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# Economic aspects of financial literacy in the context of sustainable management

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The paper is focused on financial literacy in the context of teaching sustainable management to young people (e.g. increasing the engagement of youth in fostering the United Nations' Sustainable Development Goals (SFGs)) represented by the university students. The main aim of this paper was to evaluate the attitudes of young people to the management of funds and obtaining the knowledge required for using financial tools and instruments. When it comes to shaping up the sustainable behavior of individuals, financial literacy is gaining a special importance in in this process. The questionnaire survey was used as a tool for collecting the primary data used for feeding the empirical model used in this research. A sample of 1,437 randomly selected respondents took part in our own questionnaire survey prepared and carried out by the research team. Participants of the survey were young people represented by the students of the three selected random universities from the Czech Republic. First, the area of the overview of the respondents' financial resources was monitored. In this case, 97.28% of respondents answered "yes" or "rather yes". In terms of monitoring personal income and expenses, i.e., in the question of whether respondents created their own budget, 81.77% of respondents in question answered «yes,» most often indicating that were were using information and communication technologies for these purposes. All in all, our results confirm that the level of any individual's financial literacy has an impact on this individual's sustainable management skills. Furthermore, it becomes apparent that financial literacy within the context of sustainable management plays a crucial role in the social and economic development of any society. Our results might be informative and useful for both the policymakers and researchers working in the fields of promoting sustainable behavior and financial literacy through introducing effective sustainable education and boosting efficient management skills.

**Keywords:** behavior; sustainable management; financial literacy; finance; student; university

JEL codes: D10, L66

# Экономические аспекты финансовой грамотности в контексте устойчивого управления

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Наша статья посвящена финансовой грамотности в контексте обучения молодых людей устойчивому управлению (например, расширение участия молодежи в продвижении Целей устойчивого развития Организации Объединенных Наций) в лице студентов университетов. Основная цель данной работы состояла в том, чтобы оценить отношение молодых людей к управлению средствами и получению знаний, необходимых для использования финансовых механизмов и инструментов. Когда речь идет о формировании устойчивого поведения личности, особое значение в этом процессе приобретает финансовая грамотность. Анкетный опрос был применен в качестве инструмента для сбора первичных данных, которые использованы для подачи эмпирической модели, задействованной в этом исследовании. Выборка из 1437 случайно выбранных респондентов приняла участие в нашем собственном анкетном опросе, подготовленном и проведенном исследовательской группой. Участниками опроса были молодые люди, представленные студентами трех выбранных случайным образом университетов из Чешской Республики. Во-первых, отслеживалась область обзора финансовых ресурсов респондентов. При этом 97,28% опрошенных ответили «да» или «скорее да». В части контроля личных доходов и расходов, т.е. на вопрос о том, составляют ли респонденты собственный бюджет, 81,77% опрошенных ответили «да», и чаще всего это указывает на то, что для данных целей использовались информационные и коммуникационные технологии. В целом наши результаты подтверждают, что уровень финансовой грамотности любого человека влияет на его устойчивые управленческие навыки. Кроме того, становится очевидным, что финансовая грамотность в контекст устойчивого управления играет решающую роль в социальном и экономическом развитии любого общества. Наши результаты могут быть информативными и полезными как для политиков, так и для исследователей, работающих в области продвижения устойчивого поведения и финансовой грамотности путем внедрения эффективного устойчивого образования и повышения эффективные управленческие навыки.

**Ключевые слова:** поведение; устойчивое управление; финансовая грамотность; финансы; студент; университет

#### Introduction

The concept of sustainable development is traditionally associated with the environmental issues and concerns. However, the social and economic dimensions also constitute essential parts of the sustainable development, especially with regard to the United Nations (UN) Sustainable Development Goals (SDGs) (Agbedahin, 2019; Lu et al., 2019; Chebotareva et al., 2020; Čábelková et al., 2022). Taking this into the account, the emphasis is placed on the corporate responsibility (Bihari and Pradhan, 2011; Décamps et al., 2017; Hohnen and Potts, 2007). Within the framework of sustainable development, it is possible to perceive financial literacy from both an individual and a societal perspective (Kumari and Harikrishnan, 2021). The economic shape of the whole society is a reflection of the economic level of each individual, hence the level of the financial literacy posessed by each individual contributes to state of the economy as a whole (Popescu and Popescu, 2019; Ye and Kalathunga, 2019).

With the growing possibilities in all areas of human lives, the demand for knowledge increases, and so doesthe complexity of decision-making (Leumann and Aprea, 2015). Having some level of understanding how financial skills work and therefore posessing the required financial literacy is clearly a part of the responsible functioning and operation of all individuals in the countries with advanced market economies. This is becoming increasingly difficult, as nowadays in the world full of information resources and numerous decision possibilities, financial literacy is progressively emphasized, especially in the everyday lives of the individuals (Lusardi and Mitchell, 2014; Čábelková and Strielkowski, 2013; Lusardi et al., 2010).

