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ANALYSIS OF FINANCIAL LITERACY TENDENCIES WITH YOUNG PEOPLE*

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Abstract. The following skills, such as planning of personal finances, formation and diversification of savings, augmentations of personal capital, and open-mindedness to new initiatives in the entrepreneurship activities, enhance the financial sustainability of the population, and are decisive for their life quality. Every person in certain circumstances can be financially and economically active, if s/he has got such competence as financial literacy which is much more important in the course of life than the level of income or professional qualifications, because, hereafter the governing factor will be not the possession of financial instruments by the person, but skills of effective management for the achievement of one's own objectives. Knowledge of financial matters at a young age makes administration of finances much easier when becoming adult, getting education, or joining the labor market. At the same time the necessity of improving the financial literacy among young people and educating schoolchildren is more and more discussed. Taking into consideration the fact that young individuals are a significant factor for the development of national economy, substantial improvement of young people's financial literacy is essential. Young people with a high level of financial literacy would be those who could give greater contribution to state economy, so it is important to research the level of financial literacy among young people. The objective of the present research is to analyze the financial literacy of young people in Daugavpils. Methods used in the research: monographic method – theoretical description of financial literacy, graphical method – graphical representation of obtained

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results, interview method (questionnaire) – data acquisition required for the research, statistical method – analysis of statistical information, comparative method – description of the obtained data and drawing conclusions. The financial literacy of Daugavpils youth has been researched and evaluated. The results of the questionnaires show that more than half of respondents have given good estimates of their financial literacy; however, at the same time research results prove that the overall level of financial literacy is not sufficiently high.

Keywords: financial literacy; financial literacy index; financial products; young people; Daugavpils

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1. Introduction

There is a growing awareness for the need to facilitate the understanding of each individual and each household about the world of finance, its offers and possible risks, as financial services are nowadays available to everyone. Hence, it is important for each person to successfully operate his/her finances in order to gain stability in life and provide oneself and the surrounding people with welfare. Financial literacy affects not only a person's quality of life (Organisation for Economic Co-operation and Development, 2014; Latvijas Universitāte, 2017), but also sustainable economic development in general, development of entrepreneurship, and improvement of business environment (Pietrzak *et al.* 2017; Ohotina *et al.* 2018a; Fabuš, 2017; Michailova *et al.* 2017).

As concerns such seemingly obvious matters as skills of using simplest financial services, ability of being aware of one's financial limitations, changing them, and constantly striving for greater personal well-being, the notion of financial literacy is related not only to economy but also management, psychology, pedagogy and many other branches of science.

The demographic situation in Latvia is growing worse with each year. The decrease of the number of population has mostly been conditioned by the negative natural growth and emigration. The society is constantly growing older. The number of young people in Latvia has decreased in relation to the overall number of able-bodied population in the country. For this reason, taking into consideration that young people make an essential factor of national economy development, it is necessary to improve their financial literacy and entrepreneurship capacity. Young people with a high level of financial literacy would be those who could make a greater contribution to national economy, hence it is important to study the level of financial literacy among youths.

The topicality of the research is justified by the fact that, both in society and among decision makers in state institutions and enterprises, there is an on-going discussion on the improvement of the financial literacy of the population of Latvia, including young people.

The aim of the present research is studying and analysing the financial literacy of young people in Daugavpils.

The objectives of the research:

- studying theoretical sources on the notion of financial literacy and methods of financial literacy assessment;
- assessing the financial literacy index and sub-indexes of Latvian population;
- carrying out a survey of young people in Daugavpils aimed at investigating their financial literacy.

Methods used in the research: monographic method – theoretical description of financial literacy, graphical method – graphical representation of obtained results, survey method (questionnaire) – data acquisition required

for the research, statistical method – analysis of statistical information, comparative method – description of the obtained data and drawing conclusions.

2. Theoretical aspects of financial literacy

Financial literacy is defined as a complex of understanding, knowledge, skills, and attitudes necessary for making appropriate financial decisions leading to individual financial wellbeing (Organisation for Economic Co-operation and Development, 2015). Researching financial literacy is a growing area in educational and social research (Organisation for Economic Co-operation and Development, 2014). A person who understands financial issues is knowledgeable not only in the sphere of finance but economy on the whole and can apply this knowledge for promoting his/her future wellbeing and financial growth to reach private financial goals (Finanšu un kapitāla tirgus komisija, 2015).

