support of the general public. The main research question is whether the citizens’ opinions differ from those of the tax experts.

Previous research reveals the presence of strong self-interest (e.g. Hammar et al., 2008; Hulse, Stephenson, & Vines, 2012). So, we expect Croatian citizens to oppose especially such types of taxation that most affect them personally, e. g. inheritance and gift taxation which is traditionally highly unpopular (e.g. NKK, 2003; Hammar et al., 2008; Lim et al., 2013), or interest taxation. It is expected that the mentioned self-interest will be reflected in strong support for the reintroduction of PIT reliefs, especially the one relating to the ability-to-pay, i.e. the health cost relief (NKK, 2003; Klun et al., 2016). In line with self-interest, we expect support for broadening the reduced VAT rate to include all food (Klun et al., 2016). This is also supported by research for Croatia, showing that the scope of reduced and zero VAT rates is among the narrowest in the EU (EC, 2015; Šimović & Deskar-Škrbić, 2015), which implies a strong regressive effect (Blažić, 1999; Urban, 2011). Based on previous tax expert survey for Croatia (Blažić, Šimović, & Štambuk, 2014), but also for Slovenia (Klun et al., 2016), we expect that citizens will support a redistributive tax system and that this variable will also be an important regressor for other statements/questions. This distributional aspect does not only relate to the VAT the rate, but also to the flat tax whose relatively heavier burden on middle incomes in Croatia was established by Urban (2006). However, relevant international literature on citizens’ surveys is quite ambiguous (Bowman & Rugg, 2012; NKK, 2003; McGowan, 2000; Hulse et al., 2012; Piotrowski & Guyette, 2011). Based on Slovenian results, we expect (Klun et al.,
2016) that citizens would express some support for the junk food tax which is broadly advocated in Croatia too (e.g. Bejaković, 2013). The current negative attitude towards the banking sector and the relative absence of self-interest in that area is expected to result in support for the introduction of a bank tax, despite a lack of such support in recent Croatian literature (Olgić Draženović, 2018). We also expect self-interest to be reflected in different attitudes of different demographic groups (e.g. homeowners are less inclined to inheritance taxation, whereas bank savers are less inclined to interest taxation). Education could alleviate the simple self-interest effect (i.e. have positive impact on accepting a high(er) personal tax burden) (Hammar et al., 2008). Finally, based on Lim et al. (2013) and Klun et al. (2016), we expect citizens’ responses to differ from those of tax experts for most of the questions, reflecting higher self-interest but also more redistributive concern.

After the Introduction, the concept and aims of the research are presented in Section 2, followed by a brief presentation of the basic elements of the Croatian tax system relevant to the survey questions in Section 3 and the methodology in Section 4. Section 5 presents the results and discussion.

RESEARCH AIMS AND HYPOTHESES

The main aims of this research are to explore the views of Croatian citizens about the most relevant aspects of the tax system and to compare their views with the views of tax experts. The analyses include the influence of demographic characteristics and attitudes towards redistribution on citizens’ views. The following aspects of the tax system are included: inheritance and gifts taxation, personal income tax (PIT) rates (flat tax), PIT reliefs, taxation of capital incomes (dividends, interest, capital gains), reduced VAT rate for foodstuffs, "junk food" tax and bank tax.

Following the main aims of the research and based on literature overview, four hypotheses were formulated:

1. Citizens’ view on the tax system is influenced by demographic characteristics and the attitude towards income redistribution;
2. Self-interest is noticeable in citizens’ answers, which is also reflected in demographic variables’ regression results;
3. Citizens generally support the tax system being redistributive;
4. Citizens’ views on the tax system differ from those of tax experts, mostly due to self-interest.
The policy relevance of tax questions for Croatia and other post-transition and transition countries

The questions posed to Croatian citizens are not only a reflection of specific Croatian tax system characteristics and the discussed problems, but also of taxation issues in post-transition and transition countries in general. Furthermore, most of the issues are part of a general tax debate at the EU and global levels. However, only questions within the scope of taxpayers' knowledge and those about the taxes citizens deal with in everyday life were chosen.

The first question (Q1) is about the existence of inheritance and gifts taxation. Due to its perceived unfairness but also high administrative costs, this tax has already been abolished in many developed countries, as well as some (post)transition countries. Croatia still applies this tax, but closest family members are exempt, and its flat rate in 2017 decreased from 5% to 4%. Inherited and donated real estate is taxed under the similar real estate transfer tax.

Croatia has (still) resisted the flat tax fever typical of the (post)transition countries. The introduction of flat tax has been repeatedly on the agenda (Q2). Nevertheless, the 2017 reform brought the system closer to the flat tax, having decreased the number of brackets/rates from three to two. The first modern Croatian PIT (introduced in 1994) had only two rates, no non-standard PIT reliefs and it applied only to labour incomes and no capital incomes. In 2010, almost all non-standard reliefs were abolished (except charity contributions), mostly due to efficiency, fiscal, and even horizontal equity reasons. It is common for (post)transition countries to have no non-standard reliefs. However, the reintroduction of such reliefs is often advocated by the general public. That is why a general (Q13) and individual/particular questions about the reintroduction of PIT reliefs (Q14-Q18) were posed. Since 2013, all capital incomes have been gradually included in the tax base. It is common for these incomes to be taxed, even in (post)transition countries. However, the Croatian tradition of non-taxation of all capital incomes is an additional reason for questioning their relevance (Q3-Q7).

