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## The Role of Motivation, Locus of Control and Financial Literacy on Women Investment Decisions Across Generations

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### Abstract

This research gave attention to three factors that influence individuals in making investment decisions, motivation, locus of control, and financial literacy. This study generally aims to compare and analyze the effect of motivation, locus of control, and financial literacy on investment decisions on the families of the baby boomers generation, generation X, and generation Y. This study applied a direct interview method and uses a questionnaire as a data collection tool. Thirty housewives from each generation were interviewed. The results showed a significant difference in motivation and financial literacy between the three generations. The results also showed that all variables had a significant effect on investment decisions in each generation. Otherwise, overall, only the locus of control variable that has no significant effect on investment decisions. Based on this, the government together with investment service providers need to formulate an appropriate program. Apart from the education provided through educators, the program can also be provided with socialization and consultation services, either directly or indirectly. Development of supporting infrastructure and public access to financial institutions, products or services according to their needs and capacities also need attention.

Keywords: cross-generations, financial literacy, investment decisions, locus of control, motivation,

### Abstrak

Penelitian ini memberikan perhatian pada tiga faktor yang mempengaruhi individu dalam membuat keputusan investasi, motivasi, *locus of control*, dan literasi keuangan. Penelitian ini umumnya bertujuan untuk membandingkan dan menganalisis pengaruh motivasi, *locus of control*, dan literasi keuangan terhadap keputusan investasi pada keluarga generasi *baby boomer*, generasi X, dan generasi Y. Penelitian ini menerapkan metode wawancara langsung dan menggunakan kuesioner sebagai alat pengumpulan data. Tiga puluh ibu rumah tangga dari setiap generasi diwawancarai. Hasil penelitian menunjukkan

perbedaan yang signifikan dalam motivasi dan literasi keuangan antara tiga generasi. Hasil juga menunjukkan bahwa semua variabel memiliki pengaruh signifikan terhadap keputusan investasi di setiap generasi. Secara keseluruhan, hanya variabel *locus of control* yang tidak memiliki pengaruh signifikan terhadap keputusan investasi. Impikasi berdasarkan hal ini pemerintah bersama dengan perusahaan penyedia jasa investasi perlu merumuskan program yang sesuai. Selain melalui edukasi yang diberikan melalui tenaga pendidik, program juga dapat diberikan dengan layanan sosialisasi dan konsultasi baik secara langsung ataupun tidak. Pembangunan infrastruktur pendukung dan ketersediaan akses masyarakat terhadap lembaga, produk atau layanan jasa keuangan yang sesuai dengan kebutuhan dan kemampuan juga perlu diperhatikan.

Kata kunci: keputusan investasi, lintas generasi, literasi keuangan, *locus of control*, motivasi

### Introduction

Complex global economic conditions and increasingly high economic demands bring people a necessity for a smart financial decisions that are not only prepared in the short term but also in the long term. According to Wrihatnolo, Dwidjowijoto, and Nugroho (2007), a theory of economic development that still used adopted is the theory of savings and investment. This theory stated that the economy must have a particular portion of savings and investment in gross national product. The more savings and investments, the faster the economy grows. The tendency of Indonesian people to be consumptive towards goods and services makes the community only focus on their short-term needs without preparing their long-term needs as well as investments in education, health, or finance.

Indonesia, as a developing country, still invests in one of the things that have not been utilised by many people, even though investment can prepare people to be independent in meeting their future needs. The number of investors in the capital market is increasing every year, but based on data released by the Indonesian Central Securities Depository (KSEI), the total assets of shares still dominated by foreign investors.

Investment instrument preferences divided into two, namely in the form of real assets and financial assets. Before making a choice, consumers must first find out how much return or risk and the risk posed by the investment. The investment goal itself will be achieved if in determining the investment decision certainty conditions are obtained, meaning that the benefits obtained are as expected. Indirectly, consumers will tend to choose investment products that are profitable for themselves, with returns and risks that suit their needs and abilities. According to Salim (2010), a person's goal in investing includes keeping watch, making a profit, beating inflation, having a decent life for the future, and preparing a pension fund.

Several researchers found that factor that influence the investment decision making. Ariani (2015) mentioned that financial literacy and locus of control had a significant influence. Morris and Perry (2005) mentioned an influence of race and ethnic background on one's financial behaviour. Motivation (Pajar, 2017), income (Musdalifa, 2016), representativeness and risk perception (Irjayanti, 2017), the influence of responsibility and framing of budget information (Susanto, 2011), accounting learning achievement (Sulityowati, 2015), and socioeconomic conditions

(Kustitik, 2013), testing the effect of framing (Bahrudin, & Anissa, 2011) also influences one's investment decisions.

