

## ANALYSIS OF THE USE OF FINANCIAL TECHNOLOGY AND FINANCIAL LITERACY ON FINANCIAL BEHAVIOR OF STUDENTS IN BANDUNG CITY

**Lena Amalia**

Sekolah Tinggi Ilmu Ekonomi Ekuitas  
[lenaamalialaaa@gmail.com](mailto:lenaamalialaaa@gmail.com)

**Mirza Hedismarlina Yuneline\***

Sekolah Tinggi Ilmu Ekonomi Ekuitas

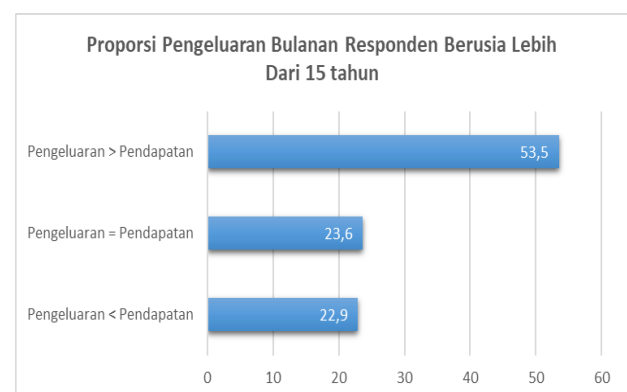
\*Corresponding Author: [mirza.yuneline@ekuitas.ac.id](mailto:mirza.yuneline@ekuitas.ac.id)

**Abstract.** *Financial behavior relates to the behavior of an individual in managing his personal finances, it arises as a result of the great desire of individuals to fulfill their life needs in accordance to their income. The purpose of this study is to examine the factors that influence the Students' financial behavior which are the financial technology adoption and financial literacy. The object of this research is University Students in Bandung city. This research is included in the type of descriptive and verification research with a quantitative approach. The main data used in this research is data obtained from distributing questionnaires to 100 people who are active University students in Bandung city. This research uses probability sampling data collection technique with random sampling method. The results of this study indicate that student's Financial Technology adoption, the financial literacy, and student' financial behavior is in the sufficient category. Partially, both financial technology adoption and financial literacy have significant effect on financial behavior. Simultaneously, Financial Technology and Financial Literacy have a significant effect on Financial Behavior by 49.2% as the result of the coefficient determination, while the remaining 50.8% is influenced by other factors.*

**Keywords:** *Financial Technology, Financial Literacy, Financial Behavior*

### I. INTRODUCTION

Based on a survey by Bank Indonesia, Indonesian society has experienced an increase in consumption, every society tends to have consumptive behavior because every society carries out consumption activities. However, this behavior is considered deviant if consumption activities have exceeded the consumption limit of society in general. Based on the Kompasiana website ([www.kompasiana.com](http://www.kompasiana.com)) Indonesia is ranked 3rd with people who have a high level of consumerism. This can be seen in Figure 1. which illustrates that on average people over the age of 15 years have a greater proportion of expenditure than income.

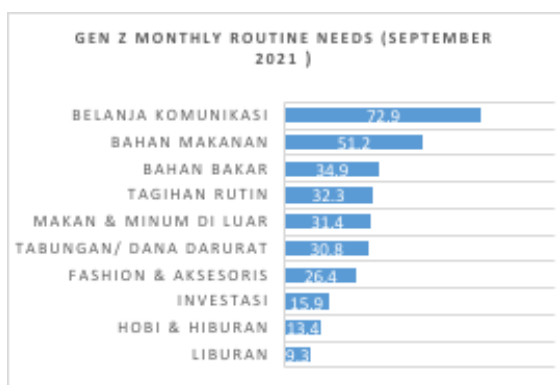


**Figure 1.** The proportion of respondents' monthly expenses Aged > 15 Years  
Source: Databox

*Insight Center (KIC)* survey, the majority of respondents or 53.3% stated that monthly expenses over the past year were greater than income. This was due to the inability to manage their finances, making expenses higher than income. Consumptive nature can attack teenagers into adulthood because of their unstable nature and cannot limit themselves, but it does not rule out that an adult has a consumptive nature.