Although EU harmonisation rules allow application of the reduced VAT rate for all food, Croatia (as well as some other countries) narrows down the reduced VAT rate only to some "basic" foodstuffs. This results in a constantly broadening list of food entitled to the reduced rate, as well as further requirements to cover all food (Q8).

The latest initiatives for a special tax on "junk food" have also been present in Croatia (Q9).
The increase in special taxation of the banking sector was evident even in the recent EU initiative for financial transaction tax (FTT). So far, Croatia has not had a special bank tax; therefore, Q10 was posed.

**METHOD**

The questions were mostly based on some of the questions for professionals (in Šimović, Blažić, & Štambuk, 2014). However, the selection criteria for the questions included taxes relevant to citizens, the most important problems involved in those taxes, as well as problems that more deeply affected citizens and that were more acceptable to ordinary people without specific tax knowledge. Nevertheless, each of the questions was accompanied by some short information/clarification about a specific taxation issue. The warning that a decrease in tax revenues should be compensated by some other increase therein was read to the respondents at the beginning, but also after each question dealing with tax decreases (suggesting even a possible way(s) of compensating for such tax losses).

The initially selected questions were tested in a pilot survey of a few citizens of different ages, and education and income levels. This resulted in two additional questions about interest rates taxation (Q5 and Q6), regarding possible exemption of a certain interest amount, leaving the bulk of low- to middle-class incomes out of taxation. Some additional clarifications for specific questions/statements were also added. Additional questions regarding demographic characteristics, also including the possession of real estate, bank savings, dividends, and other securities were posed (Table 3).

Final-year graduate students and those with high grades in taxation courses were chosen to be the interviewers in a phone survey.

The survey was conducted from May 2016 until November 2016. The target population was the adult population aged 18+. Only private households were included. The target population was the adult population of Croatia living in households, excluding group quarters population.

The household sample was selected using the probability multi-stage stratified method. Data on population size and age by settlements were obtained from the Census of Population, Households and Dwellings 2011 (Croatian Bureau of Statistics [CBS], 2011a). Data on settlement types were obtained according to The Model for the Differentiation of Urban, Rural and Semi-Urban Settlements in the Republic of Croatia (CBS, 2011b). The central phone book of the Republic of Croatia (Imenik.hr) was used as a sampling frame for choosing households in the selected settlements.
For the selection of within-household respondents, a modified Westat method with systematic non-random selection for households with three or more adults was used to decrease the usual tendency of a sample to have a disproportionately high rate of female and much older population. The systematic approach was used for the same reasons in households with two adult members, to get to interview the person already spoken to or to ask for other household members.

With a response rate of 22%, the sample included 352 respondents, and, at a 95% confidence level, the margin of error was 5.2%. It is representative of the main demographic variables such as region, sex, and settlement type at a 5% significance level (tested by chi2 test); however, the average age is 3.4 years higher (Table 1).

### Table 1

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category</th>
<th>% or Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (yrs)</td>
<td>52.1 (SD = 17.0)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td>45.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>54.8</td>
</tr>
<tr>
<td>Region</td>
<td>Zagreb and surroundings</td>
<td>23.9</td>
</tr>
<tr>
<td></td>
<td>Northern Croatia</td>
<td>15.6</td>
</tr>
<tr>
<td></td>
<td>Slavonia</td>
<td>19.9</td>
</tr>
<tr>
<td></td>
<td>Lika and Banovina</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>Croatian Littoral and Istria</td>
<td>7.7</td>
</tr>
<tr>
<td></td>
<td>Dalmatia</td>
<td>23.3</td>
</tr>
<tr>
<td>Settlement type</td>
<td>Urban</td>
<td>52.0</td>
</tr>
<tr>
<td></td>
<td>Rural (and semi-urban)</td>
<td>48.0</td>
</tr>
</tbody>
</table>

Data were analysed by non-parametric descriptive statistics. Binomial probit regression models were used to explore how the perception of the role of taxes in income redistribution, self-interest effects and some demographic, social and economic characteristics of the respondents influenced their attitude towards taxes. The reason for using binomial regression when the original answers to the questions/statements in the inquiry were Likert-type items and therefore of ordinal nature was the intention to use the same method for all variables, but not all variables satisfied the assumptions for ordinal regression. Some of the variables violated the proportional odds assumption (significant Brant test for parallel lines). We also created new variables combined of several variables (addressed as "synthetic" variables) that are dichotomous and therefore inappropriate for ordinal regression. We transformed the answers into binary variables by merging the "Disagree" answers 1 and 2 into a "No" answer (0), and by merging the "Agree" answers 4 and 5 into a "Yes" answer (1). The "Neutral" answer 3 was excluded. With a binomial probit regression we were also in line with the analysis of expert opinions on taxa-
RESULTS AND DISCUSSION

Citizens’ view

The basic descriptive statistics results are presented in Table 2a. They include the percentage distribution of original answers (from 1 to 5) and the related median with interquartile range. Further grouping of the results into the negative (answers 1 and 2) and the positive (answers 4 and 5) by leaving aside the neutral answer (3) was applied in order to assess more precisely the level of consensus—starting with at least 61%, and especially 75% (like in Lim et al., 2013).

