

## Does parental socialization affect financial literacy in Indonesia?



Raden Aswin Rahadi<sup>1</sup>, Gianina Nadya Putri<sup>1</sup>, Bagus Aditya Nugraha<sup>1</sup>, Taufik Faturohman<sup>1</sup>, Alfred Boediman<sup>2</sup>, Kurnia Fajar Afgani<sup>1</sup>, Jumadil Saputra<sup>3,\*</sup>

<sup>1</sup>School of Business and Management, Institut Teknologi Bandung, Bandung, Indonesia

<sup>2</sup>The University of Chicago Booth School of Business, Chicago, USA

<sup>3</sup>Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia

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### ABSTRACT

The technological advancement of Industry 4.0 embarked on a trend of digital payment in Indonesia to promote a cashless society. However, the rapid advancement of financial digitalization in the world should be prepared for the changes of a well-literate society. In Indonesia, a cashless society has been intensively promoted. But the low level of literacy index from its younger generation, this campaign has struggled. Among several factors, this study seeks to investigate the effect of parental socialization on improving financial literacy from this generation dominated by undergraduate students in Bandung, West Java, Indonesia. This study is designed using qualitative and quantitative approaches. The qualitative data was collected by interviewing as many as 10 parents. Also, the quantitative data were gathered by distributing the online survey questionnaire to 204 public, and private undergraduate students aged 20-24 in Bandung using Google form started January to May 2020. The data collection process was chosen to solve some constraints during the pandemic of COVID-19. This study has successfully produced a conceptual framework based on parents' perspectives. Through a data analysis process using multiple linear regression, this study found that money allowance and trust variables significantly positively affect financial literacy among undergraduate students in Bandung, West Java, Indonesia. In conclusion, this study has successfully investigated the effect of parental socialization on improving financial literacy. The parents' decisions will determine their children's proficiency in money management. Also, this study found a new model that differs from the previously developed model in the United States. For the Bandung context, these two factors are perceived as effective socialization factors from the perspective of undergraduate students.

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### 1. Introduction

The technological advancement of Industry 4.0 embarked on a trend of mobile payment in Indonesia to promote a Cashless Society (Ilham et al., 2019; Rahadi et al., 2021; 2022). As reported by Indonesia CNBC in "IPSOS Marketing Summit 2020: Indonesia, the next cashless society" around 25 % of Indonesian use digital payment already. They perceived it as a pleasant experience. The respondents feel safer, more comfortable, and more confident using digital

payment (Misshuari et al., 2021; Yosep et al., 2021). On the other hand, the easiness and the variety of financial products offered could cost irrational and misguided decisions that lead to financial loss. To prevent this situation, people need to be equipped with some competencies in finance, which could be mirrored by how their financial literacy level is facing this Cashless Society era.

Financial literacy is the skill of examining new and complicated financial instruments and making rational judgments about the choice and extent of using tools in their best long-term interest (Mandell and Klein, 2007). Financial literacy is crucial for financial decision-making (Lusardi et al., 2010) and successful adult life (Shim et al., 2010a). People have already confronted complicated financial decisions from a young age, and financial mistakes can be costly (Lusardi et al., 2010). Moreover, departing from the importance of financial literacy expressed

\* Corresponding Author.

Email Address: [jumadil.saputra@umt.edu.my](mailto:jumadil.saputra@umt.edu.my) (J. Saputra)

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Corresponding author's ORCID profile:

<https://orcid.org/0000-0003-2919-5756>

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within prior literature, we tried to map the level of financial literacy in Indonesia within the national scope and compared it with other countries.

Only 36.02% of Indonesian citizens can count interest, installment, investment, product usage costs, fines, and inflation. Moreover, in 2016, West Java, which ranked the third most populous province in Indonesia, recorded only 38.70% of the National Survey of Financial Literacy and Inclusion literacy index score. It is ranked second amongst all the provinces in Indonesia after Greater Jakarta. Fig. 1

displays the Asia Pacific financial literacy index. Indonesia is indexed below the score of 65 in the average score of the financial literacy index. Moreover, Indonesia had the most significant decline among the countries in the interval between 2013 to 2014. From this, we assumed many potential studies could be conducted to guide Indonesian people in facing a Cashless Society, especially during today's technological advancement within the Industry 4.0 era.

