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For scientists, scientists, students, graduate students, representatives of business and public organizations and higher education institutions and a wide range of readers.

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Financial knowledge of higher education students of economics

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Abstract

This study presents some partial results of a complex research. The original research topic is the comparison of the financial literacy and security of Hungarian and foreign students as a result of environmental crises. In this study, we examined the impact of individual-family financial difficulties caused by economic crises. Our aim was to show that without the right level of financial knowledge, these problems cannot be solved properly. Only undergraduate students in economics were included in the present study. On the one hand, we examined the area of investment because it is one of the possible ways to create personal financial security. The other focus point was the practical application of knowledge, the study of shopping habits. Our results draw attention to the importance of practical knowledge.

Introduction

The economic crisis of 2008 and its effects that are still rippling today focused the attention of decision makers on the importance of financial knowledge (Kovács, 2017). The insolvency of the population caused by unpaid loans, the bankruptcy of financial institutions caused by it and the resulting economic collapse led to a global crisis (Savchenko et al., 2017). Even though most of the problems caused by the crisis

have been successfully solved, the lack of financial literacy has been an ongoing difficulty for more than a millennium (De Beckker et al., 2019; Kovács, 2015; Xiao et al., 2011). However, complete recovery from the crisis is still elusive today, and now humanity is facing another problem: the health emergency caused by the coronavirus and the resulting economic recession. In contrast with 2008 and all the previous crises, which developed as a result of overproduction, excess loaning and the accompanying loss of confidence, the cause of the current crisis is the drop in demand because of the lockdowns ordered for public health reasons and reduced economic production.

Since for a long time the only remedy for the epidemic was quarantine and the restriction of personal contact, the world economy almost completely stopped for a prolonged period. The consequence of this, especially in the initial phase, was massive job losses, income shortfalls, thus financial difficulties for households. Political decision makers and governments played a significant role in solving the problems, e.g., by job protection and income shortfall compensation subsidies. At the same time, the effect on households varied depending on what kind of personal financial safety nets they had developed for themselves in the period before the pandemic. The quality of this financial safety net was considerably defined by personal financial literacy (Klapper & Lusardi, 2020)

My own research – research themes, data and methodology

My research presented here is also connected to this subject range. As a part of a larger study, I research the financial literacy, behavior and attitude of higher education students. I started my work back in 2019, before the breakout of the COVID-19 pandemic. The pandemic provided an opportunity to assess its effects as well. My research was on the international scale, it included 5 Hungarian and 2 foreign universities. The respondent students included some who specialize in economics as well as others. Financial literacy is composed of the

combination of several factors (Kovács & Terták, 2019). In my questionnaire I asked about ninety of them. The respondents could give yes/no answers to all the questions, which made statistical processing easier(Peterson, 2000). The respondents could mark the possible answers according to a scale. If it was an opinion-forming question I applied a five-level Likert scale (Asún et al., 2016). The questions investigating knowledge were multiple-choice questions with one correct answer. Another part of knowledge investigating questions is described by nominal variables, for these I applied yes/no questions (Saunders et al., 2015).

In my present work I introduce a slice of the complex research. I introduce a portion of the results that analyze the similarities and differences in financial literary evaluated among economics students attending Hungarian and foreign universities. Considering that as an effect of the COVID-19 pandemic, I repeated my 2019 questionnaire in 2020, I chose a theme that compares the results of the period before the pandemic with the changes that occurred during the first wave of the pandemic. The crisis caused by the virus pointed out the importance of a personal/family financial safety net. Investments comprise one of the elements of this (Mallinson, 2020), which contribute to the creation of emergency reserves. The research methodology was questionnaire in both cases. My first study occurred before the appearance of the coronavirus. At this time I chose the online questionnaire because in this way I expected a significantly higher response rate (Gunter et al., 2002; Zhang et al., 2017). My expectation proved to be correct: the response rate turned out to be 92%, which exceeded the usual 20-40 % response rate that is considered to be a success in the case of online questionnaires (Ilieva et al., 2002; Mehta & Sivadas, 1995; Tse, 1998; Tse et al., 1995). I forwarded the questionnaire to the respondents with the help of my acquaintances who study at the affected universities, and they returned them to me after those were filled in. In the second round I applied a similar method, in this case I used the loosening of the restrictions after

the first wave of the pandemic (the period in September when in-person education started) for the offline questionnaire. I recorded the collected data in MS-Excel, then I imported them into IBM SPSS Statistics after cleaning and coding the database, and I used this software to perform the statistical analyses.