Properly designed financial education has the potential to encourage innovation and help improve access and use of financial services (Njaramba et al., 2015). Financial literacy is relevant for sustainable development as well as business environment. Since the beginning of the 20th century, researchers from different countries have started to become interested in the economic and financial risks as factors that influence entrepreneurial environment and conditions in which the investment activity happens (Pietrzak *et al.* 2017; Kozubikova *et al.* 2017; Ohotina *et al.* 2018a; Ohotina *et al.* 2018b Jankelova *et al.* 2018; Tvaronavičienė 2018).

Effective financial management positive influence on innovation industry and entrepreneurship (Botric, & Bozic, 2017; Illmeyer *et al.*, 2017). Finance management is the most crucial element that has acquired potential magnitude in an integrated manner with the management of innovations (Laužikas *et al.*, 2017; Fabuš, 2017).

There exist several definitions of financial literacy used by various scholars and state organizations. Financial literacy is defined as knowledge, ability or skills of applying this knowledge, knowledge in an individual's viewpoint, financial conduct, and financial experience. Rather often financial literacy is defined as a totality of particular dimensions focusing on various elements of the conception of financial literacy, for instance, money literacy, price literacy, budget literacy, or debt commitment literacy (Latvijas Banka, 2018; Latvijas Komercbanku Asociācija, 2018).

Financial literacy is a complex of knowledge and skills that make it possible for the population to understand and successfully organize their financial management and take responsible decisions as to the choice of different financial services and their use, providing for their private financial stability and sustainability (Latvijas apdrošinātāju asociācija, 2018). Financial skills constitute a set of knowledge and skills necessary for the financial self-provision of people and active involvement in the market of financial products and services (Skagerlund *et al.*, 2018.). The notion of financial literacy is defined in each bibliographical source in a different way, yet all of these definitions share a common meaning. Financial literacy entails both knowledge and skills necessary for everyone to make appropriate decisions in choosing financial products as well as rational planning one's personal budget and saving for emergency situations (Slovar bankovskih terminov, 2018). Good financial literacy knowledge is the basis for good choices of best financial offers and reaching wellbeing.

To obtain a common understanding of the notion of financial literacy, partners of financial and economic education promotion in Latvia have set a strategic vision of the preferable course of the development of Latvian society in the sphere of financial literacy. Since the agreement on the goals of financial literacy strategy for Latvian population for 2014 – 2020 and signing the Memorandum of its implementation on 24 February 2014, partners for financial literacy promotion in Latvia have provided various activities, elaborated new learning materials and interactive tools. Basic competence standard in financial literacy for adults is the first step towards a united lifelong education program in financial literacy in Latvia (Finanšu un kapitāla tirgus komisija, 2014). This

document is the first financial literacy competence standard in the Baltic countries that is based on the approach of the developed countries to the issues of society financial literacy improvement.

3. Studies of the financial literacy of young people in Europe and Latvia

Many countries of the world practise a regular assessment of their population's financial literacy. In several studies, testing knowledge in mathematics is a part of the instruments of testing, as ability of making mathematical calculations is one of the elements of financial literacy. If a person has weak knowledge in mathematics, she does not get involved into financial matters or does not choose the appropriate product due to inability of comparing the offers.

Based on the definition of OECD, financial literacy is assessed by regarding all four dimensions: 1) understanding and knowledge; 2) skills; 3) beliefs and attitudes; 4) conduct. Some scholars analyze all of these dimensions, others focus on them selectively. It depends on the research scope as well as the scholars' opinion of what makes financial literacy – knowledge, skills, perception, or all of these together. (Ciemleja *et al.*, 2013a; Ciemleja *et al.*, 2013b; Ciemleja, 2014).

The research “Financial Skills in Education” (Tomášková *et al.* 2011) executed in 2011 in Czech Republic shows that financially educated population are well aware of monetary and price issues and are capable of responsible management of their personal budget. Finances are an important part of everyday life and financial knowledge is the best way of averting excessive debt commitments of the population. According to the research outcomes, school learners do not obtain wide knowledge in the sphere of finances that would help them in future (Tomášková *et al.* 2011).