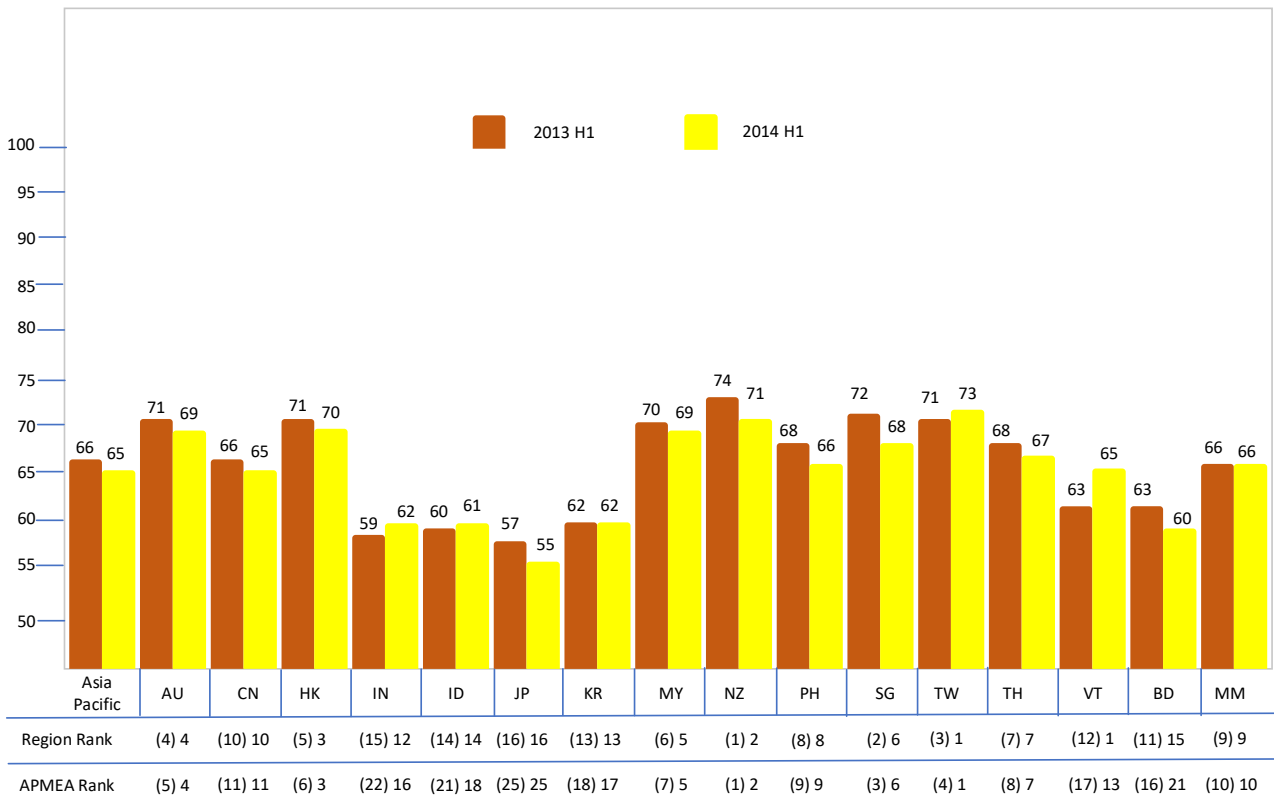


Fig. 1: Asia pacific literacy index

Within this current research, among several demographic considerations, we decided to investigate the financial literacy index of those Indonesian categorized as undergraduate students and how they manage their own money. Most Indonesian undergraduate students are experiencing the transitional stage of financial independence during this period of life. However, several adjustments such as being independent, living far away from home, and culture shock during this period might cause numerous difficulties related to this transitional stage (Tinto, 1998).

We believe several factors can influence the success of this transitional financial stage. One is how financial knowledge and awareness are pledged to these younger generations. According to several prior pieces of literature, parents, educational institutions, and the Government are those parties categorized as supportive social networks responsible for providing knowledge and building awareness of financial planning and management (Shim et al., 2010b; Sundarasan et al., 2016). Mainly, parents are the primary socialization agent. Parents

explain to children how to act by depending on their values, beliefs, and knowledge (Bandura, 1986; Clarke et al., 2005), thus shaping their children's attitudes toward finances and their behavior (Jorgensen and Savla, 2010). Therefore, it is reasonable for us to study the influence of this financial literacy socialization channel to investigate financial literacy among undergraduate students in Indonesia. To sharpen the output, Bandung City is chosen to be the scope of the study within this current research. Bandung is known as one of most favorite cities for study in Indonesia. Students are one of the most significant contributors to the massive number of immigrants. Moreover, about 91 academic institutions (including universities and academies) are in Bandung. Many of them are acknowledged as the top university in Indonesia. Therefore, it is not surprising that there are many studies regarding students conducted in Bandung.

In line with the topic, current information expressed that undergraduate students from some universities did not have adequate financial literacy. Most of these undergraduate students scored near

the illiterate threshold (Mendari and Kewal, 2013). Hence better socialization and encouragement should be conducted, even within a well-known academic institution like Institut Teknologi Bandung (ITB) and Indonesia University of Education (UPI). In sum, this research focuses on finding out how the influence of parent socialization on the financial literacy level of their children who are currently undergraduate students in Bandung, Indonesia. Henceforth, relevant literature and conceptual framework are discussed in section 2 of this research paper and then continued with methodology in section 3. Finally, section 4 describes the data analysis before it is concluded in section 5, along with the implications and recommendations for future researchers.

## 2. Literature review

### 2.1. Financial literacy

Financial literacy is a combination of skill, behavior, awareness, attitude, and knowledge of a person required to build a sound financial decision leading to financial well-being (OECD, 2016). As people become more literate, they develop into more financially sophisticated, and it is expected that this may also imply that an individual can be more proficient. In other words, individuals are acknowledged as financially literate when practicing financial inclusion and the knowledge they have learned (Moore, 2003). Financial knowledge relates to financial behavior, attitude, and influence (Jorgensen, 2007). The worst fields of financial behavior appear to be related to budgeting, planning, product selection, and professional advice (OECD, 2018).

Discussing financial literacy would always be embedded in the financial socialization process. Financial socialization teaches values, attitudes, standards, norms, knowledge, and behaviors that contribute to individuals' financial survival and success (Danes, 1994; Kamaludin et al., 2022). The financial socialization perspective presupposes that "socialization takes place through the person's interaction and various agents in specific social settings" (McLeod and O'Keefe, 1972). Previous research has shown that people access financial knowledge from financial and educational networks and interactions with socialization agents such as family, friends, media, and schools (Mitchell et al., 2009). To measure the literacy level of finance in a particular research scope, researchers can utilize OECD/INFE Toolkit for measuring financial literacy and financial inclusions as guidance. Financial literacy is measured by combining financial knowledge, behavior, and attitude. The measurement would be based on the questionnaires consisting of several questions designed for adults between 18 and 79 years old. The surveys using this questionnaire could be conducted by phone, face-to-face, or online. Question sets were translated into

national languages to understand the respondents better and avoid bias and guessing responses.