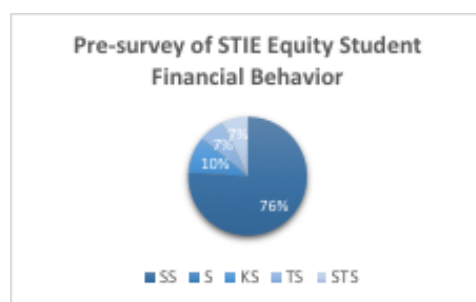
It can be concluded that people tend to have consumptive financial behavior in spending their money. Financial behavior is a person's ability to organize planning, budgeting, checking, managing, controlling, disbursing and storing financial funds on a daily basis (Kholilah & Iramani, 2013). A person's behavior is based on the knowledge he has. The more he understands something, the more he will act according to the level of knowledge he has, especially regarding financial knowledge that influences financial behavior.

When someone has bad financial behavior, they will allocate more funds for spending than using it to save or invest. Like generation Z, the generation born in 1997 – 2012, which is currently 11 – 26 years old. This generation is known as a generation that depends on technology, especially the internet and social media. The abilities and skills possessed by generation Z may have a consumerist attitude. It can be proven by data showing that Gen Z prioritizes shopping for pulses compared to other needs.



**Figure 2.** Routine Needs Gen Z Monthly  
Source: Databoks (processed by author)

The results of the survey by Katadata Insight Center (KIC) and Zigi show that the most portion of Gen Z's monthly routine spending, or 72.9%, is for communication, such as buying phone credit, internet, and so on. In addition, 30.8% for saving or emergency funds and 15.9% for investing. So it can be concluded that gen Z leads to consumptive behavior, because they more often use their money to make shopping transactions to buy credit because of the convenience provided in transactions compared to setting aside money for saving and investing. Based on these data, researchers conducted research on students because students belong to the Gen Z category with an average age of under 26 years. And to prove this phenomenon, the researchers conducted a pre-survey of 30 STIE Equity student respondents to describe their financial behavior.



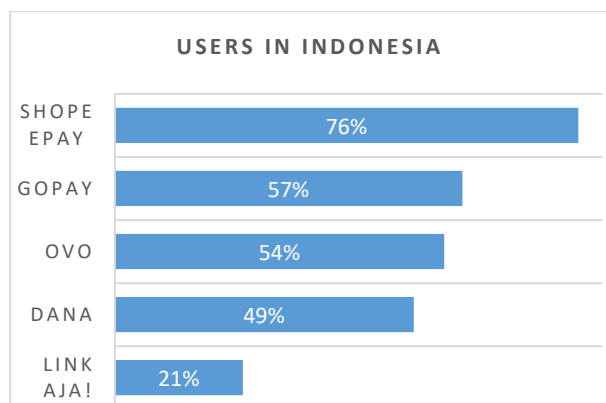
**Figure 3** Results of the STIE Ekuitas Student Financial Behavior Pre-Survey  
Source: Data processed (2023)

Based on the results of the pre-survey regarding student financial behavior, it shows that 76% of respondents have consumptive behavior. Because they are tempted by promos, *cashback* and shopping using paylaters as a way for them to get the items they want using the *e-wallet* payment method. Thus, one of the factors thought to be capable of influencing financial behavior is *financial technology*.

*Financial technology* is in the form of innovation that provides convenience and comfort for people in the financial sector, because people can make transactions only with *smartphones* and the internet. Students as young people are individuals who are close to information and digital technology, where they are able to apply all activities at one time using existing information technology.