The research carried out in 2015 concludes that there are two main factors that affect child's experience in financial skills – those of family and school. Firstly, parents' financial socialization has a positive effect on the children's financial skills. Secondly, the impact of schools appears in the improvement of financial skills, calculation proficiency that is a basic skill. (Tomášková *et al.* 2015).

The research produced in 2018 (Skagerlund *et al.* 2018) concludes that the driving force of financial literacy is the ability of understanding numbers and avoiding emotional attitude to numbers that affects the individual's routine involvement in making decisions related to mathematics and finances. Hence, purposeful improvement of calculating proficiency may result in raising the financial literacy level in the society. The Financial and capital market commission as the national coordinator in the sphere of financial literacy promotion in Latvia has worked out a measurement system and its outcome summarizing methodology – index of financial literacy of population in Latvia.

The index includes the outcomes of annual sociological surveys, carried out by the Financial and capital market commission, of the financial literacy of the population or the positive score characterizing the overall financial literacy level of the population as well as the necessary statistical data characterizing the financial stability of Latvian households, their growth and sustainability.

Since 2014, the Financial and capital market commission has been carrying out annual surveys of the financial literacy of Latvian population, including OECD INFE financial literacy measuring base survey, in order to compare the financial literacy level among OECD states. The Financial and capital market commission organizes and coordinates communication with the society concerning the annual changes of this index (Finanšu un kapitāla tirgus komisija, 2015).

The financial literacy index comprises the overall outcome of the annual sociological survey of the population's financial literacy or the sum of positive/negative points in seven subjects of financial literacy that characterizes the overall financial literacy level in the particular year (Finanšu un kapitāla tirgus komisija, 2015). The financial literacy index is based on scoring points for respondents' particular replies. The overall score of the index oscillates from 76 to 99.

In order to execute complex assessment of financial literacy, certain criteria are needed. In this respect, for complex assessment of financial literacy it is very handy to use the research of the Financial and capital market commission "Financial Literacy of Latvian Population" where, to determine the Latvian population's financial literacy index, the knowledge of Latvian population concerning various financial services is assessed along with their application habits. As stated above, these research works are a valuable source for a complex assessment of financial literacy, and within this assessment it is essential to compare how these sub-indexes change.

3. Analysis of the formation of financial literacy of young people in Daugavpils

Although in literature and sources one can find several methods whereby scholars have tried to measure the financial literacy level, no unanimously best solution has been confirmed yet. It gives rise to rather serious limitations due to the fact that the research outcomes based on different methodologies are not comparable. Therefore, to avoid this situation, the authors of the present research chose to measure the financial literacy level among young people in Daugavpils by such methods that allow comparing the outcomes of research produced in other time and other place to those obtained within the present study, and vice versa – make this work comparable to other similar studies. Thus, in this case, to investigate the financial literacy of young people in Daugavpils the quantitative method of survey was selected. Within it the authors surveyed young people who study in Daugavpils to specify their financial literacy level.

To determine the financial literacy of young people in Daugavpils, the authors selected the uppermost indicators of financial literacy that are based on the definition of financial literacy as stated above. The selected indicators were such that register the involvement level of Latvian population in using financial services along with their knowledge and customary conduct in relation to various financial issues. The major indicators in the survey were chosen planning, awareness, financial services, and credits. The survey did not separately include such indicators as savings or pensions that are often essential indicators in sociological surveys of financial literacy, because in the given case they do not refer to the target audience of the research, yet they were synthesized within other issues. To a certain extent the selected indicators were based on the idea that financial literacy was directly related to the individual's awareness level of the basic issues of economy, financial conceptions and terms.

As concerns planning, especially important is the question where respondents have to state how often they carry out particular finance planning activities: written records of personal income and expenditure; drafting a shopping list when going shopping; saving from their income; investing in the pension fund; taking a loan in the bank; lending money to relatives, friends, acquaintances; borrowing money from relatives, friends, acquaintances. Financial planning is an essential component that includes knowledge on the principles of planning a private person's budget, knowledge on options of balancing incomes and expenditures, etc.

