

MONIKA SZAFRAŃSKA

University of Agriculture in Krakow, Poland

THE LEVEL OF FINANCIAL LITERACY OF ACADEMIC YOUTH FROM RURAL AREAS IN THE MALOPOLSKIE VOIVODSHIP

Key words: financial literacy, academic youth, rural areas

ABSTRACT. The main purpose of the work is to define and characterize the level of financial literacy of students coming from rural areas in the Malopolskie voivodship in 2018. The main source of data used was primary information from the author's own study (the PAPI method, a group of 170 respondents). The research used a set of questions to assess the level of financial literacy of adults proposed by the OECD INFE. In addition to primary sources, Polish and foreign literature on the subject was also used to achieve the goal. Total statistical indicators (mean, minimum, maximum) were used for data analysis and the non-parametric chi-square test (χ^2). As results from the analysis, students are characterised by an average level of financial literacy, which may indicate a low effectiveness of financial education activities carried out at various levels of education in Poland. The factors determining the level of financial literacy of rural youth were gender and the field of study. Men and people studying economics were characterized by a higher level of financial literacy. Financial behaviour is a component of financial literacy in which students received the lowest results. The minimum target score in this module was obtained by only 24% of people.

INTRODUCTION

It is widely believed that a high level of financial literacy of young people is one of the most important competences in the 21st century. Solid financial knowledge allows young consumers to choose financial services that meet their financial needs and capacities, and properly assess the risks associated with a given product. These issues are important especially in the context of planning the financial future better by young people (e.g. periods without a job or the period of retirement). In addition, a high level of consumer financial literacy helps to limit excessive consumption, debt and unnecessary spending [O'Connell 2007, Ajzerle et al. 2013, Singh 2014, Amagir et al. 2018].

According to numerous scientific studies, the level of financial literacy of citizens is diversified within a place of residence (rural areas/city) [Lusardi, Mitchell 2014]. Residents of non-urbanized areas are characterized by a significantly lower level of financial literacy and a higher financial exclusion ratio compared to city residents [Iwanicz-Drozdowska, Nowak 2011, Smyczek 2012, Kata et al. 2015]. This is due to poorer access of rural resi-

dents to financial [Idzik 2013], ICT [Jaska 2015] and educational infrastructure [Kowalska 2012, Matyjas 2012]. As noted by Jerzy Wilkin and Iwona Nurzyńska [2018], recently, in Poland, the process of decreasing developmental divisions that divide the city and village continues. This is illustrated by the most important indicators characterizing the level of socio-economic development, similarity of political views, educational aspirations as well as consumption patterns for the countryside and the rest of the country.

Research on determining the level of financial literacy has been underway in Poland for many years. Most often, it involves determining the general level of financial knowledge of the population [Citi Handlowy 2009, Iwanicz-Drozdowska et al. 2011, Kieźel, Burgiel 2017] or population groups [Majewski, Walczak 2013, Kuchciak et al. 2014, Musiał, Świecka 2016]. However, there is a lack of detailed research determining the level of financial awareness including knowledge, behaviour and financial attitudes of selected social groups.

The main purpose of the work is to define and characterize the level of financial literacy of academic youth coming from rural areas in Poland. Understanding the level of financial literacy of young people from rural areas will enable entities responsible for financial education of society to prepare appropriate activities taking into account the needs and preferences of beneficiaries in this area. The increase in financial literacy of young people is possible only thanks to financial education, which favours the development of positive habits needed to make rational financial decisions in the area of personal finance [Zdanowska 2012, Musiał 2016].

MATERIAL AND METHODS

The primary source of data used for analysis and inference were primary information obtained from own research. The research was carried out in 2018, using the PAPI method on a group of 170 respondents from rural areas. The interview was conducted with students studying in the second largest academic centre in Poland – Krakow. The selection of the test sample was deliberate. The study was attended by students who expressed their willingness to complete the questionnaire.

In the 2017/2018 academic year, the number of students living in rural areas in the analysed voivodship amounted to 43,121 people [US Kraków 2018, Studencka Marka 2018]. To estimate the minimal sample size, the following formula was used [Szreder 2004]:

$$n = \frac{\frac{1}{4} \cdot N}{N \cdot \frac{d^2}{z_{\alpha/2}^2} + \frac{1}{4}}$$

where:

N – population size,

d – statistical error,

$z_{\alpha/2}^2$ – the value of random variable Z of normal standard distribution.