Given the above, there is an growing emphasis on the responsibility of the individual for her or his decisions. People who have adequate financial knowledge and skills can make optimal financial decisions and work effectively with financial service providers (Remund, 2010). They are also more likely to achieve their financial goals and improve their standards of living (Andriani and Nugraha, 2018). At the same time, they can also deal with financial risks and other potential negative effects. Thus, they can support the economic growth and wellbeing of the state (Kaara and Kugu, 2019; Potrich and Vieira, 2018). Every person's financial situation is affected by this person's management of assets, both financial, movable, and immovable. The ability of sound financial management represents an important condition for good prosperity (Yuesti et al., 2020).

In the same time, the share of university-educated people is growing in the young generation in all countries around the world (most notably in Western market economies). It can be assumed that after entering the productive period of their lives, there will be precisely these persons who are going to occupy the key positions in both private and public sectors and would influence the shape of the whole society with their attitudes and decisions. Financial education for everyone and at any age is therefore very important. This is especially true for the young generation, for whom education in the fields of finance (most notably in the newly emerging fields such as fintech and cryptocurrencies) and financial literacy are very important (Blue and Grootenboer, 2019). Hence, there is a pressing need for the research of the young generation: scientists want to understand what their considerations and decisions about financial resources might be, whether they know the most important concepts of finance, or how their real knowledge of basic terms and quantities can be measured (Caplinska and Ohotina, 2019).

Concerning the sustainable behavior of individuals, financial literacy is gaining importance in all of its aspects. The ways how individuals manage their financial assets and use financial tools and products affects the overall sustainable development of the whole society (Krechovská, 2015). Banking and finance, financial products and flows represent one of the essential elements in the modern society. The demand for financial literacy, which is a part of functional literacy, is constantly surging throughout the society (Huston, 2010).

The requirements for financial literacy are growing significantly together with the offer of financial instruments on the financial markets, with their complexity, but also with their ease of use in practice (just to recall the recent rise of fintech) (Opletalová and Kvintová, 2010; Pavelková et al., 2012). The dynamic development of the financial environment makes it difficult for the average citizen to cope with these changes and make optimal decisions due to the lack of tools and knowledge of basic financial concepts (Davies, 2015). This can lead to the decision-making errors in

the critical economic and financial decisions people face throughout their lives (Arceo-Gómez and Villagómez, 2017; Zait and Bertea, 2014). These facts are causing pressure and lead to the growing demands to boost the level of financial literacy (Sarnovics et al., 2016). Bryant (2013) explains this as follows: "Financial literacy is essential to living a successful and independent life, promoting economic growth, and sustaining it." Table 1 shows the main drivers for financial literacy in the context of tackling climate changes and global warming.

Table 1
Main drivers for financial literacy within the sustainability concept

Complexity of individual needs	Compexity of financial products
Growing instabilty of the working life of individuals	New distributional channels
Decrease of social security	Deregulation of the financial markets
Increasing personal responsibility	Wider range of financial products
Increasing prosperity	Increasing amount of information
Increasing indebtedness	Increasing dynamics in the development of the
Increasing life expectancy	new products

Source: Habschick et al. (2007)

The issue of financial literacy is currently a much-discussed concept among the experts and the general public. Financial illiteracy can result in the problems it causes (ignorance of basic concepts means that an individual is unable to orientate herself or himself within the products on the financial market as well as this market's conditions, indebtedness, execution proceedings, etc.). All this can cause major financial problems that can lead to a crisis that according to Dinwoodie (2010) is caused by lack of knowledge. One of the ways to influence the behavior and habits for individuals and society as a whole in the area of the financial management in the right direction is to ensure a rise of the financial literacy of the young generation (Cole et al., 2014; Ševčík, 2017). Krechovská (2015) concludes that financial literacy is the essential knowledge for the formation of the sustainable behavior of every human being. The risks arising from financial illiteracy and their connection with other social problems are presented in Figure 1.

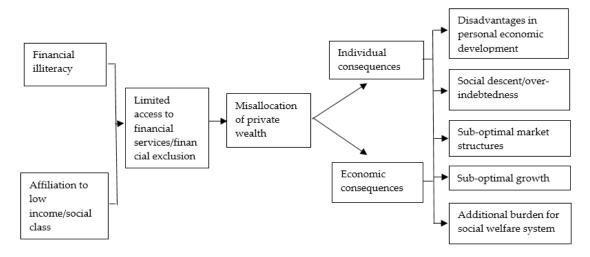
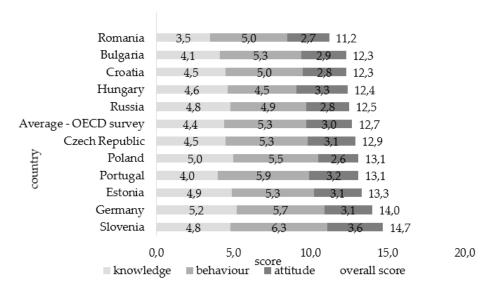


Fig. 1. Risk deriving from finanicial illiteracy

Source: Habschick, M., Seidl, B., Evers, J. (2007). Survey of financial literacy schemes in the EU27. Financial Services Evers and Jung, Research and Consulting 2007. http://tk.eversjung.de/www/downloads/report\_survey\_2007\_en.pdf (accessed 12 November 2021)

Figure 1 shows that all the risks and challenges posed by the financial illiteracy of the population exhibit the need to manage own resources more responsibly, in a more sophisticated way, and to a greater extent as well as more efficiently, which requires the necessary skills and knowledge, especially for the current generation of young people<sup>1</sup>.