### 2.2. Undergraduate student and financial literacy

In Indonesia, the typical age of undergraduate students belongs to the range age of Generation Z. Those people who were born ranged from 1995 to 2012. This generation is also popular with the term "Digital Natives," they are being raised by Generation X, known as Millennials (Singh, 2014). GenZers, born in the subtlest changes in at least a century, show the milestone generational shift of the era (Tulgan, 2013). GenZers have a dependency on the use of cell phones and how they regularly spend an average of 9 hours per day (Zickuhr, 2011). However, even though they could be categorized as a digital well-literate generation, most are still unfamiliar with financial knowledge and its digital implication.

The statement above is strengthened by the fact found by Xiao et al. (2014). According to their research, undergraduate students dominantly the younger generations were proven to have a low level of financial literacy (Xiao et al., 2014). Several variables are considered to affect this phenomenon. Most of it belongs to demographic characteristics. Ibrahim et al. (2010) stated that a student's financial literacy was affected by social background, financial attitude, financial knowledge, and family sophistication level (Ibrahim et al., 2010). Even though students live surrounded by financial activities, students are taught very little about how to practice financial matters correctly. There are various teaching methods to increase student's knowledge (Xiao et al., 2014).

In Indonesia, most of the results from previous studies indicate the financial literacy level of Indonesian students is still considered low and far from the optimum level. Those prior studies utilized by Chen and Volpe (1998) categorized the financial literacy levels into three groups: High level of financial knowledge score (more than 80%), a middle level of financial knowledge score (60% to 79%), and low level of financial knowledge score (below 60%). Even though the research sample used was undergraduate students from the economics faculty, the result was not getting any better (Rasyid, 2012; Ulfatun et al., 2016).

### 2.3. The agent of finance socialization (parent)

As the agent of socialization, Parents have been found to shape the socialization of their children (Jorgensen and Savla, 2010). Even as they get into early adulthood, parental influence remains a potentially critical socialization agent (Tang and Peter, 2015). Sorokou and Weissbrod (2005) mentioned that freshmen (both males and females) consider their parents supportive, especially during severe periods. Most young people depend on their parents for financial support from adolescence to adulthood (Schoeni and Ross, 2005). Parents have a dual role as direct teachers and active role models in

developing the financial skills of their children (Shim et al., 2010a). We summarize several related journals' articles with topics corresponding to the research topic in Table 1. Topics are related to

financial literacy, parents, and students. This state-of-the-art will assist us in creating the conceptual frameworks from the previous studies.

**Table 1:** Previous studies about the factors of financial literacy and financial knowledge

Reference	Key Point	Methodology
Tang and Peter (2015)	The roles of financial education, financial experience, and parents' financial experience have a significant impact on financial knowledge	ANOVA and Poisson Regression (main effect and interaction effect)
Jorgensen et al. (2017)	Children who learn through parents' example (role modeling) correlate with higher financial knowledge levels	Structural Equation Modeling (SEM)
Hanson and Olson (2018)	Higher family conversation orientation has a positive relationship with higher financial knowledge	Multiple linear regression
Nidar and Bestari (2012)	Financial literacy is influenced by parents' knowledge, pocket money/income, education level, faculty, parents' income, and property insurance	Logistic model regression
Serido and Deenanath (2016)	Parental role-modeling and explicit teaching have high power in the financial socialization process	Literature review
Kim and Chatterjee (2013)	Parents who are regularly monitoring their children's spending contribute to the higher skill of their children in managing money	Logistic Model Regression

### 3. Research framework

From Fig. 2 and the previous explanation, the hypotheses are constructed as follows:

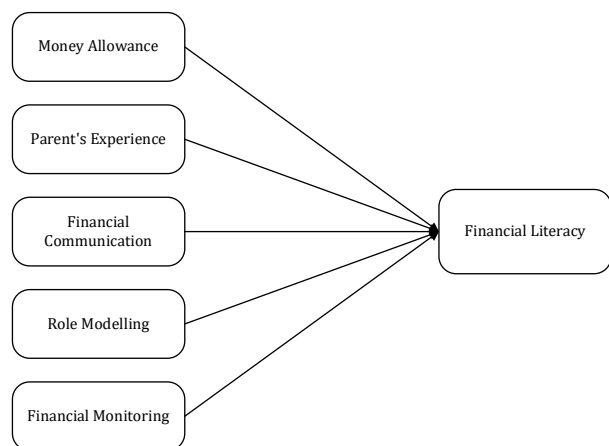
H1: Money allowance has a significant relationship with the financial literacy score of undergraduate students.

H2: Parents' Experience has a significant relationship to the financial literacy score of undergraduate students.

H3: Financial communication has a significant relationship with the financial literacy score of undergraduate students.

H4: Role modeling has a significant relationship with the financial literacy score of undergraduate students.

H5: Financial monitoring has a significant relationship with the financial literacy score of undergraduate students.



**Fig. 2:** Research framework

### 4. Materials and methods

#### 4.1. Sample and data collection

We conducted an interview session in the first phase of the data collection process to confirm the factors of parental financial socialization through a

qualitative approach by interviewing ten parents and developing a new hypothesis after that. After proceeding with the conceptual framework, we collected responses by spreading online survey questionnaires to undergraduate students in Bandung using Google Forms covered between January and May 2020. The data collection process was chosen to overcome several constraints during the pandemic of COVID-19, such as travel and gathering restrictions.

