FINANCIAL LITERACY OF UNIVERSITY STUDENTS AND COMPARISON WITH CHOSEN COUNTRIES IN THE CONTEXT OF INCREASING THE SKILLS OF PUPILS

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Abstract
In the real world, where the pursuing of success and the money is the most valuable goal not only by corporations but almost all individuals, the understanding of financial context is very important. This topic is the cornerstone of financial literacy as one of the individual skills. The article is aimed at the comparison of the situation among the general population in the financial literacy according to official statistical data. The focus in this part of the analysis is to identify if there is any connection between the financial literacy of the general population of the chosen countries and the economic level of those countries. As the next part of the analysis there are presented data of our own questionnaire survey among the students of faculty of education and the comparison of the results with the national level of financial literacy. Both parts of the article thus mutually correspond and moreover their results are used to formulate the conclusion for the increasing the skills of pupils. The pupils are the most suitable focus group for application of any enhancing educational projects in the topic of financial literacy because this topic should be one of the basic knowledge for real life. Education process of financial literacy should start as soon as possible as the preparatory process and not only as the process of elimination of consequences.

Keywords: financial literacy, competence of pupils, education process.

1 INTRODUCTION
In the current real world viewed through the perspective of economic rationality, all human activities can be evaluated according to their impact to economic situation of those people. All activities can be measured by economical categories such as revenues and cost. Each activity brings us some volume of utilities but we are supposed to do something to get those utilities connected with effort needed. Thus, there is implicit need to be aware of those forces around us. We are expected to be raised for the real world in the context of getting suitable job, suitable to our competences and getting us some sort of satisfaction, but at least provide us with the minimum resources for satisfying our needs.

Except few of us having enough resources as heritage, real world around us creates the pressure to every human being to understand the economic forces for manage the resources we have or are able to get and their distribution to our needs to get the best utilities we can. From the economic point of view this is the core of the successful life providing the very best perception of our existence in the real world around us. And for such successful perception of life each of us needs the basic knowledge of the “how the world – economic world – works”. This is, and at least should be, the main headline of the financial literacy, knowledge and suitable skills in this area with the aim of increasing the competencies of each of us.

In the context of educational process there is common understanding that the purpose of it is the preparation the young generation and the pupils for their future life. To provide the suitable information, knowledge and skills for their future job, but also for their future active engage in the public life, to encourage them for the correct ethical attitude and so on. In current society where almost each information is available “at the click” there is need for change of educational process to create not extensive database of knowledge, but forming the suitable attitude to long-life learning and provide the basics and ability to find and identify the correct piece of information and the ability to process this piece of information for use to get knowledge and transform the knowledge to skills.
2 METHODOLOGY

Methodologically this paper could be divided into two parts. The first is conducted as the desk research of the perception of the research topic using official documents and official statistics. In this first part, the main aim is the identification of relationships between the level of financial literacy and the economic level of the chosen country. The proposition for such a research is the mutual connection between the economic situation of the country evaluated according to GDP per person and the financial literacy based on the belief that the better economic situation leads to better function of the economic institution and better possibilities for inhabitants of the country to use those economic institutions and create the pressure for better financial literacy evaluation as well. For this first part, secondary data are used and the basic optometric approach is used.

At the second part of the paper there is the analysis of the financial literacy situation among the university students at the faculty of education in comparison with the situation among the general population in the Czech Republic. The aim is to identify if there is any differences in financial literacy knowledge of both samples. For such analysis, there are used the secondary data of financial literacy survey conducted by state institution among general population and our own questionnaire survey among the students of faculty of education. Focus on students of faculty of education has implication and deeper logical conclusion for the increasing of financial literacy of pupils and educational process. The very those students will be responsible for the enhancing the financial literacy of the pupils in future as future teachers.

At the end of the paper we focus on the educational process directly, especially if there is need to enhance the financial literacy of the pupils and at which level of education process. According to the previous analysis there is logical conclusion about the educational process adaptation.

3 RESULTS

The results of conducted analysis are divided according to above-mentioned perception of the problem of financial literacy in this paper. Thus, there is the analysis of relationship of the financial literacy score according to international survey and the economic situation according to international statistics. As the second step, there is the comparison between the levels of financial literacy in the Czech Republic provided by state institutions and our own questionnaire survey.