**Fig. 2.** Financial knowledge, attitudes and behaviour (average score)

Source: own elaboration, 2022 based on OECD/INFE (2020). International survey of adult financial literacy. https://www.oecd.org/financial/education/oecd-infe-2020-international-survey-of-adult-financial-literacy.pdf (accessed 10 September 2021)

As Figure 2 illustrates, the OECD average in 2020 was 12.7 points out of 20 in total. Hungary, Romania, and Croatia, for example, are below this average. Germany achieved the highest score and it was followed by Estonia and Poland<sup>2</sup>.

Financial literacy covers various areas of knowledge. Cash literacy is the competence necessary for the management (and transactions) of cash and non-cash financial assets. Furthermore, the management of tools designed for this purpose (e.g. current account, payment instruments, etc.) is also required. Price literacy is represented by the competencies necessary for understanding price mechanisms and inflation (MFČR, 2021). Budget literacy is represented by the competencies necessary for the management of one's personal or family budget. Budget literacy also includes the ability to manage various life situations from a financial point of view (Syrový and Tyl, 2014). With regard to thee above, the importance of personal and family financial planning is unquestionable (Málek et al., 2010). Attitudes towards finance and achieved financial literacy at a young age are valid tools for making optimal financial decisions that can be intertwined throughout one's life (Calcagno and Monticone, 2015; Jappelli and Padula, 2013). Belás et al. (2016) state that management and an overview of one's finances create preconditions for a wealthy and prosperous life, not only in the field of finance. This fact is also pointed out by da Silva et al. (2017) who report that the inability to monitor and manage their revenues and expenditures can cause economic and social problems. Thus, in the empirical part of this paper, the attention is focused on an overview and monitoring of personal income and spending as a part of sustainable management.

Habschick, M., Seidl, B., Evers, J. (2007). Survey of financial literacy schemes in the EU27. Financial Services Evers and Jung, Research and Consulting 2007. http://tk.eversjung.de/www/downloads/report\_survey\_2007\_en.pdf (accessed 12 November 2021)

OECD/INFE (2020). International survey of adult financial literacy. https://www.oecd.org/financial/education/oecd-infe-2020-international-survey-of-adult-financial-literacy.pdf (accessed 10 September 2021)

# Research objective and methodology

The paper's theoretical framework was developed by analysing secondary sources drawn from books, scholarly articles, relevant Internet sources, and professional literature using the synthesis of knowledge.

Our primary research on financial literacy was carried out by the means of our own survey, with the actual method used being a questionnaire survey. Respondents of this survey were students (Bachelor's and Master's degree) at the three universities in the Czech Republic: University of South Bohemia in České Budějovice (USB), Mendel University in Brno (MEU), and the Czech University of Life Sciences in Prague (CZU). A total of 1.437 randomly selected respondents took part in the questionnaire survey. The respondents were full-time students at three selected universities in the Czech Republic focused, among other things, on agriculture, forestry, as well as veterinary science. At each university, the researchers approached both respondents studying at the faculties focused on economics and respondents studying at faculties not specializing in the fieeld economics. Basic sociodemographic characteristics of respondents are depicted in Table 2 that follows.

Basic sociodemographic characteristics of respondents (in %)

Gender	Male	42.52	100	
Gender	Female	57.48	100	
	Jihočeská univerzita, České Budějovice (JCU)	18.02		
University	Česká zemědělská univerzita v Praze (CZU) 59.29		100	
	Mendelova univerzita, Brno (MEU)	22.69		
Lovel of study	Bachelor's degree (BD)	66.32	100	
Level of study	Master's degree (MD)	33.68	100	
	Economic studies (ECO)	63.40		
Field of study	Noneconomic studies (NON-ECO)	36.60	100	

Source: own elaboration, 2022

As a part of descriptive statistics, absolute and relative frequencies were used. Furthermore, we also employed the contingency tables. The type of contingency table is determined by the number of rows r and the number of columns s, and it represents a measurement of the overall dissimilarity (Hindls et al., 2007):

$$m_{ij} = \frac{n_i \cdot n_j}{n} \tag{1}$$

Table 2

$$\chi^2 = \sum \frac{(frequency\ observed - frequency\ expected)^2}{frequency\ expected} \tag{2}$$

$$\chi^2 = \frac{\sum_{i=1}^r \sum_{j=1}^s (n_{ij} - m_{ij})^2}{m_{ij}}.$$
 (3)