One of the developments in modern technology is currently experiencing very rapid progress and is related to financial technology, namely *e-wallets*. *E-wallet* is a service that is electronic in nature and functions to store data and payment instruments. *E-wallet* is an alternative payment system created to make it easier for users to make transactions with *e-wallets*. In addition, users can store their money digitally which can be used to make financial transactions, both online and offline.

The *e-wallet* services currently in demand by students include Gopay, ShopeePay, OVO, DANA, and just Link. The convenience offered by the *e-wallet* can help us pay bills, order transportation online, buy food online and pay for activities. *e-commerce*.



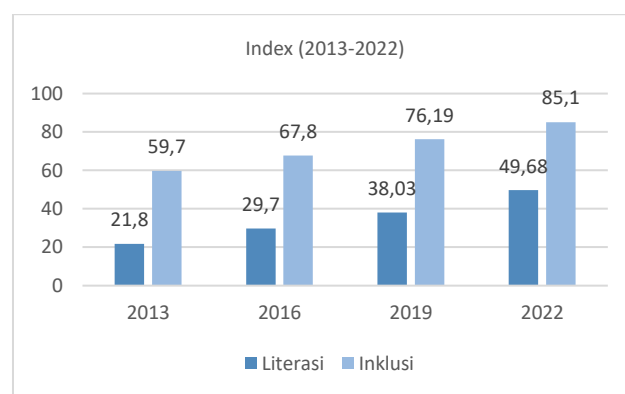
**Figure 4.** Use of Digital Wallets in Indonesia  
Source: Momentum Works (data processed, 2021)

Based on the picture above according to the Momentum Works report, there are several types of *e-wallet products*, it can be seen that ShopeePay is the most widely used digital wallet in 2021. It can be seen from the highest penetration rate, namely ShopeePay users which reached 76% in March 2021. Meanwhile, the lowest is in the LinkAja application! With a user penetration rate of 21%.

Payments made using *fintech* have the potential to affect user behavior patterns in managing finances. This condition makes students able to absorb more information to support existing activities, but this condition creates a problem where students are enabled to become more consumptive in spending their money. Such as excessive use of *e-wallets to shop online and always use the cashback* offered. Therefore, to

prevent excessive consumerism from occurring among students, financial literacy is needed, so that they are able to control their finances wisely so that patterns of consumerism do not create problems for students in the future (Lusardi & Mitchell, 2014).

Healthy financial behavior can be seen from the attitude of an individual in managing their finances, the management of each individual's personal finances is also related to financial literacy. This indicates that using a digital wallet is not balanced with financial literacy, so it is likely to have consumptive behavior.



**Figure 5.** Indonesian Financial Literacy and Financial Inclusion Index (2013-2022)  
Source: Databoks (data processed, 2022)

In the picture above, based on the 2022 National Financial Literacy and Inclusion Survey (SNLIK), it can be said that the financial literacy of the Indonesian people has improved every year. The financial literacy index score increased by 49.68% compared to the previous year of only 38.03%. Even though it has increased, the index score is still relatively low because compared to a population of 273.8 million people. In addition to the level of financial literacy of the Indonesian people, financial literacy cannot be separated from financial inclusion. Financial inclusion shows the level of ability to use financial services by the public. So it can be seen from the picture above which shows that financial inclusion has increased very high every year, inversely proportional to financial literacy. This indicates that a high level of inclusion and not balanced with financial literacy will lead to consumptive behavior.

When you have good financial literacy, it will be directly proportional to decision making and financial management if the better financial literacy you have, the more appropriate a person is in making financial decisions and the better at managing finances. Financial literacy is needed by all groups including students to support good financial management. Students are able to take advantage of and use the available digital financial services, but most do not have the knowledge or financial literacy of these financial services.