In this study, the target population is active undergraduate students from both public and private universities in Bandung. According to data from badan pusat statistik (bps) Kota Bandung from mid-2019, 255,724 people from the age range 20-24 represent the number of current universities student in the undergraduate program. Therefore, the number of samples for this research is 204 active undergraduate students from public and private universities in Bandung. The method of choosing the sample size is based on research made by Israel (1992), which stated that for the size population above 100,000 with ±7% precision level where the confidence level is 95% and p=0.5.

#### 4.2. Research instrument

The set of questions used Bahasa Indonesia to make respondents easier to answer. The questionnaire was divided into demographic information, financial literacy, and parental financial socialization. First, the demographic question used in the questionnaire is gender, undergraduate, business/non-business student, year of entry, source of income, type of living, source of financial knowledge, period of allowance distribution, and period of money allowance distribution. This kind of information would be insightful in concluding this research to understand the profile characteristics of the respondents better. Second, each financial literacy question chosen is developed using the OECD/INFE Toolkit guidelines for Measuring Financial Literacy and Financial Inclusions (OECD, 2018). The components used the questions and

statements to measure financial knowledge, financial behavior, and financial attitude. Further, to measure financial literacy of all the components (Financial knowledge, financial attitude, and financial behavior). We use the guidance measure from [Chen and Volpe \(1998\)](#), categorizing financial literacy scores into three groups: High financial literacy score (more than 80%), Moderate financial literacy score (60% to 80%), and Low financial literacy score (below 60%).

The weight of every question in financial knowledge equals 1 for every correct answer, and each wrong answer will result in 0 points. There are 6 questions in total for the financial knowledge section. The author used a 5 Likert scale ranging from never to always in measuring financial behavior. Following the [OECD \(2018\)](#) guide, the answers from 1-3 scored as 0. Those who answered 4 and 5 scored 1. The author uses a 6-scale Likert scale from strongly disagree to agree to strongly measure the financial attitude level. The lack of any neutral point in 6-point scales may be skewness ([Leung, 2011](#)). Following [OECD \(2018\)](#) guidelines, the research measures the average score of the three financial attitudes; thus, the maximum score of financial attitudes is 6, and the minimum is 1. The last section of the questionnaire, the parental financial socialization section, will be in statements using a 6 Likert scale to make the result more skewness ([Leung, 2011](#)). According to [Sugiyono \(2013\)](#), the Likert scale is used to develop instruments to measure attitudes, opinions, and perceptions about social phenomena. The variables used in this questionnaire will be confirmed by conducting qualitative research before designing the questionnaires.

### 4.3. Data analysis

This research conducted two approaches of data analysis, qualitative and quantitative. For the qualitative approach, semi-structured interviews used the key points using the guidelines from the compilation of previous research. There was a total of ten parents domiciled in Bandung for this matter. From this approach, we can redesign the conceptual framework and the hypothesis. The obtained data was then processed by multiple linear using SPSS as the statistical programming used by the authors. The multiple linear regression model is used to find the

relationship between financial literacy and parental financial socialization. Multiple linear regression is considered a good model when it has the accuracy of estimation, does not have any bias, and is consistent) if the model fulfills the normality and classical assumption ([Sujarweni, 2014](#)). For model fit purposes, we used the R square value to represent the ability of the model to predict the ability of independent variables to explain dependent variables. The models of the regression are shown below:

$$FL = \beta_0 + \beta_1.PE + \beta_2.FC + \beta_3.RM + \beta_4.FM$$

where, FL is Financial literacy score, PE is Parents' experience, FC is Financial communication, RM is Role modeling, and FM is Financial monitoring.

We also decided to utilize descriptive analysis to complement the data-gathering process. [Sugiyono \(2013\)](#) stated that descriptive analysis is the statistical way to describe or draw the gathered data in a table, graph, or diagram. ANOVA (Analysis of Variance), also often known as the F-test, is used as one of the hypotheses tests for Parametric Statistics. Moreover, a T-test is also embedded within the data analysis of this current research to see how the relationship between the dependent and independent variables is whether it is significant.

## 5. Results and discussion

### 5.1. Qualitative approach

#### 5.1.1. Money allowance

All respondents mentioned money allowance first whenever they were asked about socializing with their children. Therefore, the keywords determined as the interview result consists of a period of distribution, amount of distribution, and distribution way.

[Table 2](#) indicates that the period of distribution and allowance are the processes they conduct in socialization. The parents agreed these processes reflect how their children manage their money. Parents stated the medium they use in socialization is not part of financial socialization. They mostly agree on this.

**Table 2:** Money allowance

Keyword	Interpretation
Period of distribution	Most of the respondents said that the distribution period, whether daily, weekly, or monthly, would affect how their children manage their money. They mentioned weekly or monthly distribution is a better way to teach their children money management than giving it daily and is way more comfortable. But the longer the period is prone to make their children ask for additional money in the middle of the period. Asking for extra money indicates bad money management as the children could not set up their priorities in using their money
Amount of allowance	The allowance given by parents was counted by considering the price of the meal, transportation (using public transportation or using their vehicles), stationery, groceries, and laundry (for those who live far away from their parents. They exclude dormitory fees (for those who live far away from their parents), tuition fees, and additional school needs (for printing, buying materials for practicum, et cetera) as their allowance
Medium	Parents whose children live separately use a bank account to distribute the allowance. For parents who live with their children, most of them simply give to them directly. Parents stated the medium they use in distributing allowance is not part of their financial socialization

**5.1.2. Financial communication**

Financial communication occurs when both parents and children discuss financial matters. Each parent almost has similar patterns, one with another, summarized in Table 3.