I and j are the indexes of rows and columns, m are observed marginal frequencies,  $n_i$  and  $n_j$  are marginal totals, n is a grand total of observations,  $n_{ij}$  and  $m_{ji}$  are expected frequencies. The calculated value is compared to the critical value of a chi-square distribution with (r-1)(s-1) degrees of freedom at the level of significance of 0.05. The hypothesis is rejected if it is larger than the table value. This test is valid asymptotically, and thus it can only be applied if there is a sufficient number

of observations. All expected values ought to be higher than one (Hendl, 2015). At the same time, the table should not contain more than 20% theoretical incidence rates (frequencies) of less than 5. Where zero values occur in any of the fields, we proceed to analyze a derived table created by merging a small number of categories. Cramér's V was used to determine the degree of association between the variables. Additionally, the method of adjusted residuals was applied.

The data analysis was focused on the following tested hypotheses:

- H01: An overview of how much money a respondent now has available does not depend on gender.
- H02: An overview of how much money a respondent now has available does not depend on universities.
- H03: The overview of how much money the respondent now has available does not depend on the field of the faculty.
- H04: The overview of how much money the respondent now has available does not depend on the level of study.
- H05: Whether the respondent monitors his personal income and expenses (creates a budget) does not depend on gender.
- H06: Whether the respondent monitors his personal income and expenses (creates a budget) does not depend on the type of university.
- H07: Whether the respondent monitors his personal income and expenses (creates a budget) does not depend on the field of the faculty.
- H08: Whether the respondent monitors his personal income and expenses (creates a budget) does not depend on the level of study.
- H09: The method of monitoring personal income and expenditure (budgeting) does not depend on gender.
- H010: The method of monitoring personal income and expenses (budgeting) does not depend on the university.
- H011: The method of monitoring personal income and expenses (budgeting) does not depend on the field of the faculty.
- H012: The method of monitoring personal income and expenses (budgeting) does not depend on the level of study.

# Results and discussion

The first question we asked respondents was whether they had an overview of how much money they could manage (in total in cash, on a current account, in a savings account, savings, etc.). In this case, 77.66% (1,116) respondents answered "yes". They expressed that they certainly had such an overview. Then, 19.62% (282) of respondents said: "rather yes". Only 2.71% (39) of respondents stated that they did not have such an overview (answer "rather not" and "no") – the merging of these types of answers was performed due to the small number of one type of answer. Null hypotheses are shown in Table 3 that follows.

Table 3 An overview of the finances available to the respondent in relation to the variables

Number of hyp.	Wording of hypotheses	χ2	Critical value	HO can be rejected	Cramer's V
H01	An overview of how much money a respondent had at her/his availability does not depend on gender	6,82	7,81	-	_
H02	An overview of how much money a respondent had did not depend on universities	36,77	9,49	х	0,11
H03	The overview of how much money the respondent had did not depend on the field of the faculty	1,46	5,99	_	_
H04	The overview of how much money the respondent had did not depend on the level of study	0,55	7,81	_	_

Source: own elaboration, 2022

As the Table 4 listing the overview of hypotheses shows, the dependence in relation to one variable (university) was proved. The answers are shown in Table 4.

Table 4 An overview of the respondent about how much money had in relation to the university

	•	Yes	Rath	ner yes	Rathe	er no, no	To	otal
University / response	Absolute frequen- cies	Relative frequencies within uni- versity	Absolute frequen- cies	Relative frequencies within uni- versity	Absolute frequen- cies	Relative frequencies within uni- versity	Absolute frequen- cies	Relative frequencies within uni- versity
JCU	176	67,95 %	70	27,03 %	13	5,02 %	259	100 %
MEU	234	71,78 %	79	24,23 %	13	3,99 %	326	100 %
CZU	706	82,86 %	133	15,61 %	13	1,53 %	852	100 %
Total	1 116	77,67 %	282	19,63 %	39	2,70 %	1 437	100 %
	Value of adjusted residuals /sign notation			Sta	tistics			
JCU	-4,14		3,31	+++	2,52	+	χ2 > C	rit. value
MEU	-2,90		2,38	+	1,61	0	36,77 > 9,49	
CZU	5,71	+++	-4,62		-3,35		30,77	7 3,43

Source: own elaboration, 2022

The results in Table 4 show that the null hypothesis can be rejected ( $\chi 2$  test is higher than the critical value). The statistic Cramer's V is at the level of 0.11 and thus corresponds to a weak dependence. The difference between theoretical and empirical frequencies was verified using adjusted residues, which are supplemented by the sign notation. The difference between the frequencies was demonstrated at a significance level of 0.001 in the answers "yes" and "rather yes".

In terms of the analysis of personal income and expenditure, the question of whether respondents created their own budget, 81.77% (1,175) of people answered "yes." Respondents who did not record their income and expenditure and therefore did not create their budget were approximately one-fifth of the total number of survey participants, namely 18.23% (262 persons). Table 5 shows the tested hypotheses.