The maximal value of the statistical error of the result was assumed as 5%. The necessary minimal sample size was determined as 99 persons. 177 students participated in the study. After excluding inconsistent and incorrectly filled questionnaires, data from 170 questionnaires was further analyzed.

Among the people who participated in the study, 58% were women and 42% were men. The sample structure in terms of gender corresponded to the structure of students in the Małopolskie voivodship in the academic year 2017/2018 [Urząd Statystyczny w Krakowie 2018]. Almost 40% of students worked during their studies. The group was dominated by second-cycle students (57%) and non-economic students (67%).

The research used a set of questions to assess the level of financial literacy of adults proposed by the OECD INFE [2011]. The questionnaire form consisted of four parts and contained 24 single-choice questions of a closed nature. The first part was the respondent's particulars (5 questions). Subsequent parts concerned the individual components of financial literacy: basic financial knowledge (7 questions), financial behaviour (9 questions) and financial attitudes (3 questions).

In addition to primary sources, Polish and foreign literature on the subject was also used to achieve the goal. Total statistical indicators (mean, minimum, maximum) were used for data analysis and the non-parametric chi-square test (χ^2). The research results are presented in a descriptive and graphic form.

FINANCIAL KNOWLEDGE, FINANCIAL BEHAVIOUR AND FINANCIAL ATTITUDES OF ACADEMIC YOUTH FROM RURAL AREAS

The OECD INFE [2016] methodology was applied in order to calculate the general indicator characterising the level of financial literacy of students. The target value is the sum of the results obtained in the three modules forming the financial consciousness of the respondent. In questions regarding financial knowledge, the student received 1 point for each correct answer. The respondents were allowed to score from 0 points to a maximum of 7 points. In the next part (financial behaviour), the maximum number of points was 9. To determine the financial attitudes of the respondents (the fourth part of the questionnaire), a five-point Likert scale was used. In this part the points obtained by the respondents were summed up and the obtained value was divided by 3. The minimum number of points from this module was 1, and the maximum was 5. The student could achieve a minimum of 1 point, and a maximum of 21 points.

Students from rural areas are characterised by an average level of financial literacy. The obtained result is 12.8 points. The lowest result achieved by students from rural areas was 5 points, the maximum was 20 points. The average result obtained for the surveyed group coincided with the average result obtained for the adult population of Poland (persons aged 18-79) [OECD INFE 2016].

The factors differentiating the level of financial literacy of rural youth were gender ($\chi^2 = 14.8$, $df = 2$) and the field of study ($\chi^2 = 8.5$, $df = 2$). Men and people studying economics were characterized by a higher level of financial literacy. The degree of study ($\chi^2 = 2.4$, $df = 2$), as well as the fact that the student works during studies ($\chi^2 = 0.2$, $df = 2$) did not determine the level of financial literacy.

One of the components of financial literacy is basic financial knowledge. This knowledge enables consumers to compare financial services on the market and make rational decisions about personal finances. In the OECD INFE [2016] questionnaire, 7 questions were proposed for the assessment of this financial literacy module. According to the OECD INFE methodology, the so-called minimum target score expressing the percentage share of respondents in the population who responded to a minimum of 70% of questions correctly [OECD INFE 2016]. The obtained values are shown in Figure 1.

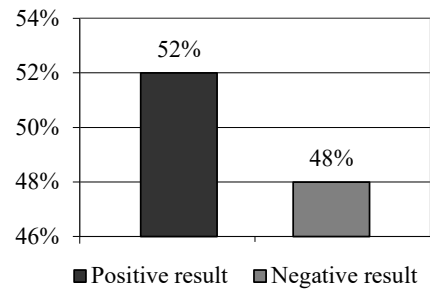


Figure 1. Financial knowledge of students from rural areas (minimum target score, more than 5 responses), $n = 170$

Source: own research

As can be seen in Figure 1, only 52% of students from rural areas participating in the study achieved the assumed minimum result. At the same time, the results obtained for the group of students are similar to the results obtained by other researchers [Frączek et al. 2017]. The results of the statistical analysis show that the level of financial knowledge of rural youth is determined by gender ($\chi^2 = 21.1$, $df = 1$) and the degree of study ($\chi^2 = 8.1$, $df = 1$). However, the factors that do not affect this level are: the field of study (economic/uneconomic) ($\chi^2 = 0.1$, $df = 1$) and whether the student works during studies ($\chi^2 = 2.2$, $df = 1$). Men were characterized by a higher level of financial knowledge (52% vs. 38%) and second-cycle students (66% vs. 46%).

