JURNAL AKUNTANSI MANAJEMEN DAN EKONOMI

JURNAL AKUNTANSI, MANAJEMEN DAN EKONOMI
Vol.23, No. 1, pp. 1 - 8
Published online in http://jos.unsoed.ac.id/index.php/jame
ISSN: 1410-9336 / E-ISSN: 2620-8482

Technology Based Financial Services Innovation, Financial Literacy and Its Impact on Financial Behavior

Ekaningtyas Widiastuti[1], Sugeng Wahyudi [2]

[1]*Student DIM of Diponegoro University, Indonesia*
[2]*Lecturer of Economic and Business Faculty Diponegoro University, Indonesia*

Abstract

Information technology grows rapidly and has brought tremendous benefits to the advance of human civilization. People in Indonesia are well known with their quick adaptation ability to any changes including changes in information technology, such as in utilizing available financial services. University students as millennial generation cannot be separated from technology in all aspects including finance. Innovative technology-based financial services (Fintech) provide flexibility for the community, including students, to meet their needs. Financial knowledge and understanding will influence a person in making decisions and behaving appropriately related to effective and efficient financial management. This research focused on students at different universities in Purwokerto, to examine the impact of technology-based financial service innovation and financial literacy on student financial behavior.

Questionnaire was used as the data collection method. Convenience sampling was used as the sampling technique and multiple linear regression used as data analysis in this study. The results showed that Social Demography, Financial Socialization and Fintech had no influence on financial behavior. Financial Knowledge and Financial attitude had a positive influence on financial behavior.

Keywords

Social Demography; Financial Knowledge; Financial Attitude; Financial Socialization; Fintech; Financial Behavior.

INTRODUCTION

Financial behavior is related to a person's attitude in managing their finances. The right financial behavior would affect a person's well-being. On the other hand, bad behavior had long term socially negative consequences (Perry and Morris, 2005). Financial behavior is a person's ability to plan, manage, control, earn, and save his or her finance. Financial behavior appears because of the goal of meeting the life necessities in line with the level of income earned. Consumption, savings, investment, and credit management are part of financial behavior that usually people have in life.

Some of the university students as the millennial generation have not been able to organize their financial aspect especially in spending the income they earn, both the income from their parents and the income from their own jobs. The financial behavior that students learn in their lives tended to influence their future decisions (Shim, Xiao, Barber, & Lyons, cited in Selcuk, 2015). Assad (2012) in his research revealed that perceived financial knowledge influenced financial decisions. Financial knowledge is part of the financial literacy dimension which can influence financial behavior.

Based on the financial inclusion index released by the Financial Services Authority (OJK), the level of student literacy in Indonesia has only reached 64.2%. For students and university students, the level of financial literacy is 23.4% which is still classified as very low. Financial literacy is defined as person's financial knowledge about financial products and the concept of skills in managing finances. Financial knowledge and understanding will influence a person's behavior in making decisions related to finance, such as saving, planning and managing finances that are not yet organized well. Regardless of the income

✉Correspondence to: widtyas@gmail.com

Received: 2 February, 2021
Accepted: 10 March, 2021
Published: 30 March, 2021

or money they receive from various sources used to meet their needs, if they do not spend it wisely, they will always feel insufficient.

Studies related to the determinants of financial behavior found inconsistencies in their results. Demographic factors, knowledge, financial attitude, and financial socialization influence financial behavior. Akben-Selcuk Elif's research (2015) among Turkish students found that financial knowledge had significant positive influence on financial behavior. In contrast, research by M. Husni Mubarok (2017) in Puspitaningtyas (2020) found different results that demographic factors had negative and insignificant influence on family financial management behavior; second, financial knowledge had positive and insignificant influence on family financial management behavior; and third, personality traits had positive and insignificant influence on family financial management behavior. Rusliza Yahaya's research (2019) proved that financial attitudes influenced financial behavior, but financial knowledge did not influence financial behavior.

