

# THE INFLUENCE OF DEMOGRAPHY, SOCIAL MEDIA, RISK ATTITUDE, AND OVERCONFIDENCE ON THE FINANCIAL LITERACY OF USERS SOCIAL MEDIA IN SURABAYA

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## ABSTRACT

This study aims to examine the influence of demography, social media, risk attitude, and overconfidence on the financial literacy of users of social media in Surabaya. The sample used in this study amounted to 300 respondents. Data were collected using an online questionnaire via Google Form. The data analysis method used in this study is PLS. The analysis test results show that there is an effect of demography, social media, risk attitude, and overconfidence on users' financial literacy in Surabaya.

**Keywords:** Demography, Social Media, Risk Attitude, Overconfidence, Financial Literacy.

## INTRODUCTION

It is a dream for everyone because besides achieving all desires to have financial stability because it also provides a sense of security for the owner (CFPB, 2015). To achieve this financial stability, every individual is encouraged to make choices to determine their economic well-being. With various demographic, social, and economic trend issues and the increasing number and complexity of financial products, financial literacy is increasingly needed (OECD, 2005). Chen & Volpe (1998) also revealed that an increase in financial literacy is needed because many people do not understand personal financial management. According to the Financial Services Authority (OJK), the index of financial literacy of Indonesia in 2019 was 38.03, which means that among 100 Indonesians, 38 people are well-literate (OJK, 2019). This index shows that there are still many Indonesians who do not have financial awareness. With the survey results of financial literacy in 2019, OJK is still looking for ways to perfect the strategy for developing financial literacy to make it more effective. Someone with low financial literacy often makes mistakes such as bad financial decisions in investing in the capital market, debt financing, and financial planning, which will impact the person's financial condition (Chu, 2016). This factor is in line with studies that conclude that the main factor for individuals to have financial well-being is the level of financial literacy they have (Sherraden, 2016).

The level of financial literacy that each person has is different, which is influenced by several things. One of the factors that affect financial literacy is demographics (Lazar & Chandirasekar, 2016). The differences that include age, education, income, and gender cause financial literacy for each person to be different (Mandell, 2008). It is deplorable if someone has a high income but cannot manage their income because of their lack of financial literacy, suppose someone cannot promote a formed business because they cannot allocate their income for investment.

However, on the other hand, the development of information technology has a role as an informal institution in providing education related to finding solutions for financial problems. This informal institution relatively shows that in the current era, financial literacy is not only influenced by formal education but also by informal education (Karaa & Sarer, 2015; Wahono & Pertiwi, 2020). Informal education is education obtained through information technology such as social media. Social media is a transformation of forms of social interaction, communication media, and content used to share information and experiences such as photos, videos, perceptions, and insights into something (Dann & Dann, 2011). Social media affects financial literacy because social media is a new source of information to improve financial literacy (Loibl & Hira, 2005). The social media platforms that are developing and popular today are Line, Youtube, WhatsApp, Facebook, and Instagram (Hootsuite, 2019). The five social media are used to facilitate the exchange of information, including financial information. Based on the results of research by Hootsuite (2019), the number of social media users in Indonesia in 2019 was 56% of the total population, and the average person spends 3 hours 26 minutes a day on social media.

Financial education information presented on social media can help strengthen financial literacy. However, social media also has risks because not everything that is presented on social media is true because of the contributions and comments from millions of users whose information can't always be trusted. The uncertainty of information in social media is a risk that will or will not be accepted, depends on the willingness of each person to take risks (risk attitude) (Weber & Milliman, 1997). Risk attitude affects how risk will be identified and handled. Each individual will have a different perspective, where some reject risks but the benefits are not maximal, and some accept risks with a higher rate of return (Rohrmann, 2008).

In addressing these risks, people who seek risk are more likely to increase overconfidence than people who avoid risk. Overconfidence is a feeling of trusting in someone's self excessively (Griffin & Varey, 1996). Everyone will have a level of different confidence in themselves, some are high and some are low. The level of confidence that a person has tends to influence a person in making financial decisions. Individuals who have a high level of overconfidence can be overconfident in their assumptions, which have the possibility of being wrong and can indirectly influence others to make wrong financial decisions and reduce their wealth. Therefore, the understanding of financial literacy is influenced by the willingness of individuals to accept risks (Widjaja & Pertiwi, 2021) when accessing and analyzing information on social media in producing financial decisions based on their level of self-confidence.