<table>
<thead>
<tr>
<th>Q No</th>
<th>Question/statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>(IQR)</th>
<th>MDN</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Inheritance and gifts should be taxed.</td>
<td>52</td>
<td>26</td>
<td>11</td>
<td>5</td>
<td>7</td>
<td>1(1-2)</td>
<td>87</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>Instead of more PIT rates, only one rate should be introduced.</td>
<td>5</td>
<td>10</td>
<td>40</td>
<td>21</td>
<td>25</td>
<td>3(3-4.75)</td>
<td>24</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>Dividends should be taxed.</td>
<td>17</td>
<td>15</td>
<td>26</td>
<td>22</td>
<td>20</td>
<td>3(2-4)</td>
<td>43</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>Interest on saving and securities should be taxed.</td>
<td>59</td>
<td>15</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>1(1-3)</td>
<td>84</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>For those who answered Q4:1-3: Do you consider that some small(er) amount (up to some yearly limit) should be exempt from taxation (only higher amounts exceeding the limit should be taxed)?</td>
<td>10</td>
<td>16</td>
<td>8</td>
<td>18</td>
<td>48</td>
<td>4(2-5)</td>
<td>28</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td>For those who answered Q4:4-5: If interest income is still taxed, do you consider that there should be an exemption for some small(er) amount (up to a yearly limit), so that only higher amounts exceeding the limit should be taxed?</td>
<td>5</td>
<td>7</td>
<td>35</td>
<td>21</td>
<td>32</td>
<td>4(3-5)</td>
<td>18</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Q7</td>
<td>Financial capital gains should be taxed.</td>
<td>8</td>
<td>11</td>
<td>36</td>
<td>21</td>
<td>24</td>
<td>3(3-4)</td>
<td>29</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td>Instead of reduced VAT rates for some &quot;basic&quot; foodstuffs, the reduced VAT rate for all foodstuffs should be introduced.</td>
<td>4</td>
<td>4</td>
<td>9</td>
<td>19</td>
<td>64</td>
<td>5(4-5)</td>
<td>9</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>Special tax on &quot;junk food&quot; should be introduced (fat food, fried food, &quot;fast-food&quot;, overly sweetened food).</td>
<td>16</td>
<td>9</td>
<td>19</td>
<td>15</td>
<td>42</td>
<td>4(3-5)</td>
<td>30</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Q10</td>
<td>Special bank tax should be introduced.</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>16</td>
<td>65</td>
<td>5(4-5)</td>
<td>11</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Q11</td>
<td>Different government tax reductions (reliefs, incentives) promote economic growth.</td>
<td>5</td>
<td>9</td>
<td>17</td>
<td>26</td>
<td>43</td>
<td>4(3-5)</td>
<td>17</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Q12</td>
<td>Tax system should contribute to income redistribution.</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>18</td>
<td>69</td>
<td>5(4-5)</td>
<td>8</td>
<td>92</td>
<td></td>
</tr>
</tbody>
</table>

1 – Completely/strongly disagree, 2 – Mostly disagree, 3 – Neither agree nor disagree, 4 – Mostly agree, 5 – Completely/strongly agree. No: 1+2, Yes: 4+5. Neutral answer excluded; Degree of consensus above 60% underlined; above 75% underlined and italicised.
Although the results are not surprising, it was not expected that the respondents would express such a high degree of agreement/disagreement regarding some questions. However, these are questions that most affect them personally, so that a strong self-interest effect is confirmed, as hypothesised.

This is the case with the first question (Q1). Inheritance (and gifts) taxation, i.e. the estate tax, has usually been perceived as the worst (least fair)/most unpopular type of taxation and it has been considered that it should not exist (e.g. NKK, 2003; Hammar et al., 2008; Lim et al., 2013). The frequency distribution (not only with minimum median, but also the smallest interquartile range) and the exceptionally high degree of consensus on disagreement with inheritance and gifts taxation (87%) could be accounted for by traditional society and a very close relationship between parents and their children (the "dynasty hypothesis"), as well as other heirs. This is implemented in the current legislation in the form of complete exemption for children/spouses. These findings speak in favour of maintaining the existing personal exemptions, as well as considering the abolishment of such taxation, or at least lowering its rate.

The same logic could apply to the completely negative attitude towards interest taxation inside the PIT (Q4), presumably mostly due to interest on bank savings, since a high percentage of citizens/respondents possess bank savings accounts (the self-interest effect). As expected, this negative attitude has not been expressed for dividends (Q3) or financial capital gains (Q7), earned more irregularly and by fewer respondents. It is unreasonable to expect interest taxation (existing in the entire EU and beyond) to be abolished, but the introduction of some exemptions for lower incomes (in the form of absolute or relative exemption) should be seriously considered. This is in line with the experience of some other countries and is confirmed by the answers to Q5 and Q6.