With a good level of financial literacy, students can improve their financial planning skills and avoid unsafe financial instruments. The higher the level of understanding of financial literacy, will have a positive impact on financial behavior. . This includes the ability to discern financial choices, discuss money and financial matters, plan for the future, and respond competently to events that affect day-to-day financial decisions, including those that occur in the economy in general. Based on OJK (2018), financial literacy is basically divided into 2 types, namely basic financial literacy, which shows a person's ability to understand simple financial concepts and advanced financial literacy, which shows a person's ability to understand investment finance concepts, especially in the capital market.

This research is in line with previous research that has been conducted by (Widiastuti et al., 2020) which states that there is a positive relationship between financial technology, financial literacy and financial behavior

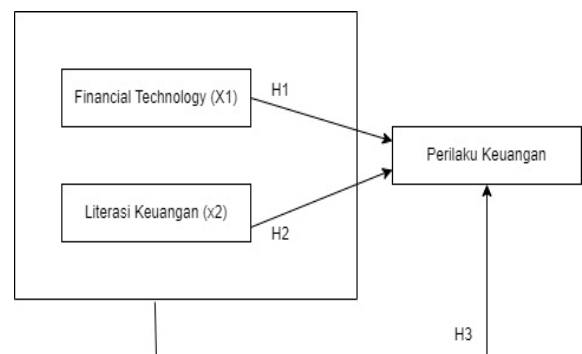
Based on the background above regarding the use of *e-wallets* , the authors are interested in conducting research on how students' financial behavior in the city of Bandung uses a related theory, namely *Financial Technology* and *Financial Literacy* .

## II. METHODS

This research is a descriptive research. The data source used by the researcher is primary data, which comes from the results of the questionnaire answers obtained directly from

the object under study. The object of research is *Financial Technology*, *Financial Literacy* and *Financial Behavior*.

This research uses a probability sampling technique, namely random sampling and sample size using the Cochran formula with the criteria of active students in the city of Bandung and have made transactions with one of the *e-commerce services*. The population used by students in the city of Bandung. Based on the conceptual description, review of previous research and the conceptual framework, the hypotheses proposed in this study are as follows:



1. H1: *Financial Technology* has a positive effect on financial behavior of students in the city of Bandung partially.
2. H2: *Financial Literacy* has a positive effect on *Financial Behavior* of Students in the city of Bandung partially.
3. H3: *Financial Technology* and *Financial Literacy* have a positive effect on *Financial Behavior* of Students in the city of Bandung simultaneously.

The operational variable for this research as follows:

Table 1. Operational Variable

Variable	Indicators	Scale
Financial Technology (X <sub>i</sub> ) (Kennedy & Harefa, 2018; Venkatesh et.al., 2012)	1. Performance Expectancy (PE) 2. Effort Expectancy (EE) 3. Social Influence (SI)	Ordinal

Variable	Indicators	Scale
	4. Facilitating Condition (FC) 5. Hedonic Motivation (HM) 6. Price Value (PV) 7. Habit (H)	
Financial Literacy (X <sub>2</sub> ) (Laily, 2016; Cheung, et.al, 2015; Yuneline & Suryana, 2018)	1. General Financial Knowledge 2. Savings & Loans 3. Investment 4. Insurance	Ordinal
Financial Behavior (Y) (Ingale & Paluri, 2022).	1. Obsession 2. Power 3. Budget 4. Achievement 5. Evaluation 6. Anxiety 7. Retention 8. Non Generous	Ordinal

### III. RESULTS AND DISCUSSION

The questionnaires were distributed to 100 respondents who were active students in the city of Bandung. This questionnaire consists of 52 questions, of which 19 questions are for the Financial Technology variable (X<sub>1</sub>), 11 questions are for the Financial Literacy variable (X<sub>2</sub>) and 22 questions are for the Financial Behavior variable (Y). 76% of respondents are female with 99% of them were 19 until 23 years-old. 32% of respondents are STIE Ekuitas' students, 15% are UPI's students, 11% are UIN Sunan Gunung Djati's students, 6% are Unpas' student, 5% are contributed by each Poltek STIE LAN and Unpad's student, and the rest are other university in Bandung.