Based on research conducted by Ibrahim and Tayfun (2016), the results show that demographics, social media, and overconfidence influence financial literacy. Financial literacy is increasing by using social media as a new source of information, such as following pages or financial accounts. Overconfident people will be better at making financial decisions than people who are not overconfident. According to Zaenal and Erin (2019), it was found that overconfident behavior is influenced by a risk attitude or attitude towards risk where the more you like/dare to take risks, the higher the level of overconfidence. Therefore, the researcher wanted to examine the variables of social media, demographics, overconfidence, and risk attitude towards the variable's financial literacy of users social media in Surabaya more deeply, since the data on the penetration of social media use in Surabaya was 83%, which is higher than the national average of 73.7% (Trenasia, 2020).

## **LITERATURE REVIEW**

### **Financial Literacy**

According to Chen & Volpe (1998), financial literacy is the ability to manage finances so that you can live more prosperously in the future. There are 4 essential aspects in financial literacy, namely:

1. Personal finance, which includes understanding several related matters with basic knowledge of personal finance.
2. Saving and borrowing, including knowledge related to savings and loans such as the use of credit cards.
3. Insurance is defined as the part that includes basic insurance knowledge such as life insurance and motor vehicle insurance.
4. Investment is knowledge about market interest rates, mutual funds, and investment risk.

### **Demography**

Demography is a study that studies the human population (Loix & Hove, 2005). According to Robb & Sharpe (2009), the demographic variable is a study that studies the characteristics, attitudes, and behavior of a person, which is influenced by several factors such as age, gender, education level, and income. These variables are demographic characteristics that are used to differentiate between communities.

### **Social Media**

Social Media Research Group (SMRG) states that social media is understood as a web-based platform that allows and facilitates users to produce and share information and interact online with other users (Social Media Research Group, 2016). Prabha & Vasantha (2016) stated that this social media platform would have an important impact on a person's decision-making before determining financial decisions based on the information, they get on social media.

## Risk Attitude

According to Pennings (2002), risk attitude reflects the general tendency of consumers to take risks in a consistent manner. The concept of this risk attitude is related to risks related to everyday life where we will be faced with things that are not certain (Jacobs-Lawson & Hershey, 2005)

## Overconfidence

Overconfidence is a feeling of overconfidence in someone's self. According to Griffin & Vary (1996), overconfidence is divided into two types: overconfident because they too believe in their knowledge and are too confident in their abilities. According to Geravis & Odean (2001), overconfidence in the financial literature is defined as overestimating something. Overconfidence often occurs due to overconfidence when utilizing the information obtained (Ackert & Deaves, 2010). It is only an illusion of ability due to several reasons, such as lack of experience and limited expertise in interpreting existing information.

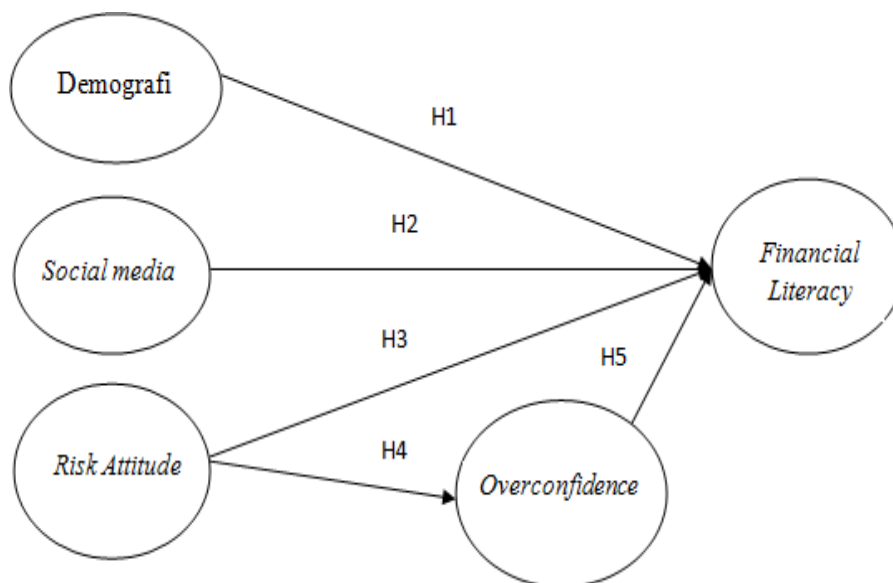


Figure 1. Research Framework

## METHODOLOGY

### Type of Research

This research is a quantitative type of research. Quantitative research, according to Sugiyono (2017), is a type of research to determine the effect or relationship between two or more variables. The quantitative research that is carried out is an associative type that intends to describe and test the effect. This research was conducted to determine the effect of demography, social media, risk attitude, and overconfidence on financial literacy of users of social media.