Broadening the reduced VAT rate to include all foodstuffs (Q8) is strongly advocated, as it is in Slovenia (Klun et al., 2016). The Croatian result can be explained by relatively low incomes, resulting in a relatively large share of food in the consumption structure. Since this question directly and personally affects all people, the highest level of (positive) consensus (aside from the last two general questions) is fully expected.

The recent global financial crisis with its sources and the resulting negative attitude to the banking system are the general causes of the strong support for the introduction of the bank tax (Q10). The public are aware of such taxation being applied in some European countries, and the respondents were even informed about that fact and the EU FTT incentives.
The results for the remaining two individual taxation questions are quite unexpected. Since most personal income taxpayers are not in the highest tax bracket, it was expected that they would mostly oppose the flat tax (Q2). Additionally, they have been warned that the flat rate (if introduced) would be definitely higher than the existing lowest rate, in order to ensure sufficient revenue. Furthermore, sometimes even higher-income taxpayers do not support flat tax. The results of previous public opinion surveys for developed countries are ambiguous, but most of them speak slightly against the introduction of flat tax (Bowman & Rugg, 2012; NKK, 2003; McGowan, 2000; Hulse et al., 2012). A similar situation exists in neighbouring Slovenia (Klun et al., 2016). However, the results for Croatia show relatively high consensus (of as much as 76%). This could be explained by the recent support for flat tax expressed by the current Ministry of Finance. Thus, people seem to strongly support movements towards tax rate flattening and reducing the number of tax brackets, such as the changes introduced as of January 1st, 2017 (the lowest PIT bracket was abolished, leaving only two PIT rates).

As expected, people also support junk food tax (Q9). Such support is also evident in Slovenia (Klun et al., 2016), but not in the U.S. (Lim et al., 2013). This is a sign of environmental and nutritional awareness.

The answers to the last questions concerning the perceived general effects towards economic growth (Q11) and income redistribution (Q12) are positive, as expected. People are a bit more reserved concerning the former, which is realistic and probably the result of their own lifetime experience. Our hypothesis that citizens support the tax system being redistributive is strongly confirmed.

Table 2b presents additional data for PIT reliefs. A general question is followed by specific questions about individual types of relief.

For those who answered Q13 positively (3): PIT reliefs should be reintroduced for:

<table>
<thead>
<tr>
<th>Q No</th>
<th>Question/statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>MDN (IQR) No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q13</td>
<td>PIT reliefs should be reintroduced.</td>
<td>22</td>
<td>16</td>
<td>62</td>
<td>3(2-3)</td>
<td>26</td>
</tr>
<tr>
<td>Q14</td>
<td>health costs</td>
<td>19</td>
<td>5</td>
<td>76</td>
<td>3(3-3)</td>
<td>20</td>
</tr>
<tr>
<td>Q15</td>
<td>owner-occupied housing</td>
<td>24</td>
<td>5</td>
<td>70</td>
<td>3(2-3)</td>
<td>26</td>
</tr>
<tr>
<td>Q16</td>
<td>life insurance</td>
<td>34</td>
<td>12</td>
<td>54</td>
<td>3(1-3)</td>
<td>39</td>
</tr>
<tr>
<td>Q17</td>
<td>voluntary pension insurance</td>
<td>27</td>
<td>11</td>
<td>62</td>
<td>3(1-3)</td>
<td>30</td>
</tr>
<tr>
<td>Q18</td>
<td>additional and private health insurance</td>
<td>31</td>
<td>12</td>
<td>57</td>
<td>3(1-3)</td>
<td>35</td>
</tr>
</tbody>
</table>

1 – Disagree (No), 2 – Neither agree nor disagree (Do not know), 3 – Agree (Yes). No: 1, Yes: 3; Neutral answer excluded; Degree of consensus above 60% underlined; above 75% underlined and italicised.
Not surprisingly, people again feel directly personally affected here (the 'self-interest effect' hypothesis is confirmed again) and advocate the reintroduction of such allowances/deductions, despite being warned that this would lead to a rise in (some) income tax rates, or a rise in some other tax(es). Not surprisingly again, the percentage of positive answers and degree of consensus are the highest for the broadest of these deductions, namely deduction for health costs. This is in line with the results of a U.S. survey, where the respondents find this relief to be the fairest among non-standard reliefs (NKK, 2003), as well as with the Slovenian results (Klun et al., 2016). All previous attempts to reintroduce the abolished non-standard reliefs in Croatia failed. It is therefore hard to believe that the government would take into account this citizens’ view. The reason should not be sought in the prevalent negative view of the efficiency of such reliefs in recent tax literature, but rather in their negative fiscal effects and high administrative (and compliance) costs.

Factors influencing the citizens' survey results

Citizens' answers about individual taxes are hypothesised to be influenced by demographic characteristics as well as the citizens' perception of the tax system's economic and social roles (Q11 and Q12). In order to assess that influence, answers were grouped into positive and negative ones (the last columns in Table 2a and Table 2b). Table 3 presents the results of a binomial probit regression. Q11 as well as sex were omitted as regressors, since no significant relationships had been found. Given that there are three related questions about interest taxation (Q4-Q6), Q4 and Q5 are joined together in the way that the answers indicating disagreement with interest taxation (the answers 1-2 to Q3) are merged into a single negative answer, whereas the positive answer comprises the answers 4-5 to Q4, which made the relevant respondents eligible to answer Q5 (they answered with 1-2 or even 3). This resulted in the formation of Q4+ – a new synthetic variable.