As results from the conducted research, less than 40% of students were able to determine the purchasing power of money assuming that inflation will remain stable for one year (question 1). The obtained result is lower in comparison to the results of the research carried out by the OECD INFE [2016], which shows that the majority of participants (80%) gave a correct answer to this question.

Nearly 60% of respondents were able to calculate the amount of interest on borrowed capital (question 2). The next question concerned the ability to calculate simple interest (question 3). In this case, 63% of students reported the correct answer. The obtained results are inconsistent with the results of research obtained by other scientists, which show that young people are characterised by a higher level of financial knowledge than adults. The difference stems from the fact that the subject of research in the works carried out by Barbora Chmeliková [2015] and Bożena Frączek together with the team [2017] were students of economic studies who, due to the implemented study programme, deal with the above-mentioned issues.

The question regarding the compound interest rate turned out to be the most difficult issue for the group in question (question 4). On average, only every third student knew the answer to this question. The obtained results coincide with the results obtained for the adult population of Poles [OECD INFE 2016]

The next question in the questionnaire concerned the relationship between risk and the rate of return on financial instruments (question 5). In this case, the most correct answers were given (90%).

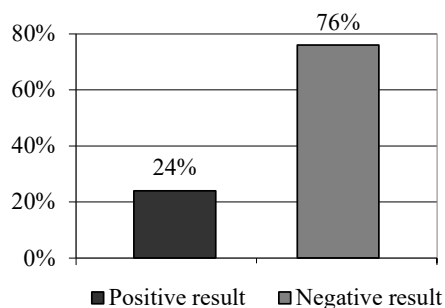


Figure 2. Financial behaviour of students from rural areas (minimum target score, 6 and more correct responses), $n = 170$

Source: own research

According to the analysis, only every fourth student in rural areas obtained the assumed minimum result (24%). The result obtained is also lower than the result achieved for the group of adult Poles (24% vs. 31%) [OECD INFE 2016].

The financial behaviours of students is determined by the professional activity of young people ($\chi^2 = 4.6$, $df = 1$). Almost 2/3 of students who work during studies achieved the assumed minimum result, while in the group of non-working people only 39% did so. The other analysed factors do not determine the financial behaviour of students from rural areas (gender – $\chi^2 = 1.3$, $df = 1$, field of study – $\chi^2 = 1.5$, $df = 1$, degree of study – $\chi^2 = 1.8$, $df = 1$).

The first question asked in this part was “Who is responsible for your everyday decisions regarding money?” (question 8). Most students (71%) take such decisions themselves or together with other family members. The result obtained, however, is lower by 23 p.p. points compared to the adult population of Poland [OECD INFE 2016], which results from the fact that the basis of the monthly student budget, regardless of the country, is the support of parents who very often make financial decisions for a young person. According to data from the National Bank of Poland, independence in making financial decisions among students grows with age. Almost 60% of students aged 20-24 admit that their parents influence the money management process. In the case of people aged 25 to 32, this constitutes only 35% [Polak 2018].

In the next question, young people were asked whether they prepare a budget for their household, understood as a statement of revenues and expenses in a given time interval (question 9). As results from the conducted research, only 42% of students register and control their income and expenses. Most of the respondents have never heard of such practice. Awareness of the budget of a young consumer should form the basis for rational spending planning for each student.

The next rational habit is the financial behaviour described as “active saving” (question 10). In the interview, the student was not asked if they had savings, but whether during the last 12 months they managed to save even a small amount. Just over 75% actively saved in the last year.

One of the basic financial phenomena is the phenomenon of inflation. According to the research, almost 60% of respondents were able to correctly define the general price increase (question 6). Only 44% of people knew the correct answer to the question about the concept of diversification (question 7).

The second component of financial literacy is financial behaviour. The students’ financial behaviour was assessed with 9 questions. Figure 2 presents the percentage share of respondents who indicated at least six correct answers, which means that their behaviour on the financial market is rational [OECD INFE 2016].

According to the research, 71% of students are sensible about shopping (question 11). Prudent shopping requires time and organisation but results in cost savings and a good student budget. Paying your bills on time is another good financial habit. One in five students does not remember to pay bills on time (question 12).