My results

In the present work I focus on two areas among the received responses. One of them is the subject of investments – as I mentioned in the introduction – they represent the foundation for creating financial resilience and the personal safety net. The other subject range is everyday practical knowledge, of which this time shopping and card use was in the focus, and I also asked about interest calculation as a basic skill. I studied the two areas separately in the case of full-time and part-time (correspondent) students.

Investments

In the area of investments, I measured skills with 5 questions:

Q_B_01 In the case of a mortgage combined with life-insurance, do the savings cover the amount to be paid back?

Q_B_02 In your opinion, is it a good idea to have insurance with investment purpose?

Q_B_03 Money market funds do not involve risk, since our money is only invested in bank accounts and securities.

Q_B_04 There are risk-free investments.

Q_B_05 A portion of our pension contribution goes to our personal account managed by the voluntary pension fund.

I studied the knowledge level calculated per person based on the indicator gained from to total of correct answers. Before the pandemic 69 % of Hungarian, Slovakian and Austrian students gave correct answers, the percentage was the same during the pandemic. Regarding investment knowledge correspondent students performed better in both years (Figure 1). At the same time, while the performance of full-time students declined, the performance of correspondent students improved, based on the results of the second questionnaire.

An explanation to this may be that the changes caused by the pandemic significantly affecting every area of life diverted the time and energy of students from expanding their financial knowledge. Another possible reason is the heightened uncertainty brought on by the virus situation. The better performance of part-time students is probably a result of their greater work and life experience and the connected practice. Moreover, correspondence students were less affected by transferring to online education.

While studying the differences and similarities between countries, I concluded that progress occurred in investment knowledge among Vienna students (3% improvement) and Bratislava students (9% improvement). However, the performance of Hungarian students

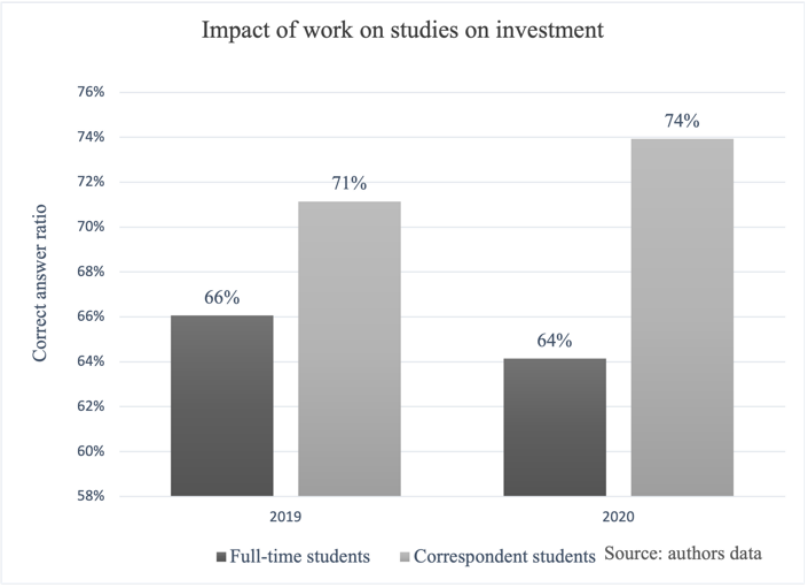

Figure 1: Investment knowledge of full-time and correspondent students in higher education
Source: own data

An explanation to this may be that the changes caused by the pandemic significantly affecting every area of life diverted the time and energy of students from expanding their financial knowledge. Another possible reason is the heightened uncertainty brought on by the virus situation. The better performance of part-time students is probably a result of their greater work and life experience and the connected practice. Moreover, correspondence students were less affected by transferring to online education.