### Population and Sample

The population in this study is people in Indonesia who have smartphones or other technologies to make social contacts and use social media. The sample collection in this study uses the purposive sampling technique, where this method uses the researcher's criteria in selecting the sample. In this study, the sample collection criteria lives in Surabaya and uses one or more social media applications such as Line, Instagram, WhatsApp, Facebook, and Youtube every day.

### Types and Data Collection Methods

The type of data used in this study is primary data. According to Sugiyono (2017), primary data is direct data collected by researchers from the first source. In this study, primary data was obtained through

respondents' answers in filling out questionnaires distributed online in the form of Google Form to users of social media in Surabaya.

**Variable:**

1. Concept: Financial literacy  
 Operational definition: The level of understanding of users social media regarding finance.  
 Empirical indicators: Statements that measure an individual's understanding of personal finance, saving and borrowing, insurance, and investment (Chen & Volpe, 1998).  

Interval	Coding
False	0
True	1
2. Concept: Risk attitude  
 Operational definition: Measuring users' attitude to the risks they face.  
 Empirical indicators: Statements that measure the responses of users social media when faced with financial risks (Jacobs-Lawson & Hershey, 2005).
3. Concept: Overconfidence  
 Operational definition: self-confidence excessive the users of social media.  
 Empirical indicators: Statements that measure the beliefs of users social media (Bhandari & Deaves, 2006).
4. Concept: social media  
 Operational definition: A platform for obtaining information.  
 Empirical indicators: Statements that measures of of social media individual'sfor finance (Ibrahim & Tayfun, 2016).
5. Concept: Demographics  
 Operational definition: Characteristics of each user social media  
 Empirical indicators: Age, income, gender, and level of education.

**Data Analysis Techniques**

Data analysis will be carried out through data collection, which is done by distributing questionnaires via google form and the data collected will be processed using the help of Smart PLS and then analyzed. The questionnaire will also be carried with coding as follows;

**Table 1.** Research questionnaire

No Coding	Variable	Coding	
1	Financial Literacy	0 = False 1 = True	
2	Demographics	Age	1 = 17-25 years 2 = 26-35 years 3 = 36-45 years 4 = 46-55 years
		Opinions late	1 = <Rp.50.000.000 / year 2 = Rp.50.000.001- Rp.250.000.000 / year 3 = Rp.250.000.001- Rp.500.000.000 / year 4 => Rp.500.000.001 / year
		Gender	0 = Male 1 = Female
		Level of Education	1 = ≤ SMP 2 = SMA 3 = D1 / D2 / D3 4 = S1 / S2 / S3
		Risk Attitude Overconfidence social media	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

## Partial Least Square

Partial Least Square is a predictive technique that can handle many independent variables that occur even though there is multicollinearity between variables. The advantage of this method is that the data does not have to have a normal distribution multivariate. Indicators with categorical, ratio, ordinal, interval, and ratio data scales can be used. There are 2 PLS functions, namely the inner model and outer model. The inner model is more towards regression to assess the effect of one variable on other variables, while the outer model is more towards testing the validity and reliability. PLS is used because it can thoroughly analyze the influence of demographic variables, social media, risk attitude, and overconfidence on variables financial literacy in this study. The PLS steps are as follows:

### 1. Constructing a Path Diagram

This is a diagram that shows the relationship between the independent variable and the dependent variable. The relationship is depicted with a single arrow. This study uses a formative indicator model where it is assumed that all indicators affect a single construct. This relationship model is a causal relationship that originates from the indicator towards the latent variable. Thus, changes that occur in the indicators will be reflected in their latent variables. This formative model does not assume the need for correlation between indicators.

### 2. Measurement of the Outer Model

#### a. Convergent Validity

Convergent validity is a measurement of a construct that is theoretically interrelated. Convergent validity is assessed based on outer loading  $\geq 0.5$ , which is stated as ideal or valid (Latan & Ghozali, 2013).

#### b. Discriminant Validity

According to Latan and Ghozali (2013), discriminant validity is a measure to test whether the indicators of a construct are not highly correlated with other construct indicators. The assessment is based on cross-loading the largest compared to other variables.

#### c. Composite Reliability

Composite reliability is a measure to test the reliability of a construct. The accepted limit value for the reliability level composite is 0.6 (Latan & Ghozali, 2013).