Being informed in practically any issue is a decisive aspect as lack of information may lead to ignorance. It concerns also financial literacy – lack of information may create disorientation and inability to plan and successfully use one's finances. Within the questionnaire, matching the target audience of the research, the authors attempted to clarify the respondents' awareness and experience with financial products. Knowledge of the products and services offered by banks and other financial institutions is essential for understanding risks and liabilities that arise when dealing with more complex financial products, etc. It is equally important to acknowledge not only the awareness level of these financial services but also their practical use (see Fig.1).

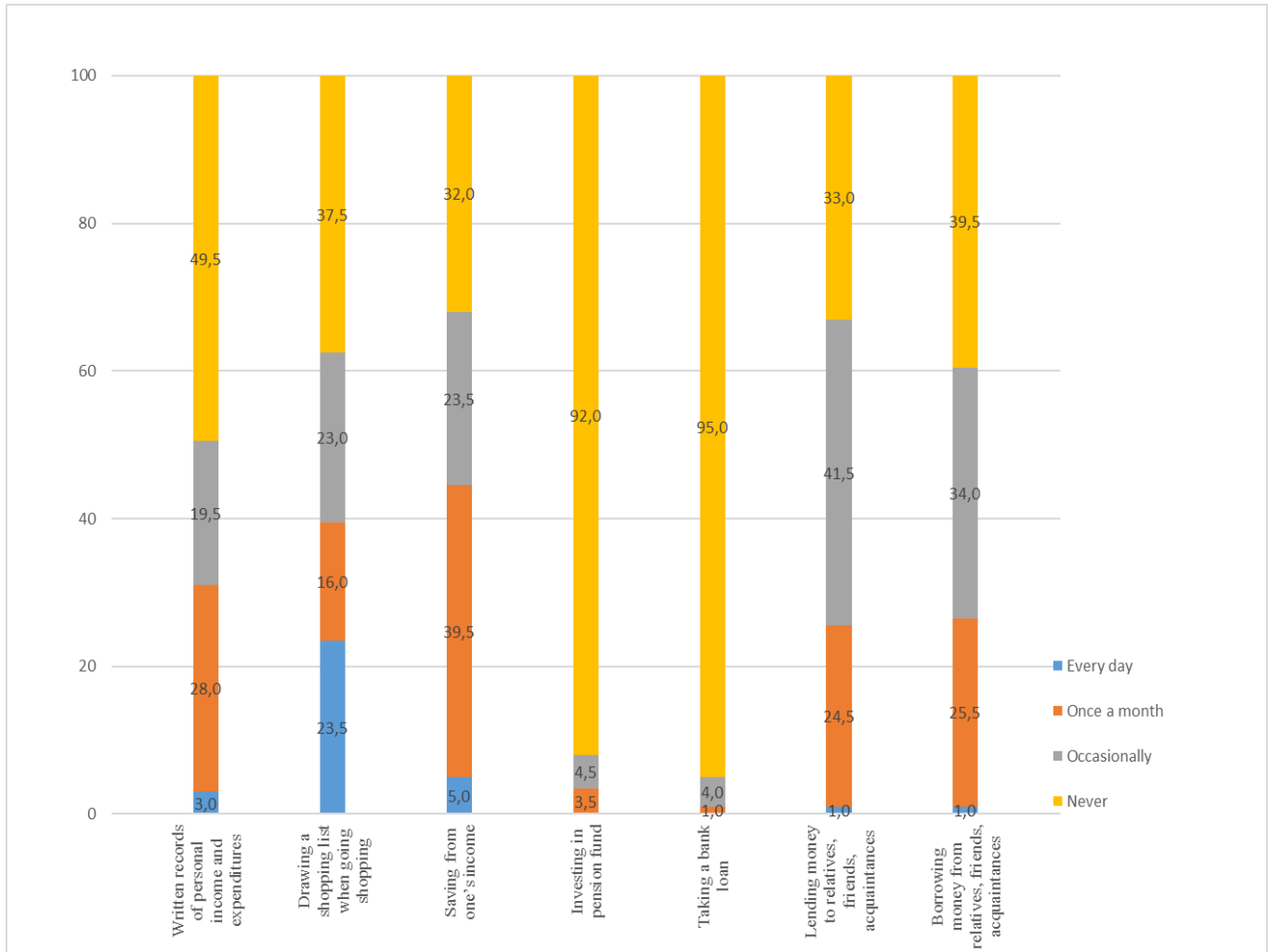


Fig.1. Activities of financial planning by young people who study in Daugavpils
(% from the total number of replies)