In studying financial behavior among university students, technology cannot be separated and they even have a dependence on technology in all aspects related to finance. Fintech-based digital financial services provide flexibility for university students to meet their needs. The use of mobile banking financial services and investment through technology such as smartphones and laptops are examples of a combination of technology with the financial system to make it easier for people including university students to access financial services. University students take advantage of technology-based financial services as a means of payment transactions, transfer, and even for investment.

Based on the data from a report entitled Digital Banking in Indonesia: Building Loyalty and Generating Growth from the business management consulting company McKinsey & Company (in Rasyid, 2019), the penetration rate of the use of fintech-based financial services in Indonesia was still around 5%. The data showed that compared to China with a percentage of 67%, Hong Kong with 57% and India with 39%, Indonesia was still relatively low. However, looking at the very fast growth of digitalization in Indonesia, shows that Indonesia has the opportunity and potential to develop. Humaidi, Ahmad et al ,. (2020) showed the results that financial technology and financial literacy had a significant positive effect on financial management behavior in the productive age population in Surabaya. The development of this technology is expected to be a medium for the development of students' mindsets, so that it can be reflected in their behavior related to their finances. Especially if it is supported by adequate financial knowledge and understanding, it will have an impact on good financial planning and management.

This study aimed to determine the impact of Fintech-based financial service innovation and financial literacy on student financial behavior in order to plan and manage their personal finances. Determining the right strategic efforts in improving financial attitudes or behavior would be able to change their mindset so that they could act appropriately in managing their finances. This research focused on university students from various universities in Purwokerto.

Financial Behavior

Financial behavior could be defined as human behavior that was relevant to money management (Xiao, 2008). According to Shefrin (2000) in Fitriarianti (2018) financial behavior was a study that studied how psychological phenomena affected financial behavior that was practiced in financial decision making. Good financial knowledge could encourage people to form positive financial behavior (Hilgert, et al., 2003). Xiao (2008) explained that financial behavior had a high influence on financial decision making, which could affect personal finances as a whole.

Individuals need financial knowledge to make decisions that will improve the quality and welfare of life now and in the future. An individual behavior would reflect the application of knowledge (Wiharno, 2018). Financial behavior is an individual action such as recording income and expenditure, making investments, taking insurance, calculating, predicting and having the courage to face the risks of decisions that are related to finance.

Fintech Development in Indonesia

The development of technology has changed most of human life, including business. Financial technology innovation started in the banking world with the arise of the Core Banking System (CBS), an application that is the heart of the banking system. The development of financial technology spread to clients with the growth of start-up and high-tech companies that create financial technology innovations. The financial services sector with information technology known as Financial Technology (Fintech) synergizes to achieve the goal of maximizing the use of technology in accelerating financial services.

Indonesian Fintech Association (AFI) aims to provide trusted and reliable business partners to build a fintech ecosystem in Indonesia originating from Indonesian companies and for Indonesia itself. Up to now, there are 140 fintech users in Indonesia with 55 of them being members of the organization. In 2016, the Indonesian Financial Services Authority (POJK) Regulation issued a new regulatory policy regarding fintech about off balance sheet borrowing by the market and by the payment transaction process by Bank Indonesia.

Financial Literacy

According to the Financial Services Authority (OJK) (2016) financial literacy was knowledge, skills, and beliefs that influence attitude and behavior to improve the quality of decision making and financial management in order to achieve welfare. The development of financial literacy has become increasingly important recently due to complex financial problems. There are many people who do not understand the financial concepts and financial equipments needed to make more profitable decisions.

Tyson (2010) argued that people should increase financial literacy because people who were less knowledgeable about finance would have more financial mistakes. Financial literacy comes from a person's personal financial knowledge and its application to his or her personal finance. Financial literacy helped a person to understand, had confidence, and had motivation to make wise financial judgments and decisions (Gachango, 2014 in Reswari 2018).

Hypothesis

H1 : Socio Demography has a positive effect on Financial Behavior

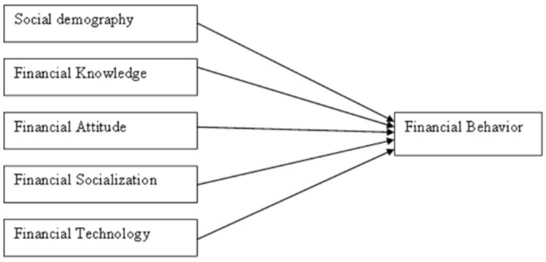
H2 : Financial Knowledge has a positive effect to the Financial Behavior.