Table 5
Monitoring of revenue and expenditure (budgeting) in relation to variables

Number of hyp.	Wording of hypotheses	χ2	Critical value	HO can be rejected	Cramer's V
H05	Whether the respondent monitors her/his personal income and expenses (creates a budget) does not depend on gender	1,41	3,84	I	-
H06	Whether the respondent monitors her/his personal income and expenses (creates a budget) does not depend on the type of university	1,96	5,99	-	-
H07	Whether the respondent monitors her/his personal income and expenses (creates a budget) does not depend on the field of the faculty	4,47	3,84	X	0,07
H08	Whether the respondent monitors her/his personal income and expenses (creates a budget) does not depend on the level of study	1,99	3,84	-	-

Source: own elaboration, 2022

The tested hypotheses showed the dependence on only one variable. The dependence is very low (0.07). Table 6 lists the answers in a greater detail.

	Y	Yes No			To	tal
Specialization of the faculty / response	Absolute frequencies	Relative frequencies within faculties	Absolute frequencies	Relative frequencies within faculties	Absolute frequencies	Relative frequencies within faculties
ECO	730	80,13 %	181	19,87 %	911	100 %
NON-ECO	445	84,60 %	81	15,40 %	526	100 %
Total	1 175	81,77 %	262	18,23 %	1 437	100 %
	Value	of adjusted res	siduals/sign notation		Stat	istics
ECO	-2,11	_	2,11	+	χ2> Crit	ric. value
NON-ECO	2,11	+	-2,11	_	4,47	> 3,84

Source: own elaboration, 2022

The results from Table 6 show that the null hypothesis can be rejected ( $\chi 2$  test is higher than the critical value). The value of Cramer's V is at the level of 0.06 and thus corresponds to a very weak dependence. The adjusted residue method complements the results of specific responses. The sign notation shows that the monitoring of income and expenditure, i.e., the choice of "yes" (84.60%), was more often chosen by the students of the non-economically oriented faculties (i.e. the people who are less educated in the field of finance).

Chmelíková (2015) drew the same conclusion from a similar study, albeit with a lesser extent. According to her, n comparison with the research of financial literacy in the general adult population in the Czech Republic, university students are more responsible for creating their overview of income and expenditure.

Following the above question, it was also found out how respondents monitored their income and expenses. In the next question, therefore, only those respondents who stated that they monitored their income and expenses and created their own budget provided a meaningful response (there were 1,175 respondents in total). Table 7 shows the results of the null tested hypotheses.

Table 7
Method of monitoring income and expenditure in relation to the variables

Number of hyp.	Wording of hypotheses	χ2	Critical value	HO can be rejected	Cramer's V
H09	The method of monitoring personal income and expenditure (budgeting) does not depend on gender	14,66	5,99	Х	0,11
H010	The method of monitoring personal income and expenses (budgeting) does not depend on the university	10,50	9,49	Х	0,10
H011	The method of monitoring personal income and expenses (budgeting) does not depend on the faculty	1,35	7,81	_	-
H012	The method of monitoring personal income and expenses (budgeting) does not depend on the level of study	0,67	7,81	_	-

Source: own elaboration, 2022

The table with an overview of hypotheses shows that the method of monitoring personal income and expenditure and thus budgeting depends on two monitored variables. Tables 8 and 9 show more detailed answers. Our findings reveal that the most common option for respondents to monitor income and expenses is the electronic format (Excel, applications for the budget on a mobile phone, as well as other tools). In total, 68.94% (810) of respondents chose to monitor income electronically (using information and communication tools and technologies). Another standard answer was "I imagine it myself" (the idea of the respondents), which was chosen by 23.23% (273) of respondents. The least used option for monitoring income and expenditure was the paper form ("on paper" option), which was mentioned by only 7.83% (92) of respondents.

Table 8 Method of monitoring income and expenditure in relation to the respondent's gender

	Electro	nic form		e idea of the Paper form		Paper form		tal
Gender/ response	Absolute frequen- cies	Relative frequen- cies with- in gender	Absolute frequen- cies	Relative frequen- cies with- in gender	Absolute frequen- cies	Relative frequen- cies with- in gender	Absolute frequen- cies	Relative frequen- cies with- in gender
Female	468	68,42 %	146	21,35 %	70	10,23 %	684	100 %
Male	342	69,65 %	127	25,87 %	22	4,48 %	491	100 %
Total	810	68,94 %	273	23,23 %	92	7,83 %	1437	100 %
	Value of adjusted residuals /sign notation					Stat	istics	
Female	-0,45	0	-1,81	0	3,62	+++	χ2 > Crit	ric. value
Male	0,45	0	1,81	0	-3,62		14,66	> 5,99

Source: own results

The critical value (at the significance level of 0.05) is lower than statistic of chi-square test which means that the null hypothesis can be rejected. Thus, the relationship between the method of monitoring the personal income and expenditure, as well as the gender of the respondent was proved. The value of Cramer's V is at the level of 0.11 and thus corresponds to a weak dependence.