### 3. Measurement Inner Model

The inner model can be evaluated by looking at the R-square of the dependent variable. The greater the R-square value, the greater the influence of the independent variable on the dependent variable. Then used Q-square to measure the value of the observations generated by the model and its parameter estimates. If the value of Q-square  $> 0$ , then the model has predictive relevance and vice versa if the value of Q-square  $< 0$ , then the model is lacking. Relevance of predictive formula for Q-square itself is:

Q-square can be calculated using the following formula:

$$Q^2 = 1 - ((1 - R_1^2) (1 - R_2^2) (1 - R_3^2))$$

This test is conducted to see whether the independent variable affects the dependent variable. The level of significance used in this study is 5%. The basis for decision making with a significance level of 5%, according to (Hair & Anderson, 2010) is: If the t-stat  $< 1.96$ , then it fails to reject H0 and If the t-stat is  $\geq 1.96$ , then reject H0

## ANALYSIS AND DISCUSSION

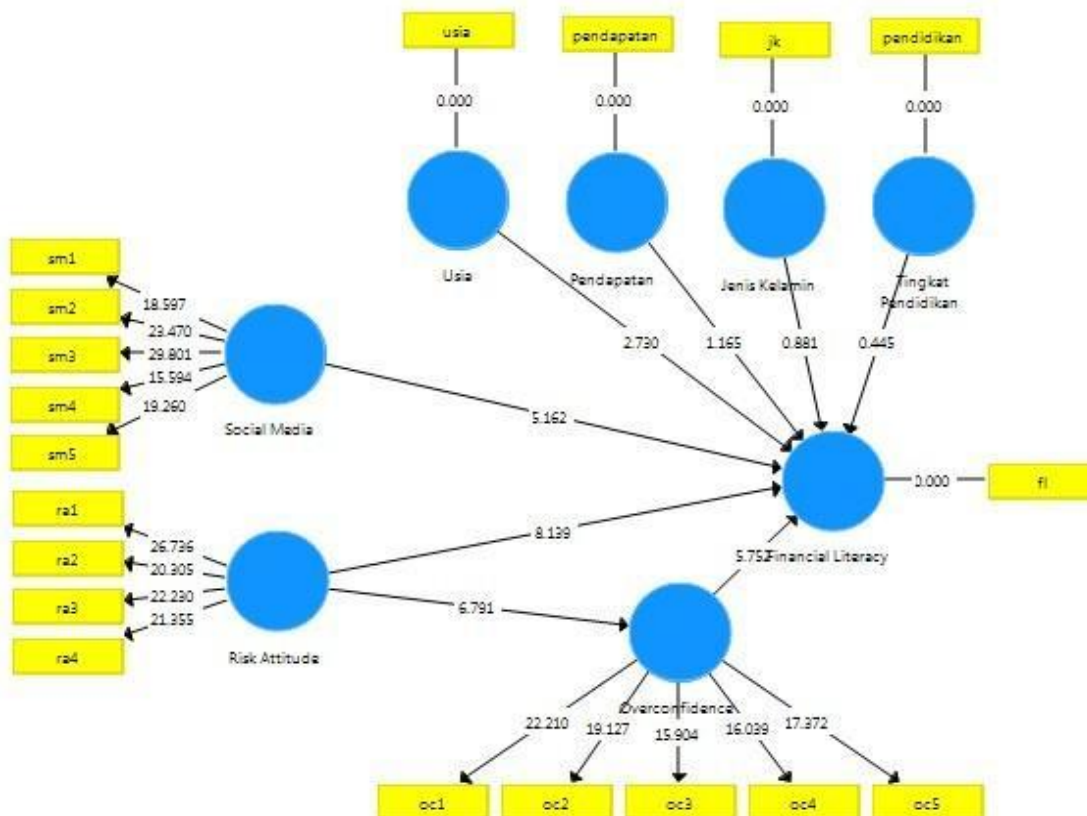
### *Overview of Research Objects*

In this study, data was obtained through distributing questionnaires via google form to 300 users of social media in Surabaya. The following is a table of descriptions of respondent profiles:

**Table 2.** Descriptive of respondents

	Question	Frequency	Percentage
Age	17-25 years	94	31%
	26-35 years	66	22%
	36-45 years	67	23%
	46-55years	73	24%
Income	≤ 50,000,000 / year	128	43%
	Rp 50,000,001 – Rp 250.000.000 / year	115	38%
	Rp 250,000,001 - Rp 500,000,000 / year	57	19%
	> IDR 500,000,000 / year	0	0%
Gender	Male	150	50%
	Female	150	50%
Education level	≤ SMP	64	21%
	SMA	98	33%
	D1 / D2 / D3	59	19%
	S1 / S2 / S3	79	27%
Social media used daily	line	191	63.70%
	Instagram	207	69.00%
	WhatsApp	229	76.30%
	Facebook	142	47.30%
	Youtube	184	61.30%
Average use of social media	<1 hour	33	11%
	1 – 2 hours	33	11%
	2 – 3 hours	75	25%
	3 – 4 hours	73	24.30%
	>4 hours	86	28.70%

**Path Analysis**



**Figure 2.** Path Analysis

## Measurement of Outer and Inner Model

### Convergent Validity

Convergent validity is assessed based on outer loading  $\geq 0.5$  expressed as ideal or valid.

**Table 3.** Outer Loading test

Variables	Indicator	Value Outer loading
Financial Literacy	FI	1
Age	Age	1
income	income	1
Gender	jk	1
The level education	of education	1
Social Media	SM1	0.73
	SM2	0.743
	SM3	0.802
	SM4	0.609
	SM5	0.737
Risk Attitude	RA1	0.777
	RA2	0.743
	RA3	0.754
	RA4	0.731
Overconfidence	OC1	0.736
	OC2	0.711
	OC3	0.703
	OC4	0.8
	OC5	0.698

### Discriminant Validity

This measurement is carried out with a value cross-loading. An indicator is said to meet the requirements if the value of the cross-loading indicator on the variable is the largest compared to other variables. Each indicator has met the discriminant validity criteria because it has a score loading higher on its construct than the score loading on other constructs. This shows that each indicator in this study represents a latent variable in its block.

### Composite Reliability

In this measurement, the accepted limit value for the level composite reliability is 0.6. The following is the value composite reliability for each variable.

**Table 4.** Value composite reliability

Variable	Composite Reliability
Minimum	1
Income	1
Gender	1
Education level	1
Financial Literacy	1
Social Media	0.859
Risk Attitude	0.838
Overconfidence	0.835

The value of composite reliability of each variable can be said that each of the above 0.6 so that each variable said to have good reliability. Based on the results obtained through Smart PLS, the resulting value is R-square 0.432 for Financial Literacy and 0.122 for Overconfidence. In the financial literacy variable, 43.2% of the research data is capable of explained by this study, while factors outside this research model explain the remaining 57.8%. In addition to the financial literacy variable, the overconfidence variable also produces the number 0.122, which means 12.2% of the research data can be explained in this study. In

comparison, factors explain the remaining 87.8% outside of this study. In the calculation of the Q-square in this study, the result was 0.501. This figure is already above 0, so it can be said that this research model has predictive relevance a fairly good value.

### Hypothesis Test

The test uses the t-statistic value of the effect of the independent variable on the dependent variable. The research hypothesis can be accepted if the t-statistic > t table at an error rate of  $\alpha = 5\%$ , namely 1.96. Here is the coefficient of influence (original sample estimate) and the t-statistic on the inner workings of the model:

**Table 5.** The Results of hypothesis

Effect of	T-stat	Decision of hypothesis	Specification
Age → FL	2.675	reject H0	Significant
Revenue → FL	1.157	failed to reject H0	Not Significant
Gender → FL	0.923	failed to reject H0	Not Significant
Level Education → FL	0.449	failed to reject H0	Not Significant
SM → FL	5.038	reject H0	Significant
RA → FL	7.516	reject H0	Significant
RA → OC	7.135	reject H0	Significant
OC → FL	5.762	reject H0	Significant

## CONCLUSIONS AND RECOMMENDATIONS

Conclusions that can be drawn from the results of the analysis and discussion are as follows:

1. Age has a significant effect on the financial literacy of users' social media in Surabaya.
2. Income does not have a significant effect on the financial literacy of users of social media in Surabaya.
3. Gender does not have a significant impact on the financial literacy of users of social media in Surabaya.
4. The level of education does not significantly affect the financial literacy of users' social media in Surabaya.
5. Social media has a significant effect on the financial literacy of user's social media in Surabaya.
6. Risk attitude is having a significant impact on the financial literacy of users of social media in Surabaya.
7. Risk attitude has a significant effect on the overconfidence of users of social media in Surabaya.

Suggestions that can be given based on the results of this study are as follows:

1. Social media users are expected to increase the use of social media further to strengthen their financial literacy.
2. For further researchers, it is hoped that this research can be used as a further reference for research related.

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