Financial Knowledge of Hungarian High School Students

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Abstract: This research paper examines the financial knowledge of Hungarian high-school students. A survey of 501 student was conducted on their general financial knowledge, attitudes, and self-awareness. It can be stated that there are large gaps in the financial knowledge of high school students, also in matters that are necessary for everyday life. Based on the survey, it can be stated that students cannot gage their financial knowledge appropriately. It can also be said that the number of diplomas found in the family, does not influence what kind of relationship the student develops with money, or how much they know about it. It has also been proven that, in accordance with international examples, that boys achieve better results on average than their female peers.

Keywords: financial education, high school, Hungary

Introduction

In recent years, there has been a lot of research on financial culture - especially a lot of it in Anglo-Saxon countries. The target group, purpose and scope of the surveys of these studies are of course extremely diverse. This diversity also means that several accepted definitions of the concept of financial culture have emerged over the years. Béres and Huzdik (2013) did not find a uniform definition of financial culture, but they developed a system of criteria that helps to navigate the topic, since financial culture is treated as a concept. This concept includes:

- general financial knowledge,
- expertise in financial matters,
- financial competencies, skills,
- and financial awareness.
In Hungary, the Hungarian National Bank (MNB) has developed a summary definition that includes a significant component of the principle of financial culture: A level of financial knowledge and skills that enables people to identify the basic financial information necessary for their conscious and deliberate decisions, and then to interpret it appropriately, and to make a decision based on this, assessing the possible future financial and other consequences of their decision (MNB, 2008).

We could assume that more than 10 years after the economic crisis of 2008, society has already recognized the importance of the fact that without sound financial knowledge, we are at a disadvantage in most areas of life. The fact that the crisis could happen at all highlighted the extent of the gaps in the financial knowledge of the population.

At the same time, a survey of 1,000 adults based on the methodology and questionnaire developed by the OECD shows that we pay less attention to our finances after the crisis. Compared to 2010, five years later, only every fourth family prepares a budget and the proportion of those who were able to correctly solve interest calculation tasks decreased. 47% of the 18-79-year-old population participating in the survey believed that they have financial goals - which can be considered a low value if we look at the future development, expected reduction, possible crisis of the state pension system, or if we think about the increasing costs of children's education - which is the most it will affect the younger age group (Pénziránytű, 2015).

Young people need certain financial literacy to be able to make risk-free financial decisions and to choose correctly among financial products, service providers and advice. Today's rising generation will have to bear greater financial risk during their adult lives than their predecessors since with the transformation of developed countries - which is related to general demographic processes, such as the increase in life expectancy at birth and the decrease in the number of births, thus the aging of the population - the role of the government in the support of higher education or old-age pensions, and in the provision of health services is reduced in many traditional welfare states (Tóth, 2015).

One of the reasons for this is the observed acceleration of economic events in the last 20-30 years. Another significant factor is that the range of products offered by the financial sector has been greatly expanded since the 1980s, which has resulted in the introduction of complex financial products and services on both the retail and investor markets. In addition, in recent years finance has undergone a profound transformation. Digital technologies are reshaping payments, lending, insurance and wealth management, a process that the COVID-19 pandemic has greatly accelerated (Feyen et al., 2021).

Contrary to expectations, research shows that the financial literacy of the younger generation is lower than that of previous generations (OECD, 2014). If we accept the assumption that young people need increasingly broad knowledge of financial literacy, then we also must accept that the role of school in this is unavoidable. The beneficial effect of teaching financial literacy at school on students' financial knowledge or, for example, their saving habits has been supported by several studies (Danes et al., 2009; Chen & Heath, 2012; Tóth, 2015). Due to the role of public education, the measurement of financial literacy appeared in the PISA
tests in 2012 (OECD, 2013). Despite this, by 2013 only 11 countries had
developed a detailed education plan and only 18 countries participated in
the 2012 PISA financial literacy measurement while only 20 countries
participated in the 2018 PISA survey. Hungary did not participate in the
assessment of financial knowledge on any of the three possible occasions

In general, an increase in gross domestic product income has a positive
effect on students' knowledge (Figure 1), but students in some countries
with lower GDPs performed better. For example, Poland's result is above
average, while the GDP of the United States is almost twice that of Poland,
yet their performance just reaches the average score (PISA, 2018).