The dependence of the method of monitoring income and expenditure was also reflected in relation to another variable. The structure of the answers is provided in Table 9.

Table 9

Method of monitoring income and expenditure in relation to the university

	Electro	nic form		a of the ndents	Paper form		Paper form Total		tal
University / response	Absolute frequen- cies	Relative frequen- cies within university	Absolute frequen- cies	Relative frequen- cies within university	Absolute frequen- cies	Relative frequen- cies within university	Absolute frequen- cies	Relative frequen- cies within university	
JCU	146	71,57 %	47	23,04 %	11	5,39 %	204	100 %	
MEU	166	61,48 %	76	28,15 %	28	10,37 %	270	100 %	
CZU	498	71,04 %	150	21,40 %	53	7,56 %	701	100 %	
Total	810	68,94 %	273	23,23 %	92	7,83 %	1 175	100 %	
	Value of adjusted residuals /sign notation					Stat	istics		
JCU	0,89	0	-0,07	0	-1,43	0	χ2 > Critic. value		
MEU	-3,02		2,18	+	1,77	0	10,50 > 9,49		
CZU	1,90	0	-1,81	0	-0,42	0			

Source: own results

Critical value (at the significance level of 0.05) is lower than statistic of chi-square test. The value of Cramer's V is at the level of 0.10 and therefore shows a very weak dependence. This was confirmed by an analysis using adjusted residues, which indicates that the theoretical and empirical frequencies are indeed small to a small extent. The result is also supplemented by the results of adjusted residues, which indicate a difference especially for students studying MEU in relation to the electronic monitoring of their financial situation, where this variant was chosen by MEU students (61.48%) less than respondents two other universities.

Many countries with advanced economies currently emphasize the financial literacy of the population (especially young adults and youth). This gradually leads to the collection of relevant data reflecting the actual state of financial literacy (and all section of financial literacy) of individual population groups (generations) in order to find potential for improvement (Goyal and Kumar, 2020; Kubák, et al., 2018). So far, the financial literacy of university students and its evaluation appears to be a less widespread topic (Gerrans and Heaney, 2016; Philippas and Avdoulas, 2019).

For the participants of our questionnaire survey, the most common way of creating and monitoring their expenses and earnings was the electronic processing, while in the general population, keeping it in the written form predominated<sup>3</sup>. The difference is probably due to the age difference due to the fact that the respondents to the survey were young adults - university students who make extensive use of modern technologies, which they consider to be an integral part of their lives (Schmidt et al., 2011). Here, we have to note that a large body of research focuses on financial literacy in the context of knowledge and gender and notes the dependencies in these variables (Bottazzi and Lusardi, 2020; Hsu et al., 2021). The most frequently mentioned reason why the people lack an overview of their income and expenses, was a lack of interest in this activity for men and a lack of time for women. It is interesting that Chmelíková (2015) also came to the same conclusions in her research. In addition, Kubák et al., (2018) and Peng et al., (2007) believe that studying economics improves financial literacy.

#### **Conclusions**

Overall, the main goal of this paper was to assess the financial literacy of young people within the context of increasing their awareness of sustainable management that can be fostered via the proper sustainable education. We wanted to see the differences of how young people manage their finances compared to the older people and how their decisions can be shaped by the sustainable education and the principles of sustainability. It turns our that young people (represented in our sample by the selection of students from the three large universities in the Czech Republic) tend to be keener on using electronic records and information and communication technologies when managing their incomes and expenses (thence, opting out for a more "greener", less energy-efficient, and a more environmentally friendly approach).

In the area of financial management, respondents were first asked if they had an overview of how much money they had at their disposal (total cash, current account, savings account, savings, etc.). 77.66% (1,116) of the respondents answered "yes," i.e., they certainly had such an overview. 19.62% (282) of respondents said "rather yes," and only 2.71% (39) of respondents stated that they did not have such an overview (answer "rather no" and "no"). In this case, the dependence on the type of school studied was proved (the unequivocal answer "yes" prevailed among the students from the Czech University of Life Sciences, Prague). In terms of monitoring personal income and expenditure, i.e., in the question of whether respondents create their own budget, 81.77% (1,175) of people answered "yes." The tested hypotheses showed dependence on only one variable (field of faculty). Results show that the method of monitoring personal income and expenditure and thus budgeting depends on two monitored variables (university and field of faculty). The electronic method (Excel spreadsheet, smartphone) was the most often used one to monitor the incomes and expenses (68.94%). The paper form was the one least used (7.83%).

<sup>3</sup> PPM factum research – Výsledky měření finanční gramotnosti 2015, Ministerstvo finanční ČR: Proč se finančně vzdělávať? https://www.psfv.cz/cs/pro-odborniky/mereni-urovne-financni-gramotnosti/2015/mereni-urovne-financni-gramotnosti-2784 (accessed 5 November 2021)

Therefore, one can conclude that in all its aspects, financial literacy is an indispensable part of everyone's life. This is the basic knowledge that creates the space for good decision-making, financial management, and, last but not least, can lead to the prosperity of the entire economy. Our results reveal that a certain level of financial literacy is an essential element of sustainable financial management.