H3 : Financial attitude has a positive effect to the Financial Behavior.

H4 : Financial Socialization has a positive effect to the Financial Behavior.

H5 : Fintech-based financial service innovation has a positive effect to Financial Behavior.

Figure 1. Research Model



METHODS

Respondents in this study were students from various universities in Purwokerto. The universities which became samples were Jenderal Soedirman University (UNSOED), Wijaya Kusuma University (UNWIKU), State Islamic University (UIN), Muhammadiyah Purwokerto University (UMP), and Amikom Purwokerto University (AMIKOM). Sampling was done using convenience sampling technique.

The dependent variable (Y) was influenced by the independent variable. In this study, the dependent variable used was Financial Behavior, which was a study that studied how psychological phenomena affect financial behavior that was practiced in financial decision making. The independent variable (X) in this study were the variables such as social demography, financial knowledge, financial attitude, financial socialization and financial technology.

Multiple Linear Regression Analysis

Multiple linear regression analysis was used to see the influence of several independent variables (X1 and X2) on the dependent variable (Y), or in other words that there were variables that influence and there were variables that were influenced.

The regression equation (Sugiyono, 2007):

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Annotation:

Y	: Financial Behavior
a	: Constants from the regression equation
b1,b2,b3,b4,b5	: Regression Coefficient of X Variable
X1	: Socio Demography
X2	: Financial Knowledge
X3	: Financial Attitude
X4	: Financial Socialization
X5	: Financial Technology
ε	: Residual value/error

Determination Coefficient

The coefficient of determination was the part of the total variation in the dependent variable that was explained by the variation in the independent variable. Also called R-squared and denoted R2. If the coefficient of determination r2 = 0, it meant that the independent variable had no influence at all (= 0%) on the dependent variable. Conversely, if the coefficient of determination r2 = 1, it meant that the dependent variable was 100% influenced by the independent variable because it was located in the interval between 0 and 1, algebraically it was stated as $0 \leq r2 \leq 1$.

Significance Test of Simultaneous Influences (Test F)

This F test was used to test the accuracy of the research model, whether or not the predicted value was able to describe the real conditions.

If F count > F table, or a significant value < α (0.05), then the fintech variables and financial literacy simultaneously influenced financial behavior (Ha was accepted and H0 was rejected)

If F count < F table, or significant value > α (0.05), then the variables of fintech and financial literacy simultaneously had no influence on financial behavior (Ha was rejected and H0 was accepted)

Significance Test of Partial Influence (t test)

This t test was used to determine the influence of the independent variable on the dependent variable partially. By using 95% confidence or α = 0.05 and with degrees of freedom (n-k), the formulas H0 and Ha were compiled as follow:

The criteria for the t-test were:

H0: There was no influence between variable X and variable Y.

Ha: There was an influence between the X and Y variables.

If t count ≥ t table or probability <0.05, It meant H0 was rejected and Ha was accepted.

If t count ≤ t table or probability> 0.05, It meant H0 was accepted and Ha was rejected.

RESULTS AND DISCUSSION

Results of Data Analysis and Discussion

The statistical analysis used in this study was multiple linear regression analysis. The regression model obtained from the ordinary least squares method (OLS) was a regression model that produced the best linear unbiased estimator (BLUE). This condition would occur if several classical assumptions were met. After testing the validity and reliability as well as testing the classical assumptions and the results were met, the next section was a discussion of the results of multiple linear regression testing. Based on the results of calculations using the SPSS program, the results of the analysis were as follow:

Regression Equation

Table 1. Results of Multiple Linear Regression Analysis

Variable	B	t count	Sig.
Constant	3,033	0,908	0,366
social demography (X1)	0,089	0,364	0,717
financial knowledge (X2)	0,541	3.372	0,001
financial attitude (X3)	0,957	4.933	0,000
financial socialization (X4)	0,033	0,335	0,738
financial technology (X5)	0,087	0,671	0,504
R2	0,702		
Sig. F	0,000		