Parents conduct financial communication rarely due to lack of time, and parents believe their children already have enough knowledge from other channels. However, parents also admit that their children have a more abundant understanding; they even get new knowledge. Dig more in-depth about this issue, and the author was able to find new

variables that matter in the socialization process: trust.

**5.1.3. Trust**

Table 4 shows the interview results when this keyword is mentioned several times by parents replacing financial monitoring. Parents tend not to monitor their children frequently because they trust them, and parents claim when they give their children trust, they are more responsible for managing money.

**Table 3: Financial communication**

Keyword	Interpretation
Timing	Parents found it hard to match the right timing to communicate finance with their children since they are both busy with their activities. Moreover, even their children are more active with outside activities than their parents. Therefore, the weekend is the usual time they discuss with their children
Casual situation	Communication is conducted in spare time in casual situations. Such as during weekend lunchtime with family or shopping
Topic discussed	Parents mostly remind their children about the importance of saving and their transactions during specific periods. If the children own a business, tell them the importance of being aware of fraud and always check who they are dealing with in a business partnership
Frequency	Parents rarely discuss finance with their children because they believe they have richer knowledge and trust in their children
Monitoring	Parents rarely monitor their children's transactions if there is no suspicious transaction. Instead, they give trust in their children

**Table 4: Trust**

Keyword	Interpretation
Openness	Children who tend to be open about their expenses gain more trust from their parents; thus, parents do not bother to ask and monitor regularly
Good track record	Parents trust their children because children are never involved in fraud or other lousy money management practices; they show appropriate acts when their parents provide them with responsibility in managing money
Responsibility mature	Trust in the parents' perspective claimed to be part of teaching their children about responsibility in managing money. Parents believe they are mature enough to manage their own money at their age
Knowledge	Parents believe their children have more knowledge about finance, and they even get caught by their children putting trust in their children. Their children got their knowledge mostly from the internet and their peers

This new variable gave some new insight that previous studies have not yet described. For example, in Indonesia, parents tend to trust rather than regularly monitor them because they have richer knowledge and a good track record.

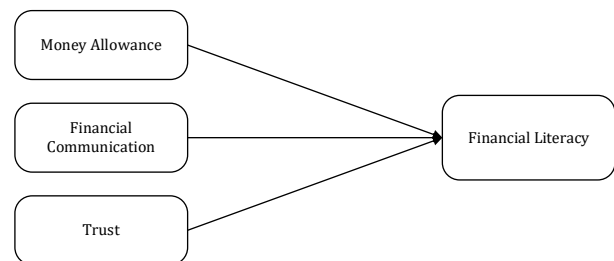
**5.2. Modified conceptual framework**

Parents' experience and role modeling were found not relevant to be applied in this study. Parents are found to be lacking experience in finance, and most of them are still prone to fraud. In addition, most of them experienced bulging investments and rarely mentioned this experience to their children. As elaborated in the previous part, most parents believe their children have more knowledge than them, so they do not use their parents' role models. That is why both variables were not used for further research. Instead, the author decided to put a new variable, trust, which is more relevant to be conducted in this study. With this change, Fig. 3 is a conceptual framework that has been modified. Hypotheses are as follows:

H1: Money allowance has a significant relationship with the financial literacy score of undergraduate students.

H2: Financial communication has a significant relationship with the financial literacy score of undergraduate students.

H3: Trust has a significant relationship with the financial literacy score of undergraduate students.



**Fig. 3: Modified conceptual framework**

By conducting a qualitative approach, we successfully confirmed the factors of parental socialization in the previous chapter. Thus, the designed questionnaire assessed in the quantitative approach is constructed by the three confirmed factors: Money allowance, financial monitoring, and trust. Four items for the money allowance variable will discuss undergraduate students' perceptions regarding their parents' money allowance and their ability to finance and manage money. In addition, there are four items to identify the undergraduate students' regarding the communication between parents and children for financial communication. To identify how it affects their financial ability and manage money. Lastly, the trust variable consists of two items to identify the effect of the trust given by

parents on children's ability to manage money and their financial skills.

### 5.3. Quantitative approach

There were 204 respondents in total. The questionnaires consist of demographic information, financial literacy measurements, and parental financial socialization. All the data coded first by Microsoft Excel continues to IBM SPSS to perform Multiple Linear Regression. The outcome of the process will be discussed and analyzed in this section. This section aims to answer the hypothesis constructed from the previous chapter and construct a new conceptual framework for this current research.

### 5.3.1. Profile demography of respondents

Table 5 shows the result of the respondent's demography profile. The majority of respondents are female, 55 percent and only 45 percent are male. A total of 64 respondents are from a public university with a major in Non-Finance related as much as 56 percent. The respondent's source of income is their parents, as much as 76 percent. A total of 49 percent of the respondents rent rooms. Interestingly, the respondent's source of financial knowledge comes from the Internet 25 percent and followed by parents as much as 20 percent. The allowance is ranged from Rp. 1,000,001-Rp. 2,000,000 (32 percent), with the distribution monthly (45 percent).