Source: author's calculations on the basis of the survey on young people studying in Daugavpils, 2017

Awareness of virtually any issue tends to be a decisive aspect, whereas a lack of information or awareness tends to lead to ignorance. It also refers to financial literacy – a lack of information might result in disorientation and inability to plan and make good use of one's finances. Within the framework of the questionnaire intended for the study of the target audience, there was an attempt to find out the

respondents' awareness of financial products and their interaction with them. Knowledge about products and services offered by banks and other financial institutions is crucial for the understanding of risks and commitments that arise when people have to deal with more complicated financial products, etc. It is also important to understand not only the level of awareness of these financial services, but also their practical application.

In order to study the information about financial literacy and young people's aspirations to acquire advanced knowledge in this sphere, it is necessary to find out where they most frequently obtain information about financial issues, the extent to which the necessary knowledge in the financial field is acquired at university, if young people have a desire to develop and improve their knowledge of financial literacy, as well as what additional knowledge of financial literacy they would like to acquire (see Fig.2).

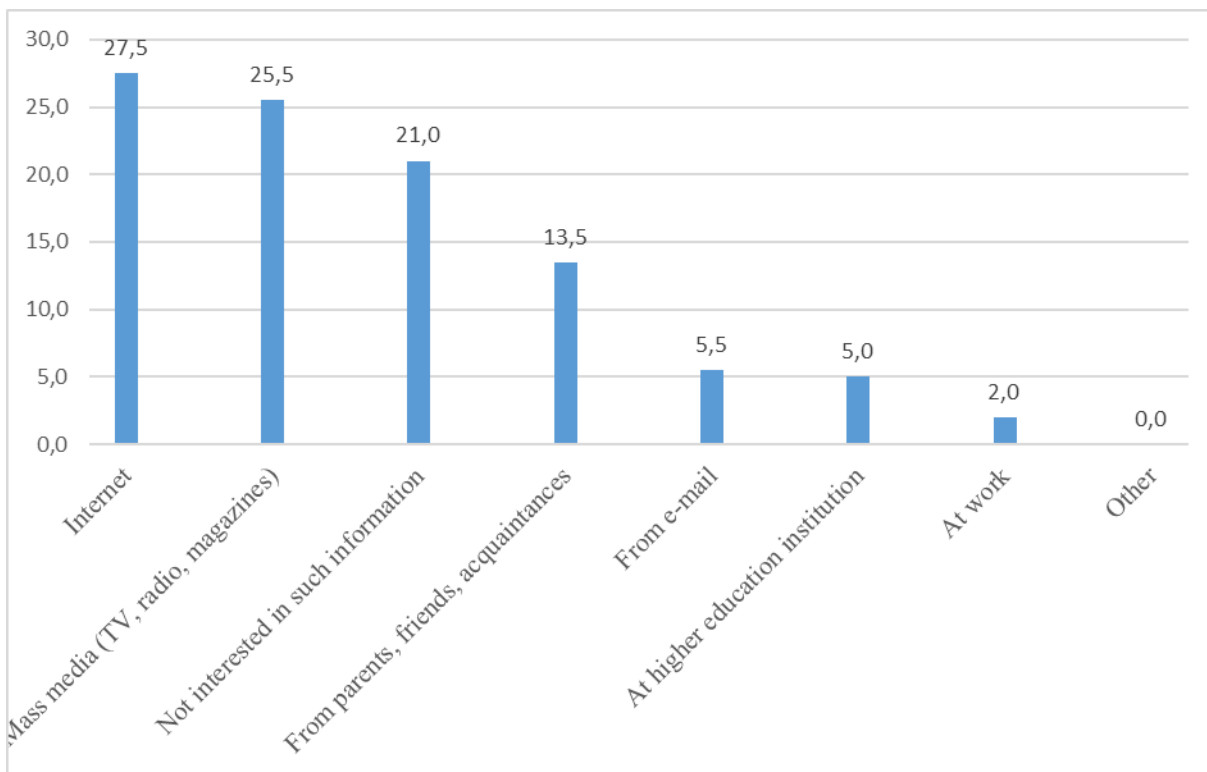


Fig.2. The way respondents obtain information on financial issues (% from the total number of replies)