All the research instruments are passed the validity test by the amount of higher than 0.195. It also passed the reliability test with Cronbach alpha's value are higher than 60%.

#### Classic Assumption Test

The results of the normality test for the dependent variable show that  $0.200 > 0.05$  so it

can be concluded that the variables studied have data that are normally distributed. The results of the multicollinearity test show that the VIF value on the *financial technology* and financial literacy variables is  $1.927 < 10$ . It can be concluded that this study did not have multicollinearity. The results of the autocorrelation test were carried out using the Durbin-Watson test (DW test). It is known that the DW is 2.047 for comparison using a significance value of 5%. The number of samples (n) is 100. And the number of independent variables is 2 (k=2), so the decision criteria obtained are  $dU < d < 4-dU = 1,752 < 2,047 < 2,285$  meaning that there is no autocorrelation in this regression model.

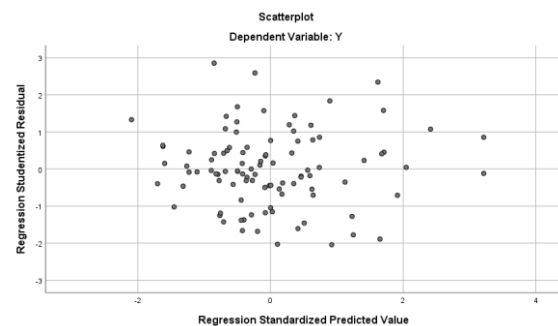


Figure 6. Heteroscedasticity Test Results

From the picture it can be seen that the points spread randomly and are spread both above and below it can be concluded that there is no heteroscedasticity.

#### The Multiple Linear Regression Analysis

The multiple linear regression analysis aims to determine the impact of financial technology and financial literacy on financial behavior. The following are the multiple linear regression analysis result:

Table 2. The Multiple Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16,839	5,449		3,090	0,003
Financial Technology	0,544	0,118	0,465	4,625	0,000
Financial Literacy	0,577	0,197	0,294	2,925	0,004

The results of multiple linear regression analysis above are formed in equation as follows:



$$Y = 16,839 + 0,544(X_1) + 0,577(X_2)$$

Based on table above, the t-test results showed that the significance value of the impact of financial technology on financial behavior is 0.000 which is lower than 5%, and the  $t_{count}$  value is 4.625 which is higher than the  $t_{table}$  value is 1.985, it can be concluded that  $H_1$  is accepted. This means that there is a significant effect of Financial Technology on Financial Behavior.

Furthermore, in the financial literacy variable, the significance value is 0.004 which is lower than 5%. The  $t_{count}$  value is 2.925 also higher than  $t_{table}$  value. It can be concluded that  $H_2$  is accepted. This means that there is a significant effect of Financial Literacy on Financial Behavior.

### Simultaneous Test Result

Simultaneous testing is carried out to find out how much the independent variables ( $X_1$  and  $X_2$ ) jointly affect the dependent variable (Y), then it will be tested using F-Test statistics. The following is the result:

**Table 3.** Simultaneous Test Results

Model		Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	5178,085	2	2589,042	46,914	0,000
	residual	5353,191	97	55,188		
	Total	10531,276	99			

From the table above it is obtained  $F_{count}$  is 46.914 which is greater than  $F_{tabel}$  of 3.090. The significance value resulted 0.000 which is less than 5%. So it can be concluded that financial technology and financial literacy simultaneously has effect the financial behavior of students in Bandung city.

### Coefficient Determination Analysis

The coefficient of determination is used to determine how big the influence financial technology and financial literacy on the financial behavior of students in Bandung City. The following are the result:

**Table 4.** Coefficient Determination Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,701	0,492	0,481	7,428831

The results showed that the coefficient correlation is 70.1% which indicated that financial technology and financial literacy has strong connection on determining the financial behavior. Thus, the results of R-Square value is 49.2% which indicated that financial technology and financial literacy have a contribution of 49.2% on financial behavior, while the remaining of 50.8% are influenced by other factors.