**Table 5:** Respondents' demography profile

Category	Items	Percentage (%)	Category	Items	Percentage (%)
Gender	Male	45	Source of financial knowledge	Formal education	18
	Female	55		Lecture	14
University	Public	64		Parents	20
	Private	36		Seminars	7
Major	Finance-related	44		Internet	25
	Non-finance-related	56		Peers	13
Class year	2015	4		Others	3
	2016	6		<Rp.750,000	15
	2017	55		Rp.750,001-Rp.1,000,000	18
	2018	21		Rp.1,000,001-Rp.2,000,000	32
	2019	14	Rp.2,000,001-Rp.4,000,000	26	
Source of income	Parents	76	Amount of allowance	Rp.4,000,001-Rp.6,000,000	6
	Part-Time job	8		Rp.6,000,001-Rp.8,000,000	0
	Business	6		>Rp.8,000,000	1
	Scholarship (NGO)	6		Daily	14
Types of living	Government	4	Money allowance distribution	Weekly	32
	House (with parents)	46		Monthly	45
	House (with relatives)	1		Others	9
	Rent room	49			
	Dormitory	3			
	Others	1			

### 5.3.2. Financial literacy score

Financial literacy scores as guided by OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusions (OECD, 2018). The components are grouped into financial knowledge, financial behavior, and financial attitude. There are six multiple-choice questions in the financial knowledge test, which discussed deposits guaranteed by the Government, simple interest, time value of money, inflation, stock, and risk and return. Each correct answer scored 1, and each wrong answer scored 0. Financial behavior test, including three statements, including active saving, budgeting, and financial goals. 5-scale Likert's scale is used to measure the behavior where scores 4 and 5 are given 1 point, and the rest are 0 points. The last section is financial attitude consists of three statements using a 6-scale Likert scale as the measurement. The variables included are satisfying to spend than save, money is there to spend, and living for today. Both three statements share the same meaning, and as guided by OECD, the point is given by giving the average score of those three statements. The maximum for this research financial literacy score is 15. All the points are converted into percentages to make it easier. In classifying the financial literacy level, this

research used the guideline from Chen and Volpe (1998) divided financial literacy into three levels which are high level (above 80%), moderate level (60% to 80%), and low level (below 60%). Here is the summary pie chart of the financial literacy level of undergraduate students in Bandung.

Fig 4 displays that most undergraduate students are at a moderate level, which got a percentage of more than half of the samples (52%). The sample's mean is 64% (Moderate level), near the low-level cut-off (60%). The highest financial literacy score lies at 96% (High level), while the lowest is at 22% (Low level).

Table 6 shows that the male (67%) got a higher average score than the female (63%). Based on the university, public universities (65%) slightly got higher average scores than private universities (64%). The tiny gap also faced the major variable; the finance-related major got the average score of 65%, while the non-finance-related major got 64%. According to the year of entry, the result is very diverse. The year of entry 2017 got 67% which is the highest average score while being the most significant number of respondents, followed by the year of entry 2015, which got 2015%, the year of entry 2019 with 64%, and the year of entry 2018 with 63%. The lowest average score for entry 2016

is 61% by only two respondents. Based on the type of living, respondents who lived in the house with their relatives got the highest average score of 83% and reached the least sample with only two respondents. It is followed by the "others" category with an average of 67%, with only three respondents where all of them are at a moderate level. Rent room (index) got 66% by the most significant number of samples in this research. Dormitory got 64% while the house (with parents) is 62%. The distribution period also has a small gap in average scores. The "others" category, which the researchers used to provide in accommodating the usual way, was the

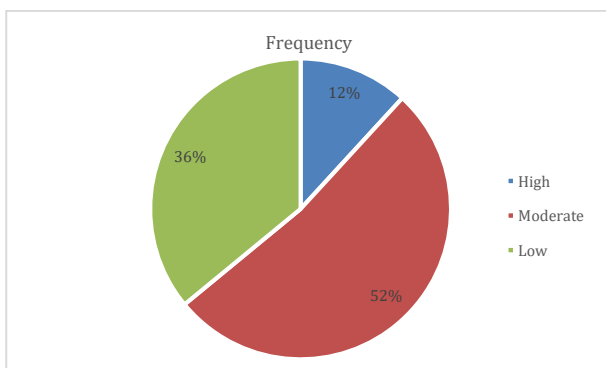
highest average score with 67%. Followed by daily distribution with an average score of 65%, and both weekly and monthly got 64%.

**5.3.3. Validity and reliability testing**

Table 7 shows that all the Cronbach alphas are above 0.6, indicating the variables are reliable. Therefore, we can conclude the data gathered (204 samples) are valid (Table 8) and reliable. Thus, we will use this data to be processed by Multiple Linear Regression.