Source: author's calculations on the basis of the survey on young people studying in Daugavpils, 2017

To study the situation with the circulation of information on financial literacy and young people's wish to obtain in-depth knowledge, it is necessary to clarify where the information on financial issues is most often gained, to what extent the knowledge in the sphere of finance is obtained in higher education, whether young people wish to expand their financial literacy knowledge, also what knowledge exactly they wish to learn.

These questions help bringing out the most efficient information media in financial literacy issues, how efficient is the information available at education institutions, what aspects are in need of greater awareness. Finally, these indicators help determining the level of interest of young people in financial literacy.

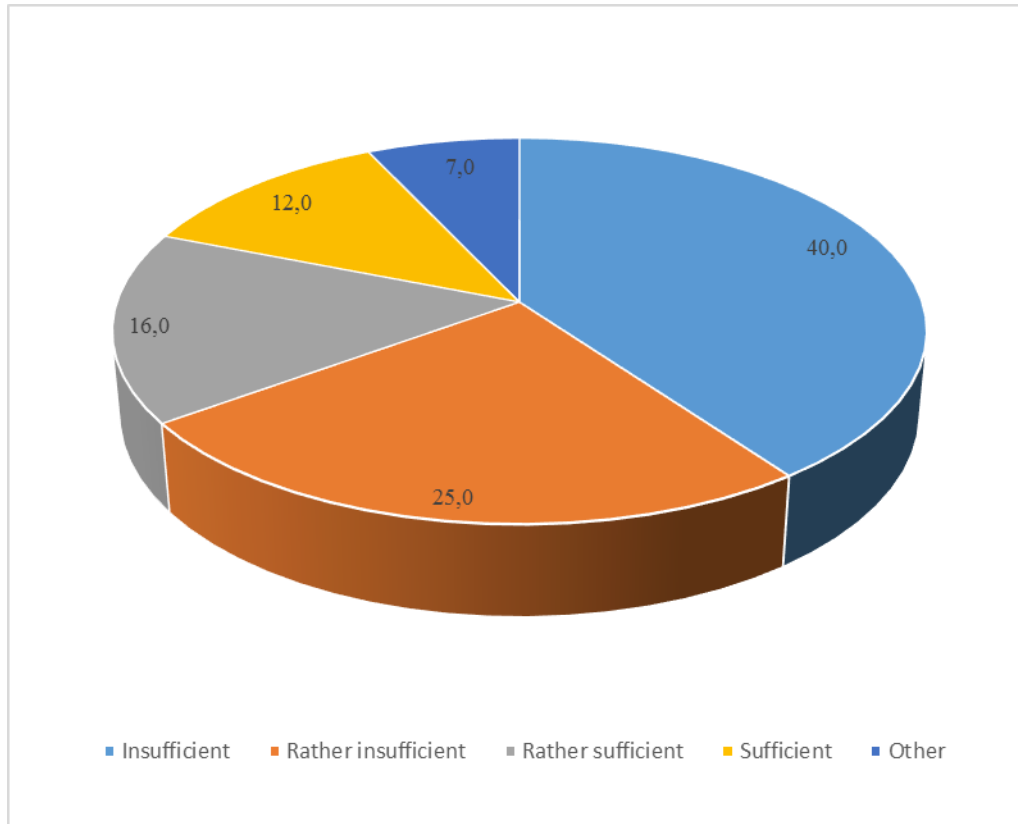


Fig.3. Students' opinion on whether higher education provides sufficient knowledge on financial issues (% from the total number of replies)
Source: author's calculations on the basis of the survey on young people studying in Daugavpils, 2017

As covering tuition fees is often an essential issue among young students, credits and credit obligations constitute another significant financial literacy indicator. Consequently, it is important not only to clarify whether respondents have concrete credit obligations but also their opinion as to what debt commitment they are ready to assume and what monthly payment they would be able to cover. As at the beginning of the survey the respondents' monthly income is specified in terms of salary, grant, benefit, questions about credit obligations reveal to what extent respondents are aware of their capability to assume credit obligations. Skill of making information-based decisions is one of the most important financial literacy components. Debt obligation literacy that characterizes an individual's or a household's knowledge and skills in credit obligation management include skills of calculating interest, understand the credit repayment schedules, etc.