Figure 1. Average performance based on financial knowledge and GDP/capita

Source: OECD, PISA 2018 database

Figure 2. Financial literacy performance, by sources of information about money
matters

Source: OECD, PISA 2018 database
Previous PISA tests and other international surveys prove that young people mostly turn to their parents for financial advice. These topics mostly affected young people’s own budget, spending habits, savings plan, and what exactly young people want to spend more money on in the short term. It is less common, however, that the family budget or the news of the financial world are discussed between parent and child. According to a study by Kovács and Mészáros (2015) students' financial behaviour is basically shaped by the behavioural patterns of their parents' and what they see at home.

**Current Situation in Hungary**

The government decree introducing the National Basic Curriculum, which entered into force in 2013, also designated financial and economic education as a definite goal: "The rising generation must have usable knowledge about the economic and financial institutions and processes that determine the lives of the world economy, the national economy, businesses and households." (Government Decree 110/2012 (VI. 4) on the publication, introduction, and application of the National Core Curriculum). One of the important initiatives in Hungary is the Funds Program of OTP Bank’s Fáy András Foundation. Since 2006, the program has been aimed at the education of high school students in several parts of Hungary, and in the meantime, it is undergoing continuous development. The ‘Pénziránytű’ Foundation, established at the initiative of the Hungarian National Bank (MNB), also targets the high school age group with its programs (Zsótér, 2013). In 2015, intensive development of school financial education programs began. Since then, we have joined the Global Money Weak (GMW) program series by organizing the PÉNZ7 financial and entrepreneurial theme week, during which hundreds of thousands of students can access thematic financial knowledge every year. In 2017, the government developed a 7-year strategy for the development of financial culture, which also brings together the programs of organizations and institutions for the common goal. In technical schools, financial and entrepreneurial skills are a compulsory subject, in high schools, students can learn practical finance integrated into subjects (Pénziránytű, 2022).

The most recent framework curriculum approved and published by the Ministry of Human Resources does not include mandatory financial or economic subjects for primary school students, although the framework curriculum for the subject of mathematics includes topics related to the development of financial awareness and mentions income, expenditure, loans, interest, wages, credit, and additional financial concepts.

Although the legislation defines the education of the subject as an important endeavour, the mandatory framework curricula do not deal comprehensively with economic and financial education, so until today, a unified, quality-assured educational concept that adequately promotes the transfer of knowledge has not been created and educational material.
Materials and Methods

The nature of the research was quantitative. Students between the age of 14-22, who are not taking part in specialized economic education - for example, they do not attend an economics vocational high school or have an economics major - were asked to fill out a survey.

The questionnaire was prepared with the help of Google Forms, in an online format. The recording was done anonymously, with the supervision of teachers, within the framework of homeroom or IT classes. A total of 501 people filled out the questionnaire during the two and a half months allotted. The number of valid cases remaining after data cleaning was 457.

In the questionnaire, a total of 19 questions were asked regarding the students' financial knowledge, and six more questions were used to assess demographic data. In the methodology of the questionnaire, the three elements of financial culture are financial knowledge, behaviour, and attitude.

For the attitude test, nine Likert scale questions were asked. In the remaining part of the questionnaire, 5 questions to be decided examined the theoretical, and 4 tasks tested the practical knowledge. The students were asked to use the "I don't know" option if they were unsure of the answer to the question, or to leave the answer blank - if it was open-ended - so that the results of the research are not distorted.

Based on the sample, the survey cannot be said to be nationally representative, but it should be considered in order to draw conclusions about the financial knowledge of the affected age group based on the results achieved in the test.

As a limitation, it should be mentioned that 65% of the respondents, 296 people, were girls, while boys gave only 35% of the answers. However, all previous research done in Hungary had about the same gender ratio. Another limitation would be that the questionnaire was filled out by students from rural schools rather than those who study in the capital or the Budapest agglomeration. Only 7% of the answers came from this region. Based on the type of school, it can be said that much of my questionnaire reached high school students (67%) and students studying in vocational high school (24%).
Table 1. Sociodemographic characteristics of the examined sample (N= 457)

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th></th>
<th>Age</th>
<th></th>
<th>Type of school</th>
<th>Residence</th>
<th>Had prior financial education</th>
<th>Parents have higher education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>male</td>
<td></td>
<td>female</td>
<td>technical school</td>
<td>capital city</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>161</td>
<td>35%</td>
<td>296</td>
<td>44</td>
<td>30</td>
<td>yes</td>
<td>252</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>vocational school</td>
<td>village</td>
<td></td>
<td>167</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>high school</td>
<td>city</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>county seat</td>
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<td>yes</td>
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<td>290</td>
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<td></td>
<td></td>
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<td>187</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>do not know</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Results

Comparison of students' perceived and real knowledge

At the beginning of the questionnaire, I asked the students how they evaluate their own financial knowledge on a scale of 1-5, with an interpretation corresponding to school grades. Here, most people indicated the medium. Based on the answers evaluated later, this means that they cannot decide, rather than indicating that they rate their knowledge as average. The maximum possible score in the test was 12. Scoring was based on the calculation method of high-school graduation grades (fail: 0-24 % (0-2 points); pass: 25-39% (3-4 points); satisfactory: 40- 59% (5-6 points); good: 60- 79% (7-9 points); excellent: 80- 100% (10-12 points).