**Table 6:** Summary of financial literacy score based on demographic profile

Demographic profile			Financial literacy score							
			High		Moderate		Low		Average score	
			n	%	n	%	n	%	Sum	Avg.
1	Gender	Male	15	16%	48	53%	28	31%	91	67%
		Female	10	9%	57	50%	46	41%	113	63%
2	University	Public	19	15%	62	48%	49	38%	130	65%
		Private	6	8%	43	58%	25	34%	74	64%
3	Major	Financial related	10	11%	46	52%	33	37%	89	65%
		Non-finance related	15	13%	59	51%	41	36%	115	64%
4	Class Year	2015	2	18%	6	55%	3	27%	11	66%
		2016	2	8%	11	46%	11	46%	24	61%
		2017	11	15%	41	55%	23	31%	75	67%
		2018	6	11%	29	53%	20	36%	55	63%
		2019	4	10%	18	46%	17	44%	39	64%
5	Types of living	House (with Parents)	10	11%	41	44%	42	45%	93	62%
		House (with Relatives)	1	50%	1	50%	0	0%	2	83%
		Rent room (indekos)	14	14%	56	56%	30	30%	100	66%
		Dormitory	0	0%	4	67%	2	33%	6	64%
		Others	0	0%	3	100%	0	0%	3	67%
		<Rp.750,000	4	12%	16	48%	13	39%	33	65%
		Rp.750,001- Rp.1,000,000	8	21%	19	50%	11	29%	38	68%
		Rp.1,000,001- Rp.2,000,000	5	8%	32	51%	26	41%	63	63%
		Rp.2,000,001- Rp.4,000,000	7	12%	30	53%	20	35%	57	63%
		Rp.4,000,001- Rp.6,000,000	1	9%	7	64%	3	27%	11	67%
6	Amount of allowance	Rp.4,000,001- Rp.6,000,000	1	9%	7	64%	3	27%	11	67%
		Rp.6,000,001- Rp.8,000,000	1	9%	7	64%	3	27%	11	67%
		Rp.8,000,001- >Rp.8,000,000	0	0	0	0	0	0	0	0
		Daily	4	14%	15	54%	9	32%	28	65%
		Weekly	11	17%	29	45%	24	38%	64	64%
		Monthly	8	9%	52	55%	34	36%	94	64%
		Others	2	11%	9	50%	7	39%	18	67%



**Fig. 4:** Financial literacy score

**5.3.4. Multiple linear regression**

This research deleted some variables that proved unsuitable for the Indonesian context and created a new variable for the fitter model of research. This

change in variable creates a new equation for the multiple linear regression process. Here below is the new equation:

$$FL = \beta_0 + \beta_1 MA + \beta_2 FC + \beta_3 T$$

where, FL is Financial literacy score, MA is Money allowance, FC is Financial communication, and T is Trust.

**5.3.5. Normality test**

The residual value should be normally distributed to ensure the model is the Best Linear Unbiased Estimator (BEST). There are some ways to check the normality of the data; one-sample Kolmogorov-Smirnov is used in this research. The data met the requirements of normally distributed when the significant result is more than 0.05, which means the



residual value is normally distributed. Table 9 shows the result of normality testing using One-Sample Kolmogorov-Smirnov and found the significant value is 0.200, which passed the requirements. The regression model is normally distributed when the data plotting reflects the real data and aligns with the diagonal line. If the data plotting is following the dialogue line means the data is normally distributed.

**Table 7: Reliability test**

Variables	Cronbach alpha
Money allowance	0.644
Financial communication	0.737
Trust	0.712

**Table 8: Validity test**

Variables	Pearson correlation	Sig. (2-tailed)
MA.1	0.424**	0.000
MA.2	0.702**	0.000
MA.3	0.704**	0.000
MA.4	0.677**	0.000
FC.1	0.794**	0.000
FC.2	0.747**	0.000
FC.3	0.759**	0.000
FC.4	0.690**	0.000
T.1	0.915**	0.000
T.2	0.607**	0.000

\*\* Coefficient is significant at 0.05 level (2-tailed)

**Table 9: Result of one-sample Kolmogorov-Smirnov (n=204)**

		Unstandardized residual
Normal parameters <sup>a,b</sup>	Mean	0.000
	Std. Deviation	0.147
	Absolute	0.056
Most extreme differences	Positive	0.021
	Negative	-0.056
Test statistic		0.056
	Asymp. Sig (2-tailed)	0.200 <sup>c,d</sup>

a. Test distribution is normal; b. Calculated from data; c. Lilliefors significance correction; d. This is a lower bound of the true significance

**5.3.6. Analysis of variance (ANOVA)**

ANOVA was used to determine whether the samples already represented the overall population. We look at the F-sig result shown in Table 10 to interpret the result. Table 10 shows that the F-value (i.e., Sig.) is 0.001, below 0.05. This result indicates that the result is not limited to the study sample. Therefore, it is already well representing the overall population.

**Table 10: Result of analysis of variance (ANOVA)**

Model	Sum of squares	df	Mean square	F	Sig.
Regression	.367	3	.122	5.563	.001 <sup>b</sup>
Residual	4.4	200	.022		
Total	4.767	203			

b. Predictors: (Constant), trust, financial communication, money allowance

**5.3.7. Overall model fit**

Interpreting the R and R square value is critical in conducting multiple linear regression. R-value detects the correlation score of the dependent variable (financial literacy) with independent variables (money allowance, financial communication, and trust). The ability of

independent variables (money allowance, financial communication, and trust) to explain dependent variables is represented by the R square value.

Table 11 indicates a 27.8% correlation between independent variables (money allowance, financial communication, and trust) and dependent variables (financial literacy). The variables used for this research explain financial literacy as much as 7.7%, whereas other factors explain 92.3%. The R square is still considered low means that these factors do not impact the financial literacy score. The previous study stated from a previous study that parental socialization is not the only source of financial literacy. Other factors include family (other than parents), friends, media, and school (Lusardi et al., 2010). Other factors were added for future research to increase the R square. A T-test was conducted to know whether the coefficient of each variable (money allowance, financial communication, and trust) significantly correlated with the dependent variable (financial literacy). The p-value (i.e., Sig.) showed the relationship of each independent variable to the dependent variables, whether having a significant relationship or vice versa. The 48 results showed the relationship for the overall population—the cut-off point where the variables are considered significant is when the P-value is below 0.05.