In 2017 a survey of young people studying in Daugavpils was carried out. The target group or the sampling general set of the survey entails all students of Daugavpils higher education institutions and their subsidiaries aged from 18 to 25. The number of students in Daugavpils in the age group from 18 to 25 is 1711. Data concerning the number of young students were obtained from six higher education institutions and their subsidiaries that are in Daugavpils.

The sampling value is calculated by the following formula (1) (Orlovska, 2007)

$$n = \frac{t^2 * S^2 * N}{t^2 * S^2 + \Delta_x^2 * N}; \quad (1)$$

wherein:

N- the volume of the general totality,

t- probability factor,

S²- sampling dispersion,

Δ_x – permissible limiting error.

The sampling parameters of the survey are as follows:

t = 1.96, as the reliability of outcomes will make 95%,

S² = 0.25, as the part of the studied feature in the general set is not known,

Δ_x = 0.05, as the maximum permissible value of the sampling error will make 5%.

$$n = \frac{1,96^2 * 0,25 * 1711}{1,96^2 * 0,25 + 0,05^2 * 1711} = 314 \text{ students}$$

The ideal volume of sampling would be 314 respondents, yet only 200 respondents participated in the survey. Hence, the possible error will be bigger.

To assess the reliability of the obtained survey data, the probability of the limiting error is used. The limiting error is calculated mathematically on the basis of theory of probability. It ought to be taken into consideration when analyzing and interpreting the research outcomes.

The limiting error is calculated by the following formula (1.) (Orlovska, 2007):

$$\Delta w = t * \sqrt{\frac{w(1-w)}{n} * \left(1 - \frac{n}{N}\right)} \quad (2)$$

wherein:

Δ_w – limiting error,

t- coefficient, that with 95% of probability equals 1.96,

w – relative frequency in the sampling (part of sampling),

n- number of respondents,

N- volume of the general totality.

The limiting error is determined on the basis of unweighted number of respondents in the respective group and the sampling part. Using these values one may find the limits of the limiting error + / - interest with 95% probability.

Table 1. Respondent replies to the question: “How would you assess your financial literacy?” (%)

I am very well informed of the financial matters	6.5
I am well informed	58
I am poorly informed	27
I am very poorly informed	8
Other	0.5

Source: table created by the authors based on the survey outcomes

Using the data obtained from the respondents, the statistical error can be calculated (3):

$$\Delta w = 1,96 * \sqrt{\frac{0,065 (1-0,065)}{200} * (1 - \frac{200}{1711})} = 0,032 = 3,2\% \quad (3)$$

Hence, if all the surveyed young students in Daugavpils (number of respondents n=200) yield a target group making 6.5% who are very well informed of financial matters, then it may be stated with 95% probability that the statistical error is in the limits of ± 3.2 %.

According to the survey data, the young people who admitted being very well informed of financial matters are not informed of such financial products as accumulative life insurance (61.5%), 3rd pension level (46.15%), long-term credit (46.15%), short-term credit (46.15%), as well as savings account (46.15%), and mortgage credit (38.46%).

In turn, those young people who replied that they are well informed of financial matters, are not informed of the following financial products: accumulative life insurance (64.65%), long-term credit (35.34%), short-term credit (34.48%), as well as mortgage credit (31.9%) and 3rd pension level (29.3%).

The authors hold that those young people who admit being very well or well informed of financial matters ought to be aware of such basic issues as various types of credit, savings account, and accumulative life insurance. Thus, it may be concluded that the majority of young people who participated in the research have inadequately high assessment of their financial literacy, and their knowledge in this sphere is not as good as they consider it to be. The survey outcomes within the research reveal that the financial literacy knowledge of young people studying in Daugavpils needs to be improved.