According to the analysis, only every fourth student declared that they set long-term financial goals and try to achieve them (question 13). The main goal of young people in the long term was to achieve financial independence from their parents. The study also asked students whether the funds they had at their disposal during the last 12 months were enough to cover the costs of student life (question 14). The vast majority of respondents marked the answer “yes” (93%). In a situation where students lacked money, they usually limited their expenses or borrowed money from family and friends.

As results from the research, young people choosing a financial product most often consider the offers of several different financial institutions (question 15). Almost 75% of the respondents who took part in the survey indicated such an answer.

The financial product most often used by young people was a bank account. Regular checking of the individual account balance enables more effective personal finance management, allows for the quick detection of incorrect transactions and facilitates the effective planning of future expenses. According to the research, almost 60% of students had the habit of systematically checking transactions on their account (question 16). Other people do not check the account history.

The next component of financial literacy is financial attitudes. The questionnaire contained three questions to assess respondents’ attitudes regarding money and financial planning. The statements used in the questionnaire are: “Money is there to spend it”, “I live today, I am not worried about the future”, “I prefer to spend money than to save”. In order to assess attitudes, the five-point Likert scale was used, where 1 meant that the student fully agrees with the statement, 5 – completely disagrees. The content of the questions concerned attitudes in a short period of time, so if the respondent did not agree with the statement (responses 4 and 5), it meant that they had such an attitude over a longer time period. The points marked by the respondents were added together and the obtained value was divided by 3. According to the OECD INFE methodology [2016], the desired result characterizing the financial attitudes of the respondents is above 3 points. Figure 3 presents the percentage share of respondents, according to area of residence, who obtained the assumed result.

Based on the data from Figure 3, it can be concluded that only every second respondent obtained the assumed minimum result in this module of financial literacy. According to statistical analysis, none of the analysed demographic characteristics determines the financial attitudes of students (gender – $\chi^2 = 0.4$, $df = 1$, field of study – $\chi^2 = 1.3$, $df = 1$, degree – $\chi^2 = 3.2$, $df = 1$, professional activity – $\chi^2 = 0.1$, $df = 1$). The results obtained coincide with the results reported by the OECD INFE [2016].

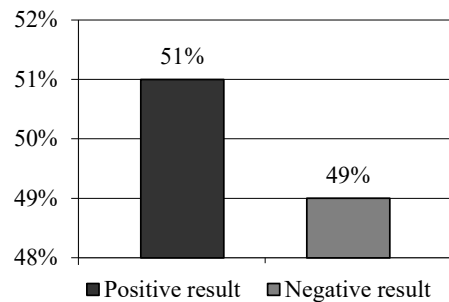


Figure 3. Financial attitudes of students from rural areas (minimum target score, more than 3 responses), n = 170

Source: own research

CONCLUSIONS

The conducted research allowed to determine the level of financial literacy of academic youth from rural areas in the Malopolskie voivodship.

As results from the analysis, students are characterised by an average level of financial literacy, which may indicate a low effectiveness of financial education activities carried out at various levels of education. In order to increase the effectiveness of implemented activities, planned educational initiatives should pay attention to the selection of appropriate teaching tools and methods. In the process of financial education, teachers should use both traditional methods and methods specific to new technologies (the so-called hybrid model). This applies to financial education both at a pre-college level and at a university level.

The factors determining the level of financial literacy were gender and the field of study. Women and non-economic students were characterized by a lower level of financial literacy. The degree of study as well as the fact that a student works while studying did not determine the level of financial literacy.

Financial behaviour is a component of financial literacy in which students received the lowest results. The minimum target score in this module was obtained by only 24% of people. In connection with the above, in programmes and educational projects in the field of personal finance dedicated to rural youth, particular attention should be paid to the issue of rational consumer behaviour in the financial market. It should be remembered that adequate financial education of a young consumer will prepare them in the future for active and conscious participation in financial markets.

In order to follow the dynamics of changes in financial literacy of academic youth, as well as, programming appropriate educational activities, there is a need to continue research in this area in subsequent periods.