While studying the differences and similarities between countries, I concluded that progress occurred in investment knowledge among Vienna students (3% improvement) and Bratislava students (9% improvement). However, the performance of Hungarian students

declined by 11% (Figure 2). This significant decline is still to be explained. I would mention as one of the possible reasons that the fast and forced transferring to remote education caused by the virus may have played a role in this decline. Literature indicates this with a separate name 'Emergency Remote Teaching – ERT' and distinguishes it from other forms of remote education (Hodges et al., 2020).

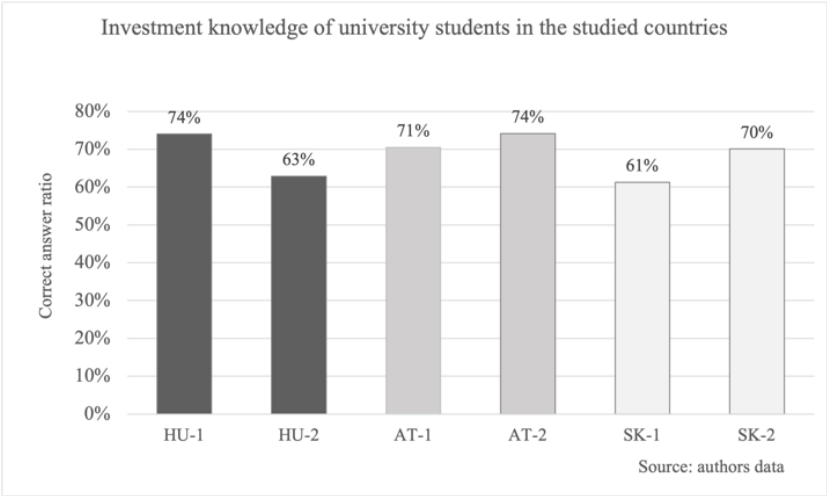

Figure 2: Level of investment knowledge in the studied countries
Source: own data

The basis of this differentiation is primarily the forcedly short preparation time, which did not allow for finding the appropriate methods and platforms. In the success of ERT the role of the students' side is just as important as the teachers' side, specifically an overwhelming majority, 98%, of education was realized even without in-person classes (Sinóros-Szabó, 2020). Moreover, the participation

rate in online classes was higher than what the experts expected (Deés, 2020). At the same time Deés also mentions that activity in this participation was significantly lower than usual. Even though the authors of the report – based among others on the assessment by the Social Science Lab (Aristovnik et al., 2020) – the unusual circumstances of the education environment are cited as the main reason for difficulties in paying attention. Dr. Vilmos Vass learning methodology expert, Docent at the Budapest Metropolitan University (METU) gives a real explanation in the interview with him (VG, 2020). He calls attention to the fact that in online-education mainly the students' sense of responsibility is critical, they must be disciplined and motivated enough to not just login to the online class, but truly participate in it.

While analyzing the responses to specific questions, in summary it can be stated that economics students in all 3 countries gave correct responses at similar rates. However, there are 3 outstandingly poor results. In the question related to money market funds, before the pandemic Bratislava students were 20% behind the knowledge of their Hungarian and Austrian counterparts, while in risk assessment and pension-savings Hungarian students practically failed during the pandemic (Figure 3).

On the one hand, this means that Hungarian students at this age don't care at all about their pensioner years, which can be a source of later financial problems. At the same time, it should be mentioned that in this question compared to the others there were almost 30% less correct responses among the students of all of the universities.