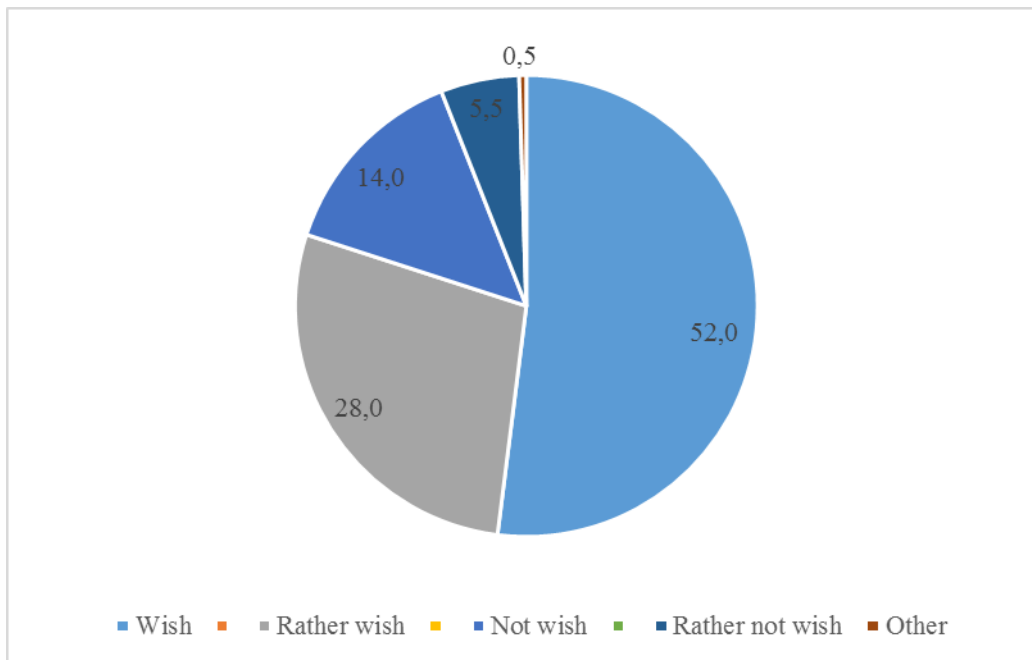


Fig.4. Respondents' wish to improve their financial literacy knowledge (% from the total number of replies)

Source: author's calculations on the basis of the survey on young people studying in Daugavpils, 2017

In each matter, the individual's wish and motivation for improvement and gaining new knowledge are of primary importance. Hence, the assessment of the respondents' wish for improving their financial literacy knowledge reveals that only 52% of them wish to improve their knowledge, 28% replied that they would rather wish to

improve their knowledge, whereas 14% replied that they would not wish to improve their knowledge in financial matters. As it is stated that 21% of respondents are not interested in financial matters at all, such outcomes are natural. It may be assumed that, among those 14% who do not wish to improve their financial literacy knowledge, there are such persons who already hold very good knowledge, yet the question about the use of various financial instruments revealed that this knowledge for a large part of respondents was insufficient. In this respect, the problematic aspect might be not so much the lack of information as lack of interest in learning more about these issues and lack of students' initiative (see Fig.4).

Conclusions

Young people who study need more awareness of various financial instruments that are developing fast under the present-day conditions of changing market, as its lack aggravates decision-making.

Education policy makers along with higher education institutions need to unite for elaborating a common, coordinated, and many-sided action for the implementation of financial literacy promotion measures.

Higher education institutions need to cooperate with public opinion research agencies that would help locating the financial aspects wherein young people lack information most of all, thus working out new initiatives that would not be of general character but oriented at concrete financial aspects.

The Ministry of Education and Science, the Ministry of Finance as well as local governments should improve their cooperation in order to ensure accessibility of additional information about financial literacy. The Ministry of Education and Science could design the standard of financial literacy for school learners, indicating the competences in the field of finance they need to obtain. The Ministry of Education and Science in cooperation with Education administrations could provide teachers with methodological support for educating learners about financial literacy. Education administrations could ensure e-support in learning and acquisition of knowledge in the field of finances. The Ministry of Finance in cooperation with the Ministry of Education and Science could organize financial literacy contests for young people.

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