Based on the tests done, the following equation results were obtained:

$$Y = 3{,}033+0{,}089X_1+0{,}541X_2+0{,}957X_3+0{,}033X_4+0{,}087X_5$$

Determination Coefficient (R2)

Based on table 2, it could be seen that the coefficient of determination (R2) was 0.702 and indicated a godness of fit. The value of 70.2% indicated that the regression equation model in this study was able to explain the relationship between the dependent variable (financial behavior) and the independent variable (social demography, financial knowledge, financial attitude, financial socialization and financial technology) by 70.2%; which meant that financial behavior could be explained by social demography, financial knowledge, financial attitude, financial socialization, and financial technology. While the remaining 29.8% was influenced and explained by other factors outside the model that were not mentioned or tested in this study.

Simultaneous Testing (Test F)

Based on table 2, it was known that the significance value of F (0,000) ≤ α (0.05), which meant that the regression equation model formed had model accuracy (goodness of fit) or it could be said that the independent variables (social demography, financial knowledge, financial attitude) , financial socialization and financial technology) simultaneously influenced financial behavior.

Partial Testing (t test)

Based on the partial test results shown in Table 2, the significance value of the social demography variable was 0.717, which was greater than 0.05, meaning that it did not have a partial effect on financial behavior. Meanwhile, the significance value of the financial knowledge variable was 0.001 and the financial attitude variable was 0.000, both values were smaller than 0.05, which meant that partially the financial knowledge and financial attitude variables had an effect on financial behavior. The financial socialization variable had a significance value of 0.738 and financial technology of 0.504. Both of these variables had a significance value above 0.05, meaning that they did not have a partial effect on financial behavior.

Discussion of Hypothesis Test Results

The Influence of Social Demography on Financial Behavior

The partial test results showed that social demography had no influence on financial behavior, so the hypothesis that social demography influenced business performance was rejected. Social Demography was the study of population (an area), especially regarding the number, structure (composition of the population) and its development (changes) from time to time. Demographic variables included job status, marital status, income, type of work, age, gender, work experience, and education level. The results of the study proved that the gender, age, income of most respondents did not influence financial behavior.

This result was not in line with research conducted by Walczak Damian and Sylwia (2018) which found that men and women showed different financial behaviors. Astari and Widagda (2014) also found that gender in the perspective of differences between men and women influenced personal financial management. Women used more economic and efficient principles than men, and people who had better or higher incomes would have better financial management.

Therefore, although the results of this study stated that sociodemography had no influence on financial behavior, this was possible because people, both men and women of productive or not productive age and highly educated or not highly educated currently prefer having consumptive lifestyle rather than increasing income. They were also not having intentions to invest or partially save. Financial advantages were like how to manage personal finances to support the achievement of welfare both now and in the future.

The Influence of Financial Knowledge on Financial Behavior

The results of the partial test showed that Financial Knowledge had a positive influence on financial behavior, so the hypothesis which stated that Financial Knowledge had an influence on business performance was accepted. This meant that the higher and the better financial knowledge a person had, the better his financial behavior would be. Most students at the Universities in Purwokerto already knew and understood the basic knowledge of financial management, how to save properly, had savings and ATMs, and did savings transactions (opening accounts, deposits, withdrawals). They also have studied financial management from social media or the internet, and learned financial management from financial experts through seminars.

The results of this study supported the theory of financial behavior that used cognitive processes in managing and solving problems in decision making. The higher the knowledge of one's finances, the better the management and problem solving in making investment decisions, the better the financial behavior would be. These results supported the statement emphasized by Gutter (2008) that financial knowledge was the main prediction in shaping financial behavior. This result was also in line with the research of Potrich et al (2014) which found that financial knowledge and financial attitudes had a positive influence on financial behavior.

