

REVIEW OF LITERACY IN PUBLIC FINANCES IN HUNGARY

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Abstract:

As part of a survey conducted using questionnaires, we investigate the population's knowledge of public finance and we draw conclusions about their financial literacy. The questionnaire consists of 26 questions. One part of them is based on the Lickert-scale, the other group of the questions are asked to find out if the participants of the survey have gained knowledge of public financing. The aim of the research is to examine the public finance literacy of the Hungarian population. In addition, we want to test the extent to which the public's self-reported public finance literacy is proven by answering the test questions.

Based on the correct answers given to the questions, we tested the public finance awareness of the Hungarian population with points of interest, and examined the accuracy of our own assumptions regarding public finance proficiency by analysis of variance.

Key words: public finance culture, population, tax morale

JEL: H24, H25, H26

1. Introduction

After the subprime crisis, the financial culture got in the limelight of studies, strict theoretical and empirical surveys were conducted and dissertations were written in this field after 2008. Primarily, studies investigating financial literacy focused on savings and credits, mainly triggered by banks or on scientific consideration.

The financial crisis proved that the citizens don't know the risks implied by credit products. The ratio of non-paying credits resulting from granting currency loans has risen drastically. As a consequence of this, several measures have been taken in education and related to the activities of the Hungarian National Bank and the State Audit Office of Hungary but financial literacy has been researched to a lesser extent. In this topic, mainly researches in connection with taxation morale prevail in the domestic professional literature. Accordingly, we made an attempt to define financial literacy which mean that individuals are aware of the main public finance terms, know the institutional system of public finance and the basic terms in connection with taxation and tax issues.

2. The aim of the study is to examine the public finance literacy of the Hungarian population through a questionnaire survey. The novelty of the study is the fact that the Hungarian and international literature has not yet examined the public finance knowledge of the Hungarian population, only its financial literacy. In addition, the research aims to determine the extent to which self-reported financial awareness is consistent with the answers to the test questions. Research is a pilot project of a research process, and we will draw conclusions from it for the remainder of the research. The study therefore contains exploratory research. Review of the related literature

The Hungarian literature examines the financial literacy of the population, primarily its attitude towards savings and loans. Research in the field of public finance, taxation, and the system of public finance institutions is currently under way in Hungary, but has not yet been disseminated, so relevant literature has only been published on the Hungarian and international level in relation to financial culture. There are more definitions of financial culture. In Hungary, the first comprehensive definition has been made by the Hungarian National Bank: „It is a high level of financial knowledge and skills that allow individuals to identify the basic financial information which are needed to reach deliberate and considerate decisions. After gaining the necessary information, individuals construe the data and make their decisions based on them and consider the potential future financial and other consequences.” [1]

In Hung et al. [2] 9 different kinds of approach exist related to financial culture:

1. knowledge of financial issues;
2. understanding of financial processes;
3. ability to use financial knowledge and experiences gained;
4. knowledge of financial connections and their definitions;
5. ability to reach justified financial decisions;
6. knowledge of basic financial terms;
7. ability to make simple (basic) financial decisions;
8. ability to reach justified and considerate decisions and;
9. knowledge of simple financial terms [see also 3-4].

Béres and Huzdik [5] have not created a unified definition of financial culture, they only made a system of aspects helping the navigation in the topic and consider the financial culture as a concept. This concept includes financial knowledge, financial skills, financial literacy and financial awareness [6].

According to Atkinson and Messy [7], the general level of national financial culture can be defined based on the following parameters: classification of the population, gender ratio, age, income, education, socio-demographic features, etc. These attributes highly depend on the socio-economic factors of the given age [8-10], and have regionally different characteristics [11].

The developed financial culture is essential for every participant of the economy, because people having a more developed financial culture are not likely to reach financial decisions which may affect them adversely [12-13].

Highly-developed financial culture is important to the financial institutes as well because it can help increase savings made in the private sector which enables to enhance their liquidity [14-15]. Customers with a high level of liquidity are considered as low-risk income sources for the sector [16-17].

Good public finance knowledge is put into practice in many ways through the education system. It can enhance the creditworthiness and innovation capacity of companies (Sági, 2017 ; Cifranic et al. 2015).