# References

- Agbedahin, A. (2019). Sustainable development, education for sustainable development, and the 2030 Agenda for Sustainable Development: Emergence, efficacy, eminence, and future. Sustainable Development 27(4), 669–680. DOI: 10.1002/sd.1931
- Andriani, D., Nugraha, N. (2018). Spending habits and financial literacy based on gender on employees. *IOP Conf. Ser.: Mater. Sci. Eng.*, 407. DOI: 10.1088/1757-899X/407/1/012089
- Arceo-Gómez, E., Villagómez, F. (2017). Financial literacy among Mexican high school teenagers. *International Review of Economics Education* **24**, 1–17. DOI: 10.1016/j.iree.2016.10.001
- Belás, J., Nguyen, A., Smrčka, L., Kolembus, J., Cipovová, E. (2016). Financial literacy of secondary school students. Case study from the Czech Republic and Slovakia. *Economics & Sociology* **9**, 191–206. DOI: 10.14254/2071-789X.2016/9-4/12
- Bihari, S., Pradhan, S. (2011). CSR and performance: The story of banks in India. *Journal of Transnational Management* **16**(1), 20–35. DOI: 10.1080/15475778.2011.549807
- Blue, L., Grootenboer, P. (2019). A praxis approach to financial literacy education. *Journal of Curriculum Studies* **51**, 755–770. DOI: 10.1080/00220272.2019.1650115
- Bottazzi, L., Lusardi, A. (2020). Stereotypes in financial literacy: Evidence from PISA. *Journal of Corporate Finance* **71**, 101831. DOI: 10.1016/j.jcorpfin.2020.101831
- Bryant, J. (2013). Economic growth and sustainability rooted in financial literacy. In: Madhavan, G., Oakley, B., Green, D., Koon, D., Low, P. (eds.) *Practicing Sustainability*. Springer New York, pp. 95–99.
- Čábelková, I., Smutka, L., Strielkowski, W. (2022). Public support for sustainable development and environmental policy: A case of the Czech Republic. *Sustainable Development* **30**(1), 110–126. DOI: 10.1002/sd.2232
- Čábelková, I., Strielkowski, W. (2013). Is the level of taxation a product of culture? A cultural economics approach. *Society and Economy* **35**(4), 513–529. DOI: 10.1556/SocEc.2013.0007
- Calcagno, R., Monticone, C. (2015). Financial literacy and the demand for financial advice. *Journal of Banking & Finance* **50**, 363–380. DOI: 10.1016/j.jbankfin.2014.03.013
- Caplinska, A., Ohotina, A. (2019). Analysis of financial literacy tendencies with young people. *Entrepreneurship and Sustainability Issues* **6**, 1736–1749. DOI: 10.9770/jesi.2019.6.4(13)
- Chebotareva, G., Strielkowski, W., Streimikiene, D. (2020). Risk assessment in renewable energy projects: A case of Russia. *Journal of Cleaner Production* **269**, 122110. DOI: 10.1016/j.jclepro.2020.122110
- Chmelíková, B. (2015). Financial literacy of students of finance: An empirical study from the Czech Republic. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering* **9**, 4233–4236.
- Cole, S., Paulson, A., Shastry, G. (2014). Smart money? The effect of education on financial outcomes. *The Review of Financial Studies* **27**(7), 2022–2051. DOI: 10.1093/rfs/hhu012
- da Silva, T., Magro, C., Gorla, M., Nakamura, W. (2017). Financial education level of high school students and its economic reflections. *Revista de Administra*ção **52**, 285–303. DOI: 10.1016/j.rausp.2016.12.010
- Davies, P. (2015). Towards a framework for financial literacy in the context of democracy. *Journal of Curriculum Studies* **47**, 300–316. DOI: 10.1080/00220272.2014.934717
- Décamps, A., Barbat, G., Carteron, J.-C., Hands, V., Parkes, C. (2017). Sulitest: A collaborative initiative to support and assess sustainability literacy in higher education. *The International Journal of Management Education* **15**(2), 138–152. DOI: 10.1016/j.ijme.2017.02.006
- Dinwoodie, J. (2010). Ignorance is not bliss: Financial illiteracy, the mortgage market collapse, and the global economic crisis. SSRN Journal. DOI: 10.2139/ssrn.1734531
- Gerrans, P., Heaney, R. (2016). The impact of undergraduate personal finance education on individual financial literacy, attitudes and intentions. *Accounting and Finance* **59**(1), 177–217. DOI: 10.1111/acfi.12247
- Goyal, K., Kumar, S. (2020). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies* **45**(1), 80–105. https://onlinelibrary.wiley.com/doi/epdf/10.1111/ijcs.12605