Table 12 shows that the Trust coefficient is the most robust relationship with financial literacy ( $\beta=0.012$ , Sig=0.036). The larger the beta, the stronger the relationship is, and from those three variables, trust has the highest beta. Followed by trust, money allowance also has a significant relationship with financial literacy ( $\beta=0.008$ , Sig=0.016). The positive beta of those two variables showed a positive relationship between dependent and independent variables. It means that the more parents give a more effective method to distribute money allowance as part of socialization, the financial literacy level of their children tends to be higher. The same goes to trust when parents give more trust in their children for them to be responsible with their money management, their literacy, the financial literacy level tends to go higher. In this context, trust is given the authority to have their financial products and manage them by themselves with little time managed by their parents.

However, the relationship between financial communication and financial literacy proved insignificant ( $\beta=-8.359E-5$ , Sig=-0.971) with a super-low beta and p-value above 0.05. Furthermore, the negative beta showed a negative relationship between dependent and independent variables. The respondents who have the least financial communication with their parents have higher financial literacy. Communication with parents is not their primary source of knowledge and not how parents teach their children in Indonesia and Bandung. Table 12 also provides information about the possibility of multicollinearity indication. The good regression result has no evidence of

multicollinearity. Multicollinearity occurred when the tolerance value was below 0.100 and the VIF

value was above 10.00 for each variable, wherein all the values met the requirements.

**Table 11:** Result of overall model fit

Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin Watson
1	.278 <sup>a</sup>	.077	.063	.148292	1.855

a. Predictors: (Constant), trust, financial communication, money allowance

**Table 12:** Result of regression analysis (hypothesis testing)

Model	Unstd. coefficient		Std. coefficient	t	Sig.	Collinearity	
	b	Std. Error	Beta			Tolerance	VIF
(Constant)	0.364	0.073		4.957	0.000		
Money allowance	0.008	0.0003	0.178	2.434	0.016	0.862	1.161
Financial communication	-0.8359E-5	0.002	-0.003	-0.037	0.971	0.963	1.038
Trust	0.012	0.006	0.157	2.109	0.036	0.832	1.202

b. Dependent variable: Financial literacy

**6. Conclusion**

This study concluded that there are three variables in parental socialization: Money allowance, financial communication, and trust. These variables were used to confirm by statistical process whether these variables proved to be true or not in the quantitative approach. Looking at the financial literacy score of the overall respondents, which are active undergraduate students in Bandung, the average score is 64%, which is located on a moderate level. This score is slightly above the cut-off point from the low level, where financial literacy is considered low when the score is below 60%. This research divides financial literacy into financial knowledge, behavior, and attitude. This research can confirm that average undergraduate students in Bandung are at a moderate level (64%). Money allowance and trust are factors in parental financial socialization related to increasing financial literacy scores of undergraduate students in Bandung.

**7. Research implication and recommendation for future research**

We are sure that parental socialization is not the primary source of financial knowledge for undergraduate students looking at how little parental socialization factors contribute to financial literacy scores. Therefore, there must be another factor that could contribute to financial literacy other than parents. It is known that the only socialization matters are money allowance and trust. It also indicates that financial communication is not a matching model for the Indonesian and Bandung contexts, to be exact. Instead, if their children have an excellent track record in managing money, their parents do not worry much and take responsibility for trusting their children. Parents also stated that whenever there is no suspicious transaction, and their children are open about their spending, they do not worry much. So, in the Bandung context, trust also substitutes for financial communication as a factor. Statements given in the questionnaire were developed from parents' interviews. The criteria of the trust given by the parents are the children never got a serious problem in financial activities (debt problems, frauded, etc.). Parents approve of children

taking responsibility for using financial services (saving accounts, electronic wallets, etc.) and managing them independently. The fit respondents to these criteria have higher financial literacy scores. This research also collects some definite information for money allowance, including the amount of monthly allowance and distribution period.

**7.1. Theoretical implication**

Money allowance and trust as parental socialization factors have a significant positive relationship with financial literacy. This research results in a new model that differs from previous research conducted in the United States. For the Bandung context, these two factors are perceived as effective socialization factors from the perspective of undergraduate students. The adjusted R square value showed that parental socialization factors (6.3%) contribute more to financial literacy scores than parental socialization factors (4.9%). In contrast, we do not consider the number of variables used in the adjusted R square. Still, these two factors have a low contribution, which means another factor might contribute to the financial literacy score. Both periods of distribution and allowance are insignificant in financial literacy scores. Both are money allowance attributes, which means that either period of distribution or the amount does not reflect how literate they are on financial matters.

**7.2. Practical implication**

From the descriptive analysis, parents were the second most answered financial knowledge source after the internet. Still, they contributed only 7.7% from the model fit, and the rest 92.3% is money allowance and trust matters in parental financial socialization. Both factors have a significant positive relationship with financial literacy scores. The more students get better socialization in money allowance and trust, the higher their financial literacy score. Even though the financial literacy score of undergraduate students are already good (lies at a moderate level, 64%), they still have an improvement in their financial knowledge score (61% on average), which is near the low-level cut-off.

### 7.3. Recommendation for future research

This research still consists of limitations due to the research resources. The author of this research would like to give recommendations for researchers who want to explore more regarding this issue more, which is still not discussed much in the Indonesian context. The researcher could measure financial literacy from both sides (parents and children) and find their relationship. Since this research explores children's perspectives, future research could discuss from parents' perspectives. Future research could also explore the attributes that matter in both factors that could be explored more profoundly. Adding more factors to the equation might contribute to a higher R square, which could explain the impact on the financial literacy score—by comparing other socialization factors such as friends, media, and school. Since this study is not much discussed in Indonesia and Bandung, the interviews should be conducted to find other parental socialization variables. There should be more research on financial literacy from parental socialization aspects since only a few studies discussed the topic.

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### Compliance with ethical standards

### Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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