3.1 Relationship between financial literacy and the economic situation

If we want to talk about the financial literacy or about the economic situation of chosen countries and analyse the available data to make any conclusion, we need to define the terms we use.

In the last years, the term financial literacy is more and more used and discussed among the academics, creators of the state policy – especially education policy – but also among the people interested in making the profit from this topic. Financial literacy became topic mentioned also by the media and according to our personal insight it is also the topic of general population. However, in the interaction with the general population there is the problem of talking about the problem of financial literacy, or financial illiteracy respectively, due to declining of lack of knowledge by the representative of general population. Also, creators of state policy are not able to acknowledge the problem of financial illiteracy due to worry about critics of their own work or accusation of lack of work done.

Financial literacy is knowledge and understanding of financial concepts and risk, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial concepts, to improve the financial well-being of individuals and society and to enable participants in economic life. [5]

The definition is used in the Programme for International Student Assessment (PISA) focused on the knowledge of 15-years old students. The results can be evaluated according to final score for each country. It provides the basic overview of the knowledge and the competencies of the participants in areas of science, reading, mathematical and financial literacy. [5]

According the definition of financial literacy there can be seen the connection to real economic life of the individuals. In our perception of the first step of the analysis presented in the paper, we are interested in the economic situation in countries for which there are the results of PISA according to score for financial literacy. In this context, we have chosen two economic indexes for comparison.
Gross domestic product (GDP) is the economic index focused on the measurement of output of economy of state created in the territory of the state in the one-year period usually. It can be seen as the index of the production possibility of the country. But for the better comparison of various countries with different inhabitants it is better to use GDP per capita, thus use the volume of GDP created by one inhabitant. The next problem of comparison is the different level of prices and wages, thus there is another correction of the amount of GDP and GDP per capita known as purchasing power parity (PPP). Thus, the best economic indicator is the GDP per capita in PPP as measurement of economy output per one inhabitant recalculated by purchasing power parity for best comparisons. Second economic indicator is the average wage of employees also recalculated by purchasing power parity for better comparison.

This two indicator of economic situation suits our purpose of analysis relationship between the financial literacy and the economic situation of the country.

Table 1. Financial literacy score and the chosen economical indexes.

<table>
<thead>
<tr>
<th>Financial literacy score (PISA)</th>
<th>GDP per capita (measured by PPP)</th>
<th>Average wage (measured by PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai - China</td>
<td>603</td>
<td>15399</td>
</tr>
<tr>
<td>Belgium</td>
<td>541</td>
<td>45047</td>
</tr>
<tr>
<td>Estonia</td>
<td>529</td>
<td>29313</td>
</tr>
<tr>
<td>Australia</td>
<td>526</td>
<td>48899</td>
</tr>
<tr>
<td>New Zealand</td>
<td>520</td>
<td>37294</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>513</td>
<td>33232</td>
</tr>
<tr>
<td>Poland</td>
<td>510</td>
<td>27764</td>
</tr>
<tr>
<td>Latvia</td>
<td>501</td>
<td>25710</td>
</tr>
<tr>
<td>United States</td>
<td>492</td>
<td>57436</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>486</td>
<td>26490</td>
</tr>
<tr>
<td>France</td>
<td>486</td>
<td>42314</td>
</tr>
<tr>
<td>Slovenia</td>
<td>485</td>
<td>32085</td>
</tr>
<tr>
<td>Spain</td>
<td>484</td>
<td>36416</td>
</tr>
<tr>
<td>Croatia</td>
<td>480</td>
<td>22795</td>
</tr>
<tr>
<td>Israel</td>
<td>476</td>
<td>35179</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>470</td>
<td>31339</td>
</tr>
<tr>
<td>Italy</td>
<td>466</td>
<td>36833</td>
</tr>
<tr>
<td>Columbia</td>
<td>379</td>
<td>14130</td>
</tr>
</tbody>
</table>

According to data displayed there is better relationship between the financial literacy score by PISA and the GDP per capita (measured in PPP) in comparison with the relationship between the score of financial literacy and the average wage (measured in PPP). The data encourage further analysis of the problem and stress the importance of the question of causality. Existence, or non-existence, of relationship is the only one side of the problem, but it not revealed the causality itself.
There is the problem of causality in relationship of financial literacy and the economic situation of the country. According to the definition, analysis of the other authors and brief data analysis mutual relationship of both concepts make sense in both directions. Thus, it can be divided in two parts:

- Financial literacy can be viewed as the proposition needed for the better economic situation. The logic behind this statement is simple and can be viewed in the definition of financial literacy itself. Individuals obtaining better financial knowledge, with the better financial literacy score, are better prepared for the real world and are able to better respond to various economic possibilities they are facing. The individuals with suitable financial knowledge, especially young ones, should make various different economic decisions influencing their future life and economic wellbeing. They make decisions about the job they will take, about the housing they will live in, about the purchase of the vehicle, loans and make savings or investments – generally about the obtaining good and services, thus spending money and creation of the demand. By those activities, they influence the economic situation of the country and contributes to economic development. We are able to see this kind of mutual relationship between the PISA scores and the GDP per capita (measured by PPP) for the countries.

- There can be opposite direction of the causality, which appears in the literature as well. The logic for this opposite causality stress the importance of the possession of enough money, capital respectively, to use for economic transactions in the real economic life. Basically, individual has to have enough money to be able to make non-trivial economic transactions, especially savings or investments of larger amount of money or decisions of the pension or insurance system individual prefer. This relationship however is not so obvious from the data analysis displayed above. There is small if any relationship between the financial literacy score and the economic situation of the country according to average wage (measured by PPP). But the basic logic is very simple and strict.

Probably, like in the other areas of real life, the true lies in the middle. The mutual causality between the financial literacy and the economic situation in the country according to these two economic indexes works in both ways. So, implication for the policy makers is not so easy to make, and their affordance should be in both areas. Strengthen the educational process focused on the financial literacy, and strengthen the economic development of the country.

### 3.2 Analysis of the financial literacy of students of faculty of education

The topic of financial literacy is one of the areas of interest of the Ministry of finance of the Czech Republic. It prepares the material for the development of the financial literacy of the general population and with the cooperation with the Ministry of Education of the Czech Republic there are materials prepared for the development of the financial literacy specially focused on pupils. There are also measurements of the level of financial literacy of general population made by the state institutions by the agency for opinion polls. [1]

This questionnaire survey of the financial literacy among the general population in the Czech Republic contains the wide variety of questions connected with the financial literacy. They are focused on the segmentation of the financial literacy to the specific areas of competencies, such as the price
orientation, budget creation, numerical competencies, informational and legal aspects of getting the information and their processing. [2][3]

The questionnaire itself, inspire us to provide our own questionnaire survey among the students of the faculty of education. It was conducted during the courses primarily focused on the topic of the financial literacy, but for the objectivity of the questionnaire survey it was taken at the very begging of the course. Thus, students were not affected by the knowledge obtained during the course. Using the questionnaire survey at the beginning of the course has been motivated also by the educational purposes. Students were able to identify the problematic areas in the topic of financial literacy and focus their interest to this very part of the financial literacy, and also they were able to track the progress they were made by attending the course of the financial literacy.

During the pre-phase of our own questionnaire survey there will be a little problem identified with the content of the questionnaire itself. The problem was connected with the suitability of each question for the focus group. Testing the financial literacy among the different focus groups create the need for the different types of questions especially due to different age categories of those focus groups. Clearly it is understandable, there should be different types of questions for very young pupils at the primary schools in comparison with the questions for the pupils in the secondary schools. Those differences are based on the different level of economical activities of those pupils, creating different levels of requirements on those pupils for real economic life.

According to results obtained from our own survey supplemented by the information from the survey in Czech Republic following statements could be made:

- the results of the students of faculty of education are very similar to the results of the survey in Czech Republic – they do not show significantly better knowledge, but it could be connected with the time of survey realization (beginning of the course, thus without further university education in the financial literacy);
- there are quite significant differences between particular questions as the representation of particular area of the financial literacy, thus there are areas with better knowledge by participants and the areas with almost zero knowledge or experience
- different areas could be evaluated differently according to age of the participant – younger ones have significantly better knowledge in informational systems and technologies
- there is lack of the knowledge and experience with the budget creation for households – almost none of the participants use the budget of household or known this activity from their parent’s households – moreover almost none thinks about the budget creation as the important part of the financial activities
- as the biggest problematic area of the financial literacy it seems to be numerical competencies – as seen through the biggest problems with the interest calculation or problems with the percentages in general
- there was lack of interest about the pension systems and about participant’s distant future, but it was not accompanied by the lack of knowledge – students basically had the correct information or were able to tell the way to obtain them, but they do not feel the need for such an action

This few results from the questionnaire survey brings us mixed feelings. The knowledge of and the user ability of new information technologies can be seen as very positive. In the current world, there is a lot of information freely available, and it is not needed to memorise all the information, but it is more important to know how to search the information and to verify it. At the other hand the very negative feelings there are about the lack of numerical competences, especially due to pressure for increasing mathematical literacy, which can be seen as the proposition in this context.