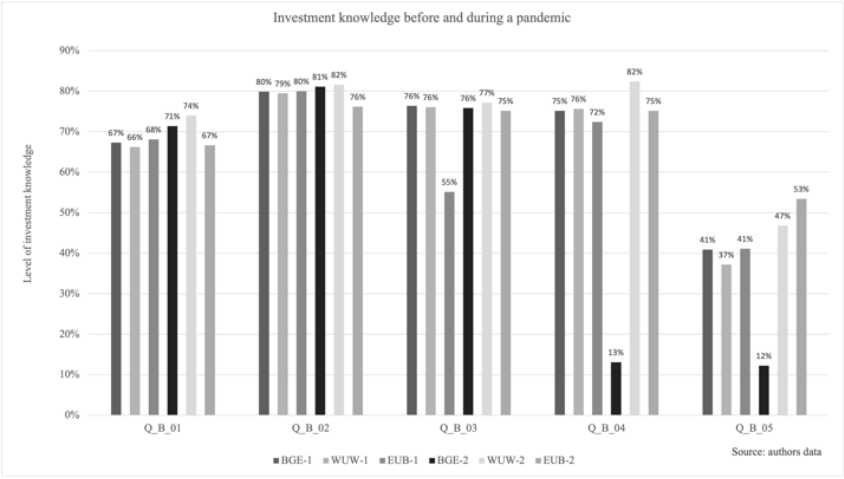

Figure 3: Student responses to interment knowledge related questions before and during COVID-19
Source: own data

It is even more noteworthy that for the other question only about 1 in 10 Hungarian students answered correctly. Thus, they are the ones who have special knowledge in their field of study in a way that they are unable to apply it in practice. The basic suspicion toward „too good to be true" offers is missing from them. During the financial difficulties caused by the pandemic this may lead to particularly dangerous decisions. After this I investigated among the part-time students who were found to be more practical, at what rate the Hungarians gave correct answers. Based on the results I concluded that roughly 2/3 of these students reacted correctly to an irresistibly good offer. This proportion is significantly higher than the responses of full-time students, but it is still considerably lower than the over 90% rate of Bratislava and Vienna students.

Practical knowledge

All knowledge is worth as much as it is proven useful in practice. This statement has been particularly true since the 2008 Economic Crisis. Unfortunately, it is a general experience that although the world managed to get over the crisis, the level of people's financial literacy is still too low (Béres et al., 2013; Huston, 2010; Klapper et al., 2015; Pintye & Kiss, 2017). It is of particular importance in the case of higher education students to be able to use their knowledge in practice. Of the questions from my questionnaire, I selected 5 for the current analysis. All of these are related to the practical side of financial matters:

Q_P_01	Do you know what to do if you buy a faulty product with your credit card/bankcard?
Q_P_02	How many days do you have to change your mind in the case of buying in a shop?
Q_P_03	How many days do you have to change your mind in the case of an online purchase?
Q_P_04	You can use a credit card to pay an unlimited amount.
Q_P_05	Do you know how to calculate interest?

In the questions I mainly focused on practice related to shopping, as a characteristic daily activity. In contrast with the unchanged investment knowledge, practice has developed during the past year: the 2019 data increased from 73% to 76% in 2020. The improvement was observed among both full-time and correspondence students. The difference in knowledge between them practically

disappeared. Both groups had a 74-77% performance, which means that daily activities are not unknown even to those who do not work on top of studying. This is well illustrated by the fact that the most correct responses came to the question related to unlimited credit card purchases (full-time: 92%, correspondence: 96%). This was followed in the second place by interest calculating skills. The respondents were least confident in the subject range of shop purchases, but I still found an over 50% correct response rate. Ranking the universities based on performance I found a Vienna – Budapest – Bratislava order both among full-time and correspondent students. I observed as an interesting result that the correct response rate to questions related to online shopping decline by 4%: from 73% in 2019 to 69%. In reality this is not surprising. A possible explanation is that as a result of the pandemic the proportion of online-purchases considerably increased, customers who previously preferred brick-and-mortar shops appeared in webstores as well. But their experience in this field is narrower, thus they responded less successfully resulting in the decline.

Summary

This study presented some specific aspects of the results of a PhD-research. The study is focused on the financial literacy, behavior and attitude of higher education students. From among these I introduced two areas, investments that represent the foundation of the financial safety net and knowledge related to shopping, by which I measured practical everyday skills. In the knowledge related to investments and money markets Hungarian students performed the weakest, particularly full-time students. In the practical area similar differences were not detected. It was also proven that correspondence students were more successful in every field, which can be attributed to greater practical experience. The entire research is still ongoing, the processing of results is being conducted.

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