3. Research method

We conducted primary research, which was carried out within a questionnaire-based survey using the so-called snowball method. 25 questions were asked using an online questionnaire. There were questions related to demography, public finance literacy and attitudes.

With 10 questions, we aimed to find out how well-informed the respondents are. We made 7 statements with true-false options and asked 3 questions about the institutional system with 5-7 possible answers. In case of statements with two answer options, 1 point was given for every single right answer. Correct responses given to multiple-choice questions were awarded more points.

In case of multiple choice questions, more points were granted proportionally, for instance $0,5/0,166=3$ where 50% is regarded as basis of comparison for answers worth 1 point. In case of 6 answer options, the chance of finding the right answer is 16.66% when answers are chosen randomly.

Accordingly, we proportionated the figures. The literacy point which has been determined based on the above-mentioned figures can not be more than 16. When conducting the research, we used the method of descriptive statistics (allocations, averages) and in case of methods with more variables, we performed the analysis of variance. Variance analysis was used to explore the relationship between awareness score and self-perception of public finance skills. The questionnaire survey was conducted online using the snowball method, As a result, so it was mainly filled in by Internet users. The survey is not representative and contains the first results of the pilot project.

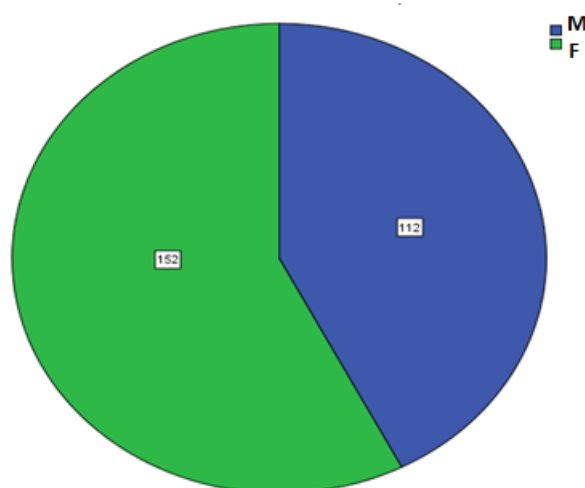
4. Results

Hereinafter, we provide a short description of the structure of the reviewed sample and their main features. In addition, we describe our most relevant findings.

4.1 Description of the sample

The vast majority of the respondents was female, their ratio is higher than 50%, it is exactly 58% (figure 1). Therefore, we can draw the conclusion that the requirement of representability is not fulfilled.

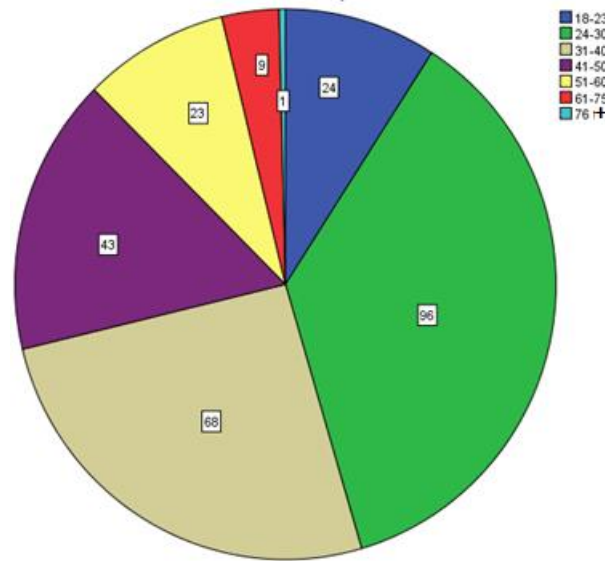
Figure 1: Composition of the sample according to gender



source: own research, 2018; n=264

As for the composition based on age of the respondents (figure 2), it is clearly seen that elder respondents are represented in a lower number. The questionnaire has mainly been filled in by respondents between 24 and 30 as well as 30 and 40. It means that members of the Y-generation account for 62% of the respondents. The generation between 41-50 and 51-60 (generation X) accounts for about a quarter of the respondents. The ratio of of respondents between 18-23 constituting the generation X and the proportion of baby boomers is relatively low in the sample. Consequently, the sample isn't representative in this respect and it does not cover the common structure of the society.