The Influence of Financial Attitude on Financial Behavior

Based on the results of hypothesis testing, it was known that financial attitudes had no significant effect on financial behavior. This result was not in line with Hayhoe, et.al (1999) which stated that there was a relationship between financial attitudes and the level of financial problems. Therefore, it could be said that a person's financial attitude also influenced the way a person managed his financial behavior. Marsh (2006) also stated that a person's personal financial behavior arose from their financial attitude.

Consequently, although the consequence was that financial attitudes did not have a significant influence on financial behavior, this could occur because individuals who were not wise enough in responding to their personal financial problems tended to have bad financial behavior. The better a person's financial attitude or mentality, the better his financial behavior.

The Influence of Financial Socialization on Financial Behavior

Based on the results of hypothesis testing, it showed that financial socialization had no influence on financial behavior. The results of this study were not in line with research conducted by Joo et al (2003) which found that there were several factors that influence financial behavior, such as environment, socialization, and other factors. Elif Akben Selcuk (2015) also found that parental teaching on finance had a positive impact on financial behavior.

From these results it could be seen that the role of family, especially parents and friends as agents of financial socialization, did not affect respondents in financial management. Family was an important socialization medium because family was the first socialization environment, family characteristics can influence communication patterns about finances that lead to good financial behavior.

The Influence of Fintech on Financial Behavior

The results of the analysis showed that fintech had no influence on financial behavior. Most students in Purwokerto have taken advantage of the available technology-based financial service facilities. They could use digital or online services for transactional purposes and could take advantage of existing promos from fintech products, in the form of go-pay, ovo, t-cash, and Dana.

But in reality, not everyone could understand fintech products well. What they should do was securing their financial position, such as saving and managing finances properly. The negative impact sometimes made them consumptive because it was easy to spend their money while they didn't feel like spending money physically. So that the existing technology-based financial services could not influence students to behave appropriately in relation to their finances. They have not been able to make the right decisions in managing their finances. This indicated that the availability of financial services must be supported by good financial literacy in order to avoid irresponsible financial behavior.

Strategic efforts that can be done are optimization of technology-based financial services is applied by providing broad literacy to the community in general and students in particular so that it can be used and utilized effectively and efficiently. This implementation will influence them in acting and making decisions related to finance in their lives. Many factors in increasing financial behavior. The college students as a respondent of this research ought to problem approximately this phenomenon via figuring out their mind-set in finance concerning financial behavior conduct with the intention to have a great conduct in finance.

CONCLUSION

Social Demography had no influence on financial behavior. It means that regardless of age, gender and income, it had no affect students to be able to manage their finances effectively. Financial Knowledge had positively effects on financial behavior. It means that the better the knowledge of ownership of money, investment and savings, the better it will be to consider decisions and actions to be taken.

Financial Attitude had positively effects on financial behavior, means that the attitude related to finance make they know must buy things that they need more, not what they want. Financial Socialization had no effect on financial behavior, means that if more and more people interact with financial dissemination agencies such as parents, educations, friends and the media had no effect the behavior of finance. Fintech had no effect on financial behavior, means that the Fintech application, the existing promos (like go-pay, ovo, t-cash, funds) had no effect financial behavior

REFERENCES

Akben-Selcuk, Elif. (2015) "Factors Influencing College Students' Financial Behaviors in Turkey: Evidence from a National Survey." International Journal of Economics and Finance, Vol.7 No.6 p. p87.

Anggraeni, Birawani. (2015). Pengaruh Tingkat Literasi Keuangan Pemilik Usaha Terhadap Pengelolaan Keuangan, Studi Kasus : UMKM Depok. Jurnal Vokasi Indonesia,Volume 3 Nomor 1 ,pp 22-30, 2015.

Hutabarat, Febrina. Pengaruh Literasi Keuangan dan Financial Technology Terhadap Inklusi Keuangan Pada Masyarakat Jabodetabek. IPB Bogor.

Humaidi, Ahmad, et al. “The Effect of Financial Technology, Demography, and Financial Literacy on Financial Management Behavior of Productive Age in Surabaya, Indonesia.” International Journal of Advances in Scientific Research and Engineering, vol. 06, no. 01, 2020, pp. 77–81.