The average score achieved on the test was 4.42, which is just at the lower limit of average. However, the median value is even lower, only 4 points. The mode is 3 points, that is most of the students could only answer three questions correctly out of the 12 asked. Only 28.5% of respondents predicted their knowledge correctly. Those who did not evaluate their knowledge correctly positioned themselves at least 2 values off from their actual level (Figure 3).
This research reinforces the ÁSZ financial culture research project (Németh et al., 2013) where it was also established that there is a significant difference between the real and perceived financial knowledge of young people studying in higher education.

**Comparison based on gender of students**

In order to determine if there is a difference in performance between genders, I did an independent t-test. In Table 2, the t-value t of -3.049 shows that the members of group 2 (boys) achieved significantly better results in the test compared to girls.

Studies conducted among adults and students in higher education revealed that there is a difference between the sexes in the case of financial literacy (Tóth, 2015). Compared to girls, there are more boys at both ends of the performance sample. In the OECD countries, there were more high-achieving boys than girls (12% compared to 9%). In addition, it can also be said that more boys scored low than girls (16% versus 14%). In this study, however, even though boys on average performed better, there were more high achieving girls (boy’s maximum score was 9 versus girl’s 11), and their performance was relatively even as the standard deviation for girls was 2.25, while for boys it was 2.13.

<table>
<thead>
<tr>
<th>Levene teszt</th>
<th>t-próba</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>.001</td>
<td>.975</td>
</tr>
</tbody>
</table>
Comparison based on family background

When asked who or where they would ask for advice on financial matters, 87% of the students indicated their family members. For those from intellectual families, this rate is 91%. Due to the non-parametric nature of the data, Mann-Whitney test was used (Table 3) to examine the results of the financial knowledge test depending on the different family background.

Table 3. Mann-Whitney test results regarding graduate family background and student test scores

<table>
<thead>
<tr>
<th>Mann-Whitney U</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilcoxon W</td>
<td>25526.5</td>
</tr>
<tr>
<td>Z</td>
<td>-0.901</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.368</td>
</tr>
<tr>
<td>MedIAN (diplomás)</td>
<td>4</td>
</tr>
<tr>
<td>MedIAN (nem diplomás)</td>
<td>5</td>
</tr>
</tbody>
</table>

After the tests, it can be said that students whose parents have higher education do not perform better compared to those who come from non-graduate families.

The results of the PISA survey also showed that the most typical source of information for students in the participating OECD countries is a parent, guardian or other adult relative. Those young people who acquire knowledge from this source achieved a result 38 points higher than those who do not receive information about financial matters from their relatives at home. Examining the topic of emotional attitudes related to loans, Németh and his colleagues (2013) study highlights that young people primarily obtain the information they need for their financial decisions from their parents; thus, family patterns also have a significant impact on their attitudes and plans.

Conclusions

The choice of topic was mostly born of its topicality. I wanted to see what kind of financial knowledge high school students have, since they have more sources to acquire this knowledge than anyone before them. I was motivated by the fact that, according to my experience, very few families in today’s world discuss financial matters. In many cases, parents living in
the same household do not manage from a common fund either; the financial situation of the family is not a daily topic. The issue has been on the agenda in several countries, the PISA assessments also included the measurement of the competence of financial knowledge. In Hungary, the 2007 NAT included financial education as an area to be developed. In 2018, it was also included in the strategic plan. However, due to the lack of specifics, no meaningful progress has been made since then.

First, perceived financial knowledge was compared with financial test results. Second, a gender comparison was performed. Finally, correlation between test results, and family background was analysed. Based on the survey, it can be stated that students cannot gage their financial knowledge appropriately. It can also be said that the number of diplomas found in the family, does not influence what kind of relationship the student develops with money, or how much they know about it. It has also been proven that, in accordance with international examples, that boys achieve better results on average than their female peers.

In summary, it can be stated that there are large gaps in the financial knowledge of high school students, also in matters that are necessary for everyday life. If those participating in the public education system learned at least basic practical financial knowledge, the transition between school and the labor market could become easier.

References