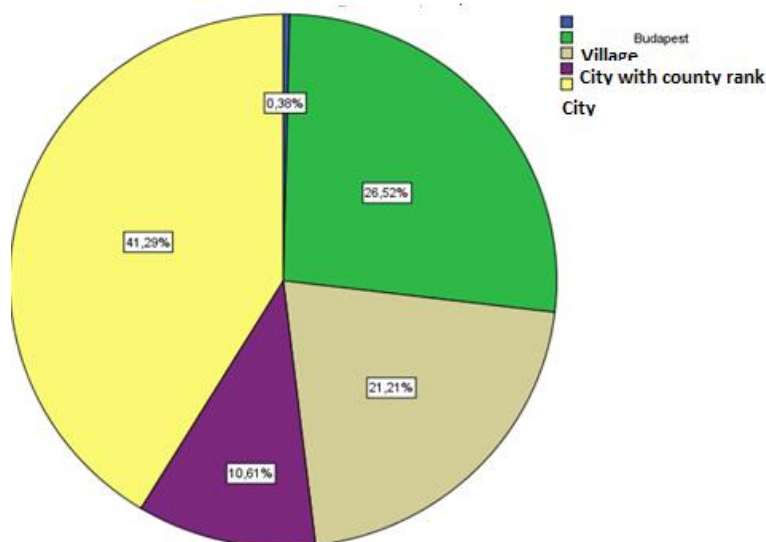
Figure 2: Composition of the sample according to age



source: own research, 2018; n=264

The residency categories are shown in the figure 3. 21,21% of the respondents live in settlements which is slightly behind the national average. Therefore, the ratio of town citizens is overrepresented. The ratio of citizens living in towns with county rights lags behind the the corresponding national figures. However, the proportion of towns and respondents living in the capital is over the national average. Accordingly, it does not fulfil the requirements of representability either.

Figure 3: Composition of the sample according to settlement type



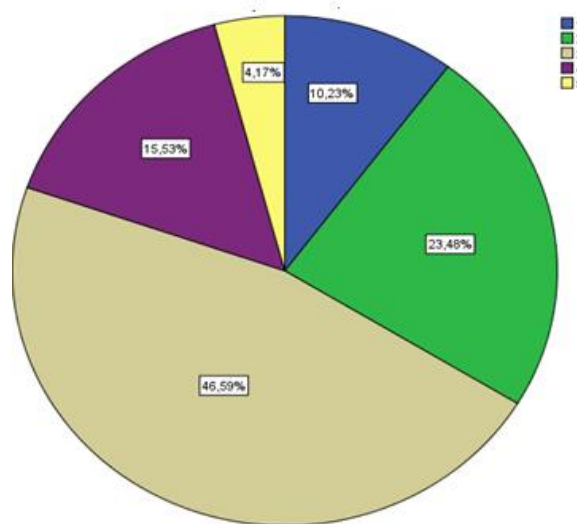
source: own research, 2018; n=264

According to the sample features, the research is not representative, but in terms of its methodology, it has innovative results.

4.2 Research results

In this study, we raised two questions in a detailed manner. One of them is literacy according to self-assessment (figure 4). The vast majority of the respondents considered their literacy to be moderate. It is sad that the number of respondents with a high level of literacy is quite low since the ratio of grades 4 and 5 is only slightly higher than 20%.

Figure 4: Financial literacy based on self-made returns



source: own research, 2018; n=264

Figure 5 shows the points to measure literacy and the allocation of the index calculated based on these points as well as their descriptive statistics. The point average approaches the level of 9, the median is largely close to this figure. Therefore, we can draw the conclusion that sample results cover and clearly show the features of the reviewed sample. The scatter level indicates a slight amplitude which can be measured using the relative spread figure, whereas the spread is then divided by the average. If this figure is higher than 0,3, the scatter level is considered as high (in our case the 0.36 is slightly above the level). The respondent showing the worst performance achieved 3 points and did not answer several questions. The best respondent gave right answer to all 10 questions. If we consider the educational system, 40% of the respondents failed the „exam” and 60% passed the test of financial literacy. Consequently, the 159 respondent proved to have a financial literacy that exceeds the medium-level. The level of financial literacy is a bit higher in case of self-assessments.