BIBLIOGRAPHY

- Ajzerle Sanja, Mark Brimble, Brett Freudenberg. 2013. Is financial capability related to the effective use of debt in Australia? *Australian Accounting Business & Finance Journal* 7 (3): 107-128.
- Amagir Aisa, Herriëtte Maassen van den Brink, Arie Wilschut. 2018. Financial literacy of high school students in the Netherlands: knowledge, attitudes, self-efficacy, and behavior. *The Working Papers Series* 17/18: 1-28.
- Chmeliková Barbora. 2015. Financial literacy of students of finance: An empirical study from the Czech Republic. *International Journal of Economics and Management Engineering* 9 (12): 4233-4236.
- Citi Handlowy. 2009. *Stan wiedzy finansowej Polaków. Raport Fundacji Kronenberga przy Citi Handlowy* (The state of financial knowledge of Poles. Report of the Kronenberg Foundation at Citi Handlowy). Warszawa: Dom Badawczy Maison.
- Frączek Bożena, Hintošová Aneta Bobenič, Monika Bačová, Tomáš Siviček. 2017. Simultaneous use of the financial literacy level and the financial inclusion degree as a result of financial education efficiency in Visegrad Group countries. *Journal of Economics and Management* 27 (1): 5-25.
- Idzik Marcin. 2013. Ekskluzja finansowa – ujęcie empiryczne (Financial exclusion – an empirical approach). *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu* 306: 154-165.

- Iwanicz-Drozdowska Małgorzata, Radosław Kitala, Anna Matuszyk, Agnieszka Nowak. 2011. Świadomość finansowa Polaków – wyniki badań ankietowych. [W] *Edukacja i świadomość finansowa. Doświadczenia i perspektywy* (Financial awareness of Poles – results of surveys. [In] Financial education and financial awareness. Experience and perspectives), ed. M. Iwanicz-Drozdowska, 143-255. Warszawa: Oficyna Wydawnicza SGH.
- Iwanicz-Drozdowska Małgorzata, Agnieszka Nowak. 2011. Rola i znaczenie edukacji finansowej. [W] *Edukacja i świadomość finansowa. Doświadczenia i perspektywy* (The role and importance of financial education. [In] Financial education and financial awareness. Experience and perspectives), ed. M. Iwanicz-Drozdowska, 13-34. Warszawa: Oficyna Wydawnicza SGH.
- Jaska Ewa. 2015. Dostępność i wykorzystanie technologii informacyjno-komunikacyjnych na obszarach wiejskich (The availability and use of Internet and communication technologies in rural areas). *Roczniki Naukowe SERiA XVII* (4): 110-115.
- Kata Ryszard, Walenia Anna, Pyrkosz Damian. 2015. Financial exclusion of the rural population in Poland. *Journal of Agribusiness & Rural Development* 4 (38): 1-10. DOI: 10.17306/JARD.2015.74.
- Kieźel Ewa, Aleksandra Burgiel. 2017. *Wiedza ekonomiczna konsumentów a racjonalność ich zachowań* (Economic knowledge of consumers and the rationality of their behavior). Warszawa: Wydawnictwo C. H. Beck.
- Kowalska Magdalena. 2012. System edukacyjny a aspiracje edukacyjne i zawodowe młodzieży wiejskiej (The system of education and the educational and professional aspiration of rural youth). *Problemy Drobnych Gospodarstw Wiejskich* 1: 71-84.
- Kuchciak Ewa, Marika Świeszczak, Krzysztof Świeszczak, Monika Marcinkowska. 2014. *Edukacja finansowa i inkluzja bankowa w realizacji koncepcji silver economy* (Financial education and banking inclusion in the implementation of the silver economy concept). Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- Lusardi Annamaria, Olivia Mitchell. 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.
- Majewski Piotr, Damian Walczak. 2013. Świadomość ubezpieczeniowa studentów w aspekcie postrzegania rynku ubezpieczeniowego (Insurance awareness among students in terms of their perception of the insurance market). *Studia Oeconomica Posnaniensia* 1 (11): 42-50.
- Matyjas Bożena. 2012. Szanse edukacyjne dziecka wiejskiego: stan, uwarunkowania i perspektywy (Educational opportunities of a rural child: state, conditions and perspectives). *Chowanna* 1: 165-177.
- Musiał Marta. 2016. Znaczenie wiedzy finansowej w procesie zarządzania finansami osobistymi (The importance of financial knowledge in the process of personal finance management). *Finanse i Prawo Finansowe* 1: 97-108.
- Musiał Marta, Beata Świecka. 2016. Analiza wiedzy i umiejętności finansowych młodego pokolenia (Analysis of knowledge and financial skills of the young generation). *Acta Universitatis Lodzianensis Folia Oeconomica* 6 (326): 203-2016.
- O'Connell Alison. 2007. *Measuring the effectiveness of financial education*, http://www.retirement.org.nz/files/Measuring_effectiveness_of_financial_education_OConnell_published_April07, access: 15.12.2018.
- OECD INFE. 2011. *Measuring financial literacy questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy*, www.oecd.org/finance/financial-education, access: 15.12.2018.
- OECD INFE. 2016. *International survey of adult financial literacy competencies*, www.oecd.org/finance/financial-education, access: 15.12.2018.
- Polak Marcin. 2018. Pracowity i oszczędny, ale finansowo wciąż skromny (Hard-working and economical but still financially modest). *Bank. Miesięcznik Finansowy* 10 (303): 28-31.
- Singh Upendra. 2014. Financial literacy and financial stability are two aspects of efficient economy. *Journal of Finance, Accounting & Management* 5 (2): 59-76.