Except Q12, demographic variables as regressors include: age, education level (university degree to PhD versus others), work status (reference value-employed); others are classified into 'retired' and 'inactive' (the unemployed, housewives, students, etc.), possession of real estate, possession of bank savings, shares and other securities (joined), income per family member (reference value – "middle incomes" between HRK 2,000 and HRK 3,000); others are divided into 'incomes below HRK 2,000' and 'above HRK 4,000' and settlement type (reference value – urban).
<table>
<thead>
<tr>
<th>Q12</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4+</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.001(0.008)</td>
<td>0.007(0.008)</td>
<td>-0.004(0.008)</td>
<td>0.021*(0.011)</td>
<td>0.005(0.009)</td>
<td>-0.015(0.010)</td>
<td>-0.002(0.008)</td>
</tr>
<tr>
<td>Education level(^a)</td>
<td>University degree</td>
<td>0.154(0.335)</td>
<td>0.020(0.306)</td>
<td>-0.480*(0.274)</td>
<td>0.319(0.458)</td>
<td>0.581(0.376)</td>
<td>0.0120.31</td>
</tr>
<tr>
<td>Work status(^b)</td>
<td>Inactive</td>
<td>-0.046(0.209)</td>
<td>-0.215(0.310)</td>
<td>-0.128(0.273)</td>
<td>1.225***(0.470)</td>
<td>-0.013(0.310)</td>
<td>-0.006(0.329)</td>
</tr>
<tr>
<td>Ownership of Real estate</td>
<td>Bank savings, shares, other securities</td>
<td>-0.177(0.231)</td>
<td>0.169(0.223)</td>
<td>-0.249(0.199)</td>
<td>-0.682*(0.367)</td>
<td>0.022(0.223)</td>
<td>-0.120(0.244)</td>
</tr>
<tr>
<td>Income per &lt;2000 HRK</td>
<td>Family member(^c)</td>
<td>&gt;4000 HRK</td>
<td>0.014(0.209)</td>
<td>0.206(0.224)</td>
<td>0.392***(0.183)</td>
<td>1.480***(0.398)</td>
<td>0.408*(0.209)</td>
</tr>
<tr>
<td>Settlement type(^d)</td>
<td>Urban</td>
<td>24.525(0.006)</td>
<td>16.967(0.075)</td>
<td>22.053(0.015)</td>
<td>22.068(0.015)</td>
<td>24.507(0.006)</td>
<td>19.977(0.030)</td>
</tr>
</tbody>
</table>

\( \chi^2 \) values:
- \( \chi^2 = 24.525 \) (p-value = 0.006)
- \( \chi^2 = 21.403 \) (p-value = 0.018)
- \( \chi^2 = 24.337 \) (p-value = 0.007)
- \( \chi^2 = 19.224 \) (p-value = 0.027)
- \( \chi^2 = 27.826 \) (p-value = 0.002)
- \( \chi^2 = 24.123 \) (p-value = 0.007)

Notes: Robust standard errors are in parenthesis. The p-values of the \( \chi^2 \) are in brackets.

\( * p < 0.1; \ ** p < 0.05; \ *** p < 0.01 \)

Q12 Tax system should contribute to income redistribution. For other questions, see Table 2a and Table 2b. Q4+: Synthetic variable for taxing interest on savings and securities, a combination of Q4 and Q5: 0 = I do not agree with taxing, 1 = I agree with taxing all interest without exemptions or neutral about exemptions.

\( a \) Education level: reference value – below university degree

\( b \) Work status: reference value – employed; inactive: unemployed, students, housewives, others

\( c \) Income per family member: reference value – middle income (between HRK 2,000 and HRK 4,000)

\( d \) Settlement type: reference value – rural
The perception that a tax system should contribute to income redistribution seems to be the most important predictor. Individuals with such perception are more inclined to financial capital gains taxation (which is partially in line with Lim et al., 2013). They also strongly support broadening the VAT rate for foodstuffs (which is the strongest factor in reducing the regressive effect of VAT, i.e. improving its distributional effect), as well as, in line with Klun et al. (2016), the introduction of bank taxation (which is often advocated for fairness reasons). A lack of (negative) influence on the flat tax question could be explained by the unawareness of such individuals of the negative redistributive aspects of that tax. It is not surprising that, among the PIT reliefs (of which almost all are statistically significant), health costs are considered a priority.

Age is, obviously, mostly irrelevant, with a minor exception when it comes to interest taxation. Higher level of education provides greater knowledge of dividends (which is partially in line with Lim et al., 2013), as an important form of saving, as well as of some negative efficiency effects of different tax reliefs, especially for health costs (moral hazard) and voluntary pensions (less funds for venture capital), which is partially in line with Hammar et al. (2008). Work status produces some hypothesised results based on self-interest. It is logical that it influences the perception of interest tax (given many unemployed people inside the active group) and owner-occupied housing (retirees are traditionally "strong believers" in real estate possession). Elderly people are also expected to avoid junk food (self-interest, as hypothesised).