Figure 5: Descriptive statistics of literacy points

		literacy points	INDEX
N	valid	264	264
	missing	0	0
average		8,98	56,13%
median		9,00	56,25%
scatter		3,29	20,59%
scope		12,97	81,06%
minimum		3,03	18,94%
maximum		16,00	100,00%
percentage	10	5,00	31,25%
	20	6,00	37,50%
	25	6,02	37,63%
	30	7,01	43,81%
	40	8,01	50,06%
	50	9,00	56,25%
	60	10,00	62,50%
	70	11,00	68,75%
	75	11,50	71,88%
	80	11,51	71,94%
90	13,50	84,38%	

source: own research, 2018

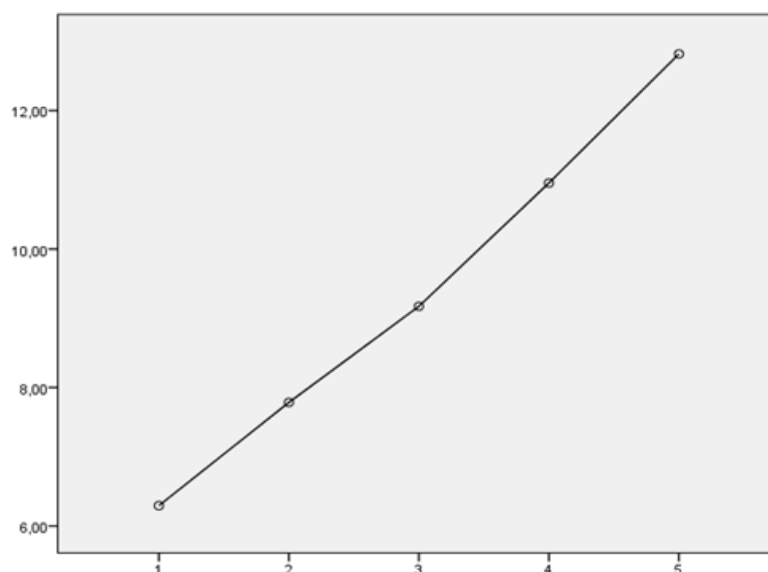
Of the two variables in concern, we indicated the literacy score as a dependent variable in Figure 6, using the method of analysis of variance. The value given during the self-assessment served as independent variable. It is shown in the ANOVA chart, how significant the difference is between the literacy level admitted during the self-assessment and the points achieved at the test. This only gave evidence for the difference between the groups, the real deviations are shown in the average diagram, i. e. by the means plot in the SPSS output (Figure 7).

Figure 6: Result chart of the analysis of variance

		ANOVA				
		sum of squares	df	mean square	F	Sig.
literacy point	between groups	609,698	4	152,424	17,593	,000
	within groups	2243,901	259	8,664		
	total	2853,599	263			

source: SPSS output

Figure 7: Means plot to test self return



source: SPSS output

The diagram clearly shows that the average value of the points is constantly rising alongside the literacy level indicated in the self-assessment. We can draw the conclusion from the statistical explanation that the respondents are aware of their financial literacy that can be confirmed by the line with positive inclination. This statement was also analysed conducting the Post-hoc test. Each figure shows a significant difference from the other ones in case of a significance level of 5%.

5. Conclusions

It is an innovative element of the research that financial literacy was tested and the terms in connection with financial literacy were clearly defined. It can be considered as an absolute novelty because the domestic specialist literature has not provided a comprehensive definition of these terms so far.

The second essential achievement of the research is that literacy level of the sample determined based on self-assessment and the test results confirm the self-assessment. Respondents who claimed to be better-informed, achieved a higher average score.

According to the scores, literacy exceeds the ratio of 50% in 60% of the respondents. This value is higher in case of self-assessment.

The only limit of the study is that we did not manage to conduct the research on a representative sample, but the result can serve a starting point of further studies.

Based on the study, the following recommendations can be made for policy makers:

- financial education should be strongly included in the education system,
- the hungarian tax authorities should do more information work online and offline,
- incorporate public finance education into financial literacy programs.

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