- Smyczek Sławomir. 2012. *Nowe trendy w zachowaniach konsumentów na rynkach finansowych* (New trends in consumer behavior in financial markets). Warszawa: Wydawnictwo PLACET.
- Studencka Marka. 2018. *Liczba studentów w Polsce* (Number of students in Poland). 2018, <https://www.studenckamarka.pl/serwis.php?s=73&pok=1909>, access: 24.03.2019.
- Szreder Mirosław. 2004. *Metody i techniki sondażowych badań opinii* (Methods and techniques of opinion polls). Warszawa: PWE.
- Urząd Statystyczny w Krakowie. 2018. *Informacje sygnałowe. Szkoły wyższe w województwie małopolskim w roku akademickim 2017/2018* (Signal information. Universities in the Małopolskie voivodeship in the academic year 2017/2018), <https://www.krakow.stat.gov.pl>, access: 15.12.2018.
- Wilkin Jerzy, Iwona Nurzyńska. 2018. *Rural Poland 2018. The report on the state of rural areas*. Warszawa: Wydawnictwo Naukowe Scholar.
- Zdanowska Marta. 2012. Świadomość finansowa w Polsce (Polish financial capability). *Współczesne Problemy Ekonomiczne* 5: 213-216.

POZIOM ŚWIADOMOŚCI FINANSOWEJ MŁODZIEŻY AKADEMICKIEJ Z OBSZARÓW WIEJSKICH W WOJEWÓDZTWIE MAŁOPOLSKIM

Słowa kluczowe: świadomość finansowa, młodzież akademicka, obszary wiejskie

ABSTRAKT

Celem artykułu jest określenie i charakterystyka poziomu świadomości finansowej młodzieży akademickiej pochodzącej z obszarów wiejskich w województwie małopolskim w 2018 roku. Zasadniczym źródłem danych wykorzystanych do analizy i wnioskowania były informacje pierwotne uzyskane z badań własnych (metoda PAPI, 170 respondentów). W badaniach wykorzystano zestaw pytań umożliwiający ocenę poziomu świadomości finansowej osób dorosłych zaproponowany przez OECD INFE. Poza źródłami pierwotnymi wykorzystano polską i zagraniczną literaturę przedmiotu. Do analizy danych zastosowano sumaryczne wskaźniki statystyczne (średnia, minimum, maksimum) oraz nieparametryczny test chi-kwadrat (χ^2). Jak wynika z przeprowadzonej analizy, studenci cechują się średnim poziomem świadomości finansowej, co może wskazywać na niską efektywność działań z zakresu edukacji finansowej, realizowanych na różnych poziomach edukacji. Czynnikiem determinującym poziom świadomości finansowej były płeć oraz kierunek studiów. Wyższym poziomem świadomości finansowej cechowali się mężczyźni oraz osoby studiujące na kierunkach ekonomicznych. Zachowania finansowe to komponent świadomości finansowej, w przypadku którego studenci otrzymali najniższe rezultaty. Minimalny docelowy wynik w tym module uzyskało tylko 24% osób.

AUTHOR

MONIKA SZAFRAŃSKA, PHD

ORCID: 0000-0002-4948-7636

University of Agriculture in Krakow

Department of Economics and Enterprise Finance

21 Mickiewicza Av., 31-120 Kraków, Poland