Real estate ownership is a highly significant regressor. The negative regression coefficient concerning inheritance and gifts taxation is related to the self-interest extended to family (dynasty hypothesis), as hypothesised. The positive one with the flat tax could be related to the current flat taxation of rental income (inside the PIT), as well as a constant fear of applying higher PIT rate(s) to that part of income. Since property ownership is still among the most powerful symbols of wealth and security, it is no wonder that such people are more inclined to invest in long-term saving vehicles such as life insurance policies. Concerning bank savings, dividends and other securities possession, it is to be expected that such citizens will be disinclined to interest rate taxation (again, due to the hypothesised self-interest effect) as well as reliefs for other forms of investment, such as real estate.

The most distinctive influence is that of income level, where the hypothesised self-interest effect is not (completely) present, as in some earlier studies (e.g. Campbell, 2009; Lim et al., 2013; Domonkos, 2016). It is understandable that higher-income earners are more inclined to some PIT reliefs, using larger
absolute amounts of expenditures and having higher tax savings per unit of expenditure due to rising marginal PIT rates (compared to middle incomes). It is also understandable that they are less inclined to support the broadening of the VAT rate for foodstuffs, compared to middle-income earners, due to its distributive impact. They are also expected to be more affected by financial gains taxation (the hypothesised self-interest effect again). However, other regression coefficients are hard to explain, especially those for low-income groups. An explanation could be found in lower financial and tax literacy. However, the answers about the income level are usually not completely honest (underreporting of low (as well as high) income). Furthermore, the reference value was middle income and not high/low income, which smooths the results.

Finally, settlement type is also a statistically significant regressor for two questions/statements. Urban population obviously has the highest taxation literacy and awareness of the contemporary taxation practice, so they accept the necessity of different capital income taxation. The same applies to the health cost relief.

A comparison of opinions between citizens and professionals

This survey follows a much broader survey of tax professionals that was undertaken in Croatia (Blažić, et al., 2014; Šimović et al., 2014; Blažić, Štambuk, Šimović, Lazović-Pita, & Klun, 2017). Of 1,000 tax professionals contacted, 304 responded to an extensive on-line survey of 92 questions/statements. Similar to the US survey (Lim et al., 2013), we have included the following three groups of tax professionals: academia (professors and researchers, mainly from faculties of economics and institutes engaged in taxation), the government sector (Tax Administration – Central Office, heads of regional and local offices, as well as heads of finance departments of municipalities and counties), and the private sector (tax advisors, employees in tax accounting companies).

Table 4a and Table 4b present a comparison of the same or similar questions and their answers between the two groups of respondents. Table 4a covers the main general questions.

Table 4a clearly shows that the answers to all questions/statements differ statistically significantly (at the level as high as 1%) between citizens and experts, which completely confirms our hypothesis. Most of the differences are also reflected in different medians. Hence, it could occur that the solutions and changes adopted by the government and its professionals would not be accepted by citizens. This could be prevented by improving tax literacy and communication with citizens, but also by resolving the conflicts, and perhaps aligning, to an extent possible, with their perceptions.
<table>
<thead>
<tr>
<th>Q No</th>
<th>Question/statement</th>
<th>Median (R)</th>
<th>Question/statement</th>
<th>Median (R)</th>
<th>Mann-Whitney U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Inheritance and gifts should be taxed.</td>
<td>1.00(277.16)</td>
<td>Inheritance and gifts should be taxed.</td>
<td>3.00(387.94)</td>
<td>35434.000***</td>
</tr>
<tr>
<td>Q2</td>
<td>Instead of more PIT rates, only one rate should be introduced.</td>
<td>3.00(382.96)</td>
<td>Instead of more PIT rates, only one rate should be introduced (&quot;flat tax&quot;) along with maintaining personal exemption.</td>
<td>2.00(242.78)</td>
<td>28349.500***</td>
</tr>
<tr>
<td>Q3</td>
<td>Dividends should be taxed.</td>
<td>3.00(285.77)</td>
<td>Inside PIT dividends should be taxed.</td>
<td>4.00(388.67)</td>
<td>38658.500***</td>
</tr>
<tr>
<td>Q4</td>
<td>Interest on savings and securities should be taxed.</td>
<td>1.00(264.01)</td>
<td>Inside PIT interest on savings and securities should be taxed.</td>
<td>3.00(388.67)</td>
<td>30804.500***</td>
</tr>
<tr>
<td>Q7</td>
<td>Financial capital gains should be taxed.</td>
<td>3.00(293.64)</td>
<td>Inside PIT financial capital gains should be taxed.</td>
<td>4.00(351.33)</td>
<td>41233.000***</td>
</tr>
<tr>
<td>Q8</td>
<td>Instead of reduced VAT rates for some &quot;basic&quot; foodstuffs, the reduced VAT rate for all foodstuffs should be introduced.</td>
<td>5.00(377.44)</td>
<td>Instead of reduced VAT rates for some &quot;basic&quot; foodstuffs, the reduced VAT rate for all foodstuffs should be introduced.</td>
<td>4.00(237.07)</td>
<td>27125.000***</td>
</tr>
<tr>
<td>Q9</td>
<td>Special tax on &quot;junk food&quot; should be introduced (fat food, fried food, &quot;fast-food&quot;, overly sweetened food).</td>
<td>4.00(323.69)</td>
<td>Special tax on &quot;junk food&quot; should be introduced.</td>
<td>4.00(295.82)</td>
<td>43334.000***</td>
</tr>
<tr>
<td>Q10a</td>
<td>Special bank tax should be introduced.</td>
<td>5.00(372.58)</td>
<td>Financial transaction tax should be introduced.</td>
<td>3.00(220.64)</td>
<td>23313.500***</td>
</tr>
<tr>
<td>Q10b</td>
<td>Special bank tax should be introduced.</td>
<td>5.00(372.58)</td>
<td>Financial activities tax should be introduced.</td>
<td>4.00(248.49)</td>
<td>30636.500***</td>
</tr>
<tr>
<td>Q11</td>
<td>Different government tax reductions (reliefs, incentives) promote economic growth.</td>
<td>4.00(337.18)</td>
<td>Different government tax reductions (reliefs, incentives) promote economic growth.</td>
<td>4.00(264.74)</td>
<td>34910.000***</td>
</tr>
<tr>
<td>Q12</td>
<td>Tax system should contribute to income redistribution.</td>
<td>5.00(350.77)</td>
<td>The equity principle should be given precedence over the efficiency principle in creating tax policy.</td>
<td>4.00(245.77)</td>
<td>29921.000***</td>
</tr>
</tbody>
</table>