Humaira, Iklima.(2018). Pengaruh Pengetahuan Keuangan, Sikap Keuangan, dan Kepribadian Terhadap Perilaku Manajemen Keuangan Pada Pelaku UMKM Sentra Kerajinan Batik Kabupaten Bantul. Jurnal Nominal. Vol. VII, No. 1.

Herculano-Houzel, S., Collins, C. E., Wong, P., Kaas, J. H., & Lent, R. (2008). The basic nonuniformity of the cerebral cortex. *Proceedings of the National Academy of Sciences 105*, 12593-12598.

Otoritas Jasa Keuangan (OJK). (2016), Strategi Nasional Literasi Keuangan Indonesia, Otoritas Jasa Keuangan. Jakarta

Potrich, A. C., Vieira, K. M., and Kirch, G. (2014). Determinants of Financial Literacy: Analysis of the Influence of Socioeconomic and Demographic Variables. 38th AnPAD Meeting.

Puspitaningtyas, Rofi (2020). The Influence of Factors Financial Literacy and Financial Technology Towards Financial Behavior in Purwokerto. Thesis of Management International. Fakultas Ekonomi dan Bisnis, Unsoed.

Rina, Lelahester. (2017). Upaya Peningkatan Literasi Keuangan Melalui Pendidikan Keuangan Dalam Menciptakan Perilaku Menabung Di Kalangan Mahasiswa. Conference Paper.

Sayinzoga, A., Bulte, E. H., and Lensink, R. (2014). Financial Literacy and Financial Behaviour: Experimental Evidence from Rural Rwanda. The Economic Journal.

Scheresberg. (2013). Financial Literacy and Financial Behavior among Young Adults: Evidence and Implications –, volume 6 issue 2 Scholar commons.

Sugiyono. (2010). Statistika untuk Penelitian. Alfabeta. Bandung.

Sugiyono. (2007). “Metode Penelitian Kuantitatif Kualitatif dan R&D”. Alfabeta. Bandung

Tyson, E. (2010). Personal Finance for Dummies, 6th Edition. Wiley Publishing.

Wiharno, Herma.(2018). PengaruhFinancial Knowledge, Financial Behavior dan Financial Attitude Terhadap Personal Financial Management.(Survei Pada masyarakat di Kabupaten Kuningan. JRKA. Volume 4 Isue 1, p.. 64-76

Xiao, J. J. (2008). Applying Behavior Theories to Financial Behavior. Handbook of Consumer Finance Research.

List of Tables

Table 1. Results of Multiple Linear Regression Analysis

Variable	B	t count	Sig.
Constant	3,033	0,908	0,366
social demography (X1)	0,089	0,364	0,717
financial knowledge (X2)	0,541	3.372	0,001
financial attitude (X3)	0,957	4.933	0,000
financial socialization (X4)	0,033	0,335	0,738
financial technology (X5)	0,087	0,671	0,504
R2	0,702		
Sig. F	0,000		

Table 2. Operational definition of variables

No.	Variable	Indicator	Measurement
1	Financial Behavior	Consumption, Cash Management , Saving and Investment, Credit Management (Xiao and Dew , 2011)	Likert scale is to measure the question with the value from 1-5 1 Strongly Dissagree 2 Disagre 3 Neutral 4 Agree 5 Strongly Agree
2	Social Demography	Age, Gender, Education, Income (Agarwalla , 2013)	Likert scale is to measure the question with the value from 1-5
3	Financial Knowledge	Ownership, Saving, Insurance, Investment (Sakinah, 2018).	Likert scale is to measure the question with the value from 1-5
4	Financial Attitude	Financial Orriented, Account Payable, Financial safety, Personal Financial (Sakinah, 2018)	Likert scale is to measure the question with the value from 1-5
5	Financial Socialization	Friends, Family, Media / Internet, money skilled (Venkataraman, 2018).	Likert scale is to measure the question with the value from 1-5
6	Financial Technology	Online transaction, Card payment, Account Receivable. (Ansori, 2019)	Likert scale is to measure the question with the value from 1-5

List of Figures

Figure 1. Research Model