3.3 Some implication for the educational process in the sense of increasing the financial literacy of the pupils

Financial literacy is the interesting topic for creator of state policy. They also declare this topic as very important for future development of economic situation of the country. As it follows from the definition of the financial literacy itself, it represents the knowledge and the ability for various economic activities of individuals, households or even wider community. Thus, it is very important to start enhancing the development of the financial literacy of the pupils at the primary school – as soon as possible – to connect this type of literacy with other types of literacies such as reading, science, or mathematical
literacy or other core competencies pupils are obtaining in the early age. The result of this approach will also imply the side effect of increasing the time period for the education of financial literacy. [6]

But as we can see in the data available through the PISA [5], there is not enough to create only the availability of the financial literacy education. The two countries with the most available financial literacy education are not getting the best results in the PISA financial literacy scores. There could be the problem of the content of the financial literacy education and this has its relations with the form of the financial literacy education process.

Figure 2. Availability of education of financial literacy.

The question connected with the financial literacy is not connected with the suitable time to start the education process only, but also connected with the form of this education process. There could be at least two possibilities of specification of education process – separate courses of the financial literacy and the financial literacy as the part of the other suitable courses. For example, numerical competences as the part of the financial literacy should be part of the mathematical courses.

According to available data [5] and according to personal contacts with several teachers with the practice in primary and secondary schools, financial literacy should be part of the other subjects especially at primary school level. Clearly it means the changing the structure of the subject, using suitable economical examples. It is very important prepare the parts of the financial literacy for implementation to the other subjects due to the age and the level of other knowledge of the pupils and ideally with the suitable connection to the topic of this other subject.

At the higher level of education process the topic of financial literacy should be created as the separate subject. The higher interest from pupils can be expected due to their need to have enough knowledge for decision making in the real economic world around them. Thus it is inevitable to use in this type of subjects practical examples inspired be the common situations in the real world, to make the topic of the financial literacy understandable and useful for the pupils.
4 CONCLUSIONS

In the first part, we have been discussing the relationship about the financial literacy and the economic situation and we concluded there is, or at least could be such relationship. At the second part, we provide a few highlights as the results from our own questionnaire survey and stress the two statements with the most positive or negative character. And finally at the last part we provide the discussion about the problem of the right time and the right extend of the education process for increasing the financial literacy.

It seems that there is some relationship between the financial literacy level (score in the survey) and the economic situation of the country – the GDP per capita and the average wage level of the each country. But there is still the question about the causality of this relationship. It can be seen as the motivation for further research of the relationship, especially in the context of causality. The main idea direction of the reasoning is to identify the primary area of supporting – increasing the financial literacy or the supporting of development of economic situation of the country. It seems that both areas should be developed in mutual symbiosis.

In the rest parts of the article there are conclusions which can be made in the suitable development of the financial literacy. This part of general literacy of the people cannot be made separately, but it should be connected with the development of the other components of the literacy in general, especially in mathematic literacy. From the data it seems it is not so important for how long the financial literacy education is available to the pupils, but the structure of financial literacy education has more significance. It seems it is the better way to separate the financial literacy education in the own subject. However the financial literacy needs the other part of the literacy as well, it seems it is the best way to start the education process as the cross-curricular subject at the younger age of the pupils and then continue with the separate financial literacy subjects with suitable practical examples according to life situation pupils are supposed to deal with.

Definitely the problematic of financial literacy provide a lot of impulses for further research in both categories, as the research of theoretical background leading to basic answers of support by state institutions and in the practical measurement of the progress of financial literacy among the pupils and the general population not only in the Czech Republic but in each country. It is our commitment to support and prepare suitable material for financial literacy education and to provide suitable financial literacy education according to our possibilities.
REFERENCES