Notes: Median for 5 values (1-5): 1 – Completely/strongly disagree, 2 – Mostly disagree, 3 – Neither agree nor disagree, 4 – Mostly agree, 5 – Completely/strongly agree. *p < 0.1; **p < 0.05; ***p < 0.01

The first question about inheritance and gifts taxation reveals the greatest differences in medians (1-3), which could be explained by self-interest, as hypothesised. Citizens feel directly affected by that tax; the dynasty hypothesis, i.e. the strong tradition and a connection between parents and their children is still present in the Croatian society. Professionals, on the other hand, are aware of the necessity of such taxation, although they are still not too enthusiastic about it, taking into account its high administrative costs and the avoidance possibilities.
The flat tax results are the most interesting. Tax professionals seem to be more skeptical than citizens, mostly due to negative distributional, but also doubtful efficiency effects of that tax. They are also aware that the flat tax implementation did not yield all the expected positive results; therefore, some of the countries even moved back to the classic (direct) progression.

It is understandable that professionals, having deeper knowledge about the taxation theory and practice, are more inclined to capital income taxation than citizens who feel to be (potentially) personally affected in this respect (the hypothesised self-interest again). However, it is interesting that the lower support for interest taxation in comparison with the taxation of other capital incomes is expressed by both citizens and professionals. This calls for taking into consideration the exemption of a certain absolute (minimum) amount of this type of income.

Both groups strongly agree on broadening the reduced VAT rate for food. This inclination is stronger among citizens (the hypothesised self-interest) than among the professionals who are aware of the negative fiscal effects.

The highest consensus seems to have been reached on junk food taxation; therefore, the introduction of that tax might be strongly advocated.

Since there are currently two types of financial sector taxation, two questions were posed to professionals. The term has been simplified for citizens as "bank tax". Citizens are more in favour of that tax than professionals, because citizens do not feel personally affected here (the hypothesised self-interest, i.e. its absence), whereas professionals are aware of some of its problems (e.g. a possibility that the tax might be shifted to citizens/bank customers, especially the FTT).

There has been a lot of talk about the positive effects of the tax system on growth. It is no wonder that professionals are a bit more skeptical than ordinary citizens, because there is considerable evidence that various tax reductions are not as effective as expected.

The difference in the final question is probably mostly the result of the fact that it is not the same question. Especially regarding professionals, this question was deliberately pointed out (the famous equity-efficiency trade off), and a high median for the answer implies that the answer to the same question posed to citizens would probably be positive.

Table 4b presents a comparison of particular PIT reliefs (the perceptions of general PIT tax reliefs are presented in Table 4c) for both groups.
It was hypothesised that citizens would have a positive perception of PIT reliefs (advocating their reintroduction – self-interest), which was not the case with tax professionals. However, it should be noted here that, for reasons of simplicity, citizens were offered answers with only three values, whereas those with five values were previously offered to tax professionals. The data in Table 4b were recalculated for professionals, in order to make them comparable to those for citizens. Not surprisingly, citizens were more inclined to the reintroduction of the PIT relief for health costs.

Given no general question for professionals about a general attitude towards (the reintroduction of) PIT reliefs, unlike in the case of citizens (Q13), two synthetic variables based on the answers from Table 4b were formed. The first one – S1 – measured/tested the opinion about the reintroduction of at least one PIT relief, and the second one – S2 – measured/tested the opinion about the reintroduction of all previous PIT reliefs. Both variables have only two values and are presented in Table 4c.

Not surprisingly again, over 90% of citizens have identified at least one PIT relief they want to be reintroduced, while this is the case with "only" about 80% of professionals. This is due to a negative general attitude towards PIT reliefs in the recent taxation literature of which professionals are more aware than citizens. Nevertheless, the percentage of positive answers
given by professionals is still relatively high, implying that most of them do not have a generally negative, but a reasonably moderate attitude towards PIT reliefs, which requires the assessment of their efficiency on a case-by-case basis.