- Hendl, J. (2015). Přehled Statistických Metod: Analýza a Metaanalýza Dat. Praha: Portál.
- Hindls, R., Hronová, S., Seger, J., Fischer, J. (2007). *Statistika pro Ekonomy*. Praha: Professional Publishing. Hohnen, P., Potts, J. (2007). *International Institute for Sustainable Development Corporate Social Respon-*
- Hohnen, P., Potts, J. (2007). *International Institute for Sustainable Development Corporate Social Respon*sibility: An Implementation Guide for Business. Winnipeg, Canada: International Institute for Sustainable Development.
- Hsu, Y.-L, Chen, H.-L., Huang P.-K., Lin, W-Y. (2021). Does financial literacy mitigate gender differences in investment behavioral bias? *Finance Research Letters* **41**. DOI: 10.1016/j.frl.2020.101789
- Huston, S. (2010). Measuring financial literacy. *Journal of Consumer Affairs* **44**, 296–316. DOI: 10.1111/j.1745-6606.2010.01170.x
- Jappelli, T., Padula, M. (2013). Investment in financial literacy and saving decisions. *Journal of Banking & Finance* **37**, 2779–2792. DOI: 10.1016/j.jbankfin.2013.03.019
- Krechovská, M. (2015). Financial literacy as a path to sustainability. *Trendy v Podnikání* **5**, 3–12.
- Kumari, S., Harikrishnan, A. (2021). Importance of financial literacy for sustainable future environment: A research among people in rural areas with special reference to Mandi District, Himachal Pradesh. *International Journal of Engineering, Science & InformationTechnology* 1, 15–19. DOI: 10.52088/ijesty.v1i1.36
- Leumann, S., Aprea, C. (2015). Kognitive und emotionale Aspekte finanzieller Handlungsfähigkeit. *Sucht-Magazin* 39–41.
- Lusardi, A., Mitchell, O. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature* **52**(1), 5–44. DOI: 10.1257/jel.52.1.5
- Lusardi, A., Mitchell, O.S., Curto, V. (2010). Financial Literacy among the Young. Journal of *Consumer Affairs* **44**, 358–380. DOI: 10.1111/j.1745-6606.2010.01173.x
- Opletalová, A., Kvintová, J. (2014). Vybrané Aspekty Finanční Gramotnosti v Podmínkách Základních a Středních Skol. Univerzita Palackého v Olomouci: Olomouc, Czech Republic.
- Pavelková, J., Knaifl, O., Preuss, K. (2012). Funkční a finanční gramotnost. *Speciální pedagogika: časopis pro teorii a praxi speciální pedagogiky* **22**, 108–119.
- Peng, T-C., Bartholomae, S., Fox, J., Cravener, G. (2007). The impact of personal finance education delivered in high school and college courses. *Journal of Family and Economic Issues* **28**(2), 265–284. DOI: 10.1007/s10834-007-9058-7
- Philippas, N. D., Avdoulas, C. (2019). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *The European Journal of Finance* **22**(1), 360–381. DOI: 10.1080/1351847X.2019.1701512
- Popescu, C., Popescu, G. (2019). An exploratory study based on a questionnaire concerning green and sustainable finance, corporate social responsibility, and performance: Evidence from the Romanian business environment. *Journal of Risk Financial Management* **12**(4). DOI: 10.3390/jrfm12040162
- Potrich, A., Vieira, K. (2018). Demystifying financial literacy: a behavioral perspective analysis. *Management Research Review* **41**, 1047–1068. DOI: 10.1108/MRR-08-2017-0263
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. Journal of consumer affairs, 44(2), 276-295.. https://doi.org/10.1111/j.1745-6606.2010.01169.x
- Sarnovics, A., Mavlutova, I., Peiseniece, L., Berzina, S. (2016). Financial literacy enhancement as a task of financial education for Latvian population. In: *Business Challenges in the Changing Economic Land-scape* **2**(2), 365–389.
- Schmidt, C., Möller, J., Schmidt, K., Gerbershagen, M., Wappler, F., Limmroth, V., Padosch, S., Bauer, M. (2011). Generation Y: Rekrutierung, *Entwicklung und Bindung. Anaesthesist* **60**, 517–524. DOI: 10.1007/s00101-011-1886-z
- Ševčík, K. (2017). Finanční gramotnost v projektovaném kurikulu Austrálie. *sciED* **8**. DOI: 10.14712/18047106.385
- Syrový, P., Tyl, T. (2014). Osobní Finance: Rízení Financí pro Každého. Grada: Praha, Czech Republic.
- Yuesti, A., Rustiarini, N., Suryandari, N. (2020). Financial literacy in the COVID-19 pandemic: pressure conditions in Indonesia. *Entrepreneurship and Sustainability Issues* **8**(1), 884–898. DOI: 10.9770/JESI.2020.8.1(59)
- Zait, A., Bertea, P.E. (2014). Financial literacy Conceptual definition and proposed approach for a measurement instrument. *Journal of Accounting and Management* 4, 37–42.