### Descriptive Analysis

In Financial Technology variable ( $X_1$ ), the respondents' result on the Facilitating Condition indicator with a percentage of 71% are included in the sufficient category. Respondents' responses regarding the questions that have been attached, with the features provided by Fintech helping with daily finances. Making respondents interested in using e-wallets because they experience convenience in their daily needs. Meanwhile, the Price Value indicator with a percentage of 59% is included in the low category. Respondents' responses regarding the questions that have been attached, with the existence of admin fees and interest when using the e-wallet, the respondents did not object. Therefore, it makes the respondents unconscious that they have been behaving consumptively. Overall, the result of data processing of 67%, which showed that respondents are in the sufficient category on the usage financial technology. The results are in line with previous research conducted by Widiastuti et.al. (2020) and Ferdiansyah & Triwahyuningtyas (2021)

In Financial Literacy variable ( $X_2$ ), the respondents' results to the Investment indicator with a percentage of 71% are in the sufficient-literate category. Respondents' responses regarding the questions that have been attached, respondents have sufficiently understood the advantages, risks and losses that will be experienced when making an investment. Meanwhile, the Savings and Loans indicator reach of 84% is included in the well-literate category. Respondents' responses regarding the

questions that have been attached, which means that respondents already understand the importance of saving and investing. Overall, the result of data processing of 73%, which showed that respondents are in the sufficient-literate category on the financial literacy. The results are in line with previous research conducted by Gultom et.al. (2022), Wati & Panggiarti (2021), and Widiastuti et.al (2020)

In Financial Behavior variable (Y), the respondents' answers to the Obsession indicator with a percentage of 68% are included in the sufficient category. Respondents' responses regarding the questions that have been attached, respondents already understand enough about the excessive use of e-wallets which makes respondents behave consumptively such as using pay later to get the desired goods. Meanwhile, the Budget indicator with a percentage of 84% is included in the high category. Respondents' responses regarding the questions that have been attached, which means that respondents already understand managing finances such as buying something based on its benefits and have adhered to the budget that has been made. Overall, the result of data processing of 72%, which showed that respondents are in the sufficient category on the usage financial behavior.

In this study, the Financial Technology and Financial literacy have contributed effect on the Financial Behavior. Thus, the available Fintech and adequate related to financial literacy that is obtained correctly will influence the respondents to have good attitudes and behavior related to their finances. The results of this study are in line with previous research conducted by Widiastuti et al., 2020

#### IV. CONCLUSION

1. Based on the respondents' responses to the results of the descriptive analysis using the *Financial Technology* and Financial Literacy variable questionnaires
  - a. According to the results of the descriptive analysis of the respondent's response data which has been processed regarding

*Financial Technology* is on the continuum line with a percentage level of 67%, which means it belongs to the middle category. So it can be concluded that students in the city of Bandung already understand enough about the use of *Financial Technology* coupled with the application of an understanding of Financial Literacy where *Financial Technology* makes it easier for people to plan their finances

- b. According to the results of the descriptive analysis of the respondent's response data which has been processed regarding Financial Literacy is on the continuum line with a percentage level of 73%, which means it is included in the sufficient category . So it can be concluded that students in the city of Bandung already understand financial literacy enough, such as knowing the importance of saving and investing.
2. The research results show that:
- a. The results of this study indicate that the *financial variable Technology* has a partial and significant effect on Financial Behavior.
  - b. The results of this study indicate that the variable Financial Literacy has a partial and significant effect on Financial Behavior.
  - c. Simultaneously the results of the analysis of *Financial Technology* and Financial Literacy on Financial Behavior simultaneously amounted to 49.2%, the remaining 50.8% which was influenced by other factors.

#### V. ACKNOWLEDGEMENT

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