However, only one third of citizens (but as much as 50% of professionals) wish all the PIT reliefs to be reintroduced. This proves that as many as half of the professionals a priori support the "interventionist" approach, advocating not only the efficiency, but also distributional arguments in favour of tax reliefs/incentives.

CONCLUSION

The first broad citizen survey about taxation in Croatia revealed mostly expected, but still interesting results. As hypothesised, Croatian citizens show considerable self-interest, but also redistributive preferences in their views about taxation. They strongly support the abolishment of inheritance and gifts taxation, as well as interest taxation inside the PIT, introduction of bank taxation and broadening of the reduced VAT rate for foodstuffs. They also advocate the (re)introduction of PIT reliefs and junk food taxation. As hypothesised, their answers are influenced by demographic characteristics (education, work status, home and savings ownership, income level and settlement type) and attitude towards income redistribution.

The abolishment of any of the fiscally important taxes in a country with fiscal consolidation problems is unlikely. However, general reduction of such taxation is called for, as in the case of the latest cut in the general inheritance and gifts tax rate from 5% to 4%. In the future, further reduction, or even the abolishment of that taxation might be taken into consideration. Real estate owners are more in favour of abolishing that taxation (due to self-interest, as hypothesised).

Regarding interest taxation, it is unlikely that this relatively low and only recently introduced taxation would be abolished. However, the exemption of some (basic) amount of interest income from taxation is yet called for.

Although Croatia does not plan to accept an FTT, proposed by the EU, in the near future, citizens do not oppose such a tax, mostly on redistributive grounds. Extending the reduced VAT rate to all foodstuffs is strongly advocated by citizens, as is the introduction of a junk food tax. The significant ageing of the Croatian population is an additional argument in favour of introducing that tax. The reintroduction of some of the PIT reliefs with more than 90% support should be assessed on a case-by-case basis, and not a priori rejected.

Significant differences in opinion between citizens and professionals, as hypothesised, point to a need for better communication and deeper awareness of citizens’ views. This survey is one of the first steps in that direction.
NOTES

1 The citizens’ views concerning the very topical issue of real estate tax were already covered in Blažić, Šimović, and Štambuk (2016).

2 This paper was written before the latest Croatian tax changes came into force in 2019. Some of those changes were covered/partially predicted in our questions/statements, such as broadening the reduced VAT rates for foodstuffs. The unpopular inheritance and gift taxation, which is, in the case of real estate, applied as the transfer tax (real estate transfer tax), has also been reduced.

3 Non-standard reliefs are PIT reliefs for particular expenditures made, unlike the standard ones which are available automatically.

4 However, dividends were taxed even before – from 2001–2005.

5 Initial answers 1 – Completely/strongly disagree, 2 – Mostly disagree, 3 – Neither agree nor disagree, 4 – Mostly agree, 5 – Completely/strongly agree.

6 This is the only exception to using the neutral answer, because it is used in the second interaction (neutral answers to the basic question (Q4) are excluded.

7 The professionals’ “Disagree” answers (1 and 2) are merged into answer 1 – “Disagree (No)”, the neutral answer – “Neither agree nor disagree” (3) is recorded as answer 2 – “Neither agree nor disagree (Do not know)”; and the “Agree” answers (4 and 5) are merged into answer 3 – “Agree (Yes)”.

8 Inheritance and gift taxation of real estate is performed under the real estate transfer tax, the rate of which is further reduced from 4% to 3% as of 2019.

9 The latest, 2019 tax changes expanded the range of foodstuffs covered by the reduced VAT rate, and a possibility of further expansion to cover all foodstuffs was announced by the Minister of Finance.

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Stav stanovništva o oporezivanju u posttranzicijskoj zemlji: slučaj Hrvatske

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Rad prikazuje stavove hrvatskih građana o nekim od najrelevantnijih aspekata poreznoga sustava. Istraživanje se nastavlja na prethodno šire istraživanje stavova poreznih stručnjaka u Hrvatskoj. Ciljevi ovog istraživanja uključuju otkrivanje stavova stanovništva o najvažnijim poreznim pitanjima, utvrđivanje utjecaja demografskih karakteristika i stavova prema redistribuciji na njihove odgovore i usporedbu njihovih stavova s onima poreznih stručnjaka. Građani se uglavnom zalažu za ukidanje poreza na nasljedstva i darove, te ukidanje oporezivanja kamata, kao i za uvođenje posebnoga poreza za/na banke i oporezivanje "nezdrave hrane". Snažno zagovaraju širenje snižene stope PDV-a na svu hranu. Rezultati regresijske analize impliciraju snažan utjecaj stava o važnosti redistributivnog učinka poreznoga sustava, nakon čega slijede vlasništvo nekretnine, dohodak razina obrazovanja i radni status. Usporedba s odgovorima poreznih stručnjaka upućuje na statistički značajne razlike. Rad trebao pridonijeti svijesti o prihvaćanju poreznoga sustava i politike u javnosti i pružiti neke smjernice njihovim promjenama.

Ključne riječi: porezn sustav, Hrvatska, građani, istraživanje javnoga mišljenja, porezni stručnjaci

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