In carrying out investment activities, a person will experience an uncertainty called risk. With the investment risk, in terms of knowledge, financial literacy becomes an essential factor that must be owned by every consumer. Financial literacy is essential for individuals to educate in the field of finance to manage finances intelligently. So that the lack of knowledge of the financial industry can be overcome, and individuals are not easily fooled into investment products that offer high returns in the short term without considering the risks. Hilgert and Hogart (2003) suggest that someone who has well financial literacy has financial responsibilities.

Cliff (2011) showed that financial knowledge is a significant factor in investment decision making. One with higher financial knowledge will have better financial behaviour and is responsible. Based on the survey of the Financial Services Authority in 2013 concerning the level of financial literacy, the results showed that only about 21.8 percent of the 9,000 respondents in Indonesia had a good level of financial knowledge. It means that there are still very few Indonesians who understand finance, whereas in terms of investment financial literacy will help investors provide an explanation and understanding of reasoning patterns in rational and emotional terms when making decisions.

In addition to individual factors, according to Manurung (2012), several psychological factors influence one's investment decisions. It relates to differences in individual beliefs in controlling or determining all events that include his own life by his business that is the locus of control.

A person with a proper locus of control will better prepare everything that will happen to him, including in financial matters. It is consistent with Morris and Perry (2005), who say that locus of control will affect one's financial behaviour. Ariani (2015) and Musdalifa (2016) also stated that locus of control influenced investment decision making. In addition to the locus of control, a person has an internal condition that plays a role in his/her daily activities, including decision making (Uno, 2009). One of these internal conditions is motivation. Motivation both intrinsically and extrinsically will be a driving factor to encourage someone in investing, as is the case, according to Yuwono (2011), which said that motivation is one of the factors that influence investors towards the amount of interest in investing in shares in the capital market.

Different individual, psychological, gender, and environmental factors of a person will influence the decisions taken, including in investment decisions. Data from clients of multinational financial services companies based in the United States, Fidelity

Investments, in 2017 showed that women set aside more money than men by 40 basis points, or 0.4 percent. Likewise when women invest, they produce more than their investment each year, which is 0.4 percent higher than the investment of male investors.

Concerning finance, the Baby Boomer generation, generation X, and generation Y have different behaviours. This difference in behaviour is caused by each generation growing up in different socioeconomic conditions. Generation Y or millennials can manage finances and have better planning than the income it has to invest in the future. Unlike the X generation who tend to use their money as venture capital, children's expenses, buying a vehicle and buying a property even though they have realised the importance of preparing post-retirement money. Another case with the Baby Boomer

generation who tend to spend their income to buy land, houses, vehicles, and the rest saved as an inheritance (Strauss, & Howe, 2000).

This research is different from the previous studies. This study will look at differences in investment decisions taken by different generations, namely the Baby Boomer generation, generation X, and generation Y. Several consumer researches that examined specific generation were focused on complaint behavior of generation Y (Simanjuntak, 2019), online purchasing behavior of generation Y (Simanjuntak & Musyifah, 2016), hedonic purchasing of generation Y (Hartatin & Simanjuntak, 2016), impulsive buying of three different generations (Pramesty & Simanjuntak (2020), compulsive buying of three different generations (Ganiah & Simanjuntak (2019), and hedonic purchasing of generation Z (Ramadhan & Simanjuntak, 2018). Meanwhile, this study focuses on three factors that influence individuals in making investment decisions, namely motivation, locus of control, and financial literacy.

The importance of this research is that the public, as consumers understand the differences in investment decisions in different generations, can be used as information material for the public and a reference for the government and related parties in making appropriate policies in terms of investment. This study generally aims to compare and analyse the influence of motivation, locus of control, and financial literacy on investment decisions of the Baby Boomer generation, generation X, and generation Y. Specifically, this study aims to identify variables, analyse differences between generations, and analyse influence between variables in each generation.

### Framework

According to Sharpe (2005) knowledge about investment will direct potential investors in the best types of investment to choose from. Musdalifa (2016) shows that locus of control, financial literacy, and income have a significant effect on a decision. Pajar (2017) in his research results stated that investment motivation and knowledge have an effect on students' interest in controlling the capital market. Based on previous research, in this study the factors to be analyzed are motivation, locus of control, and financial literacy on investment decisions on creating Baby Boomers, creating X, and creating Y (Figure 1).

Based on previous research, in this study the factors that will be analyzed for influence are motivation, locus of control, and financial literacy on investment decisions in the baby boomer generation, X generation, and Y generation and the hypotheses that will be answered in this study are:

- H1a : There is a significant difference in motivation between the Baby Boomer generation, X generation, and Y generation
- H1b : There is a significant difference between locus of control between the Baby Boomer generation, X generation, and Y generation
- H1c : There is a significant difference in financial literacy between the Baby Boomer generation X generation, and generation Y
- H1d : There are significant differences in investment decisions between the Baby Boomer generation, X generation, and Y generation
- H2a : Motivation has a significant effect on investment decisions in the Baby Boomer generation
- H2b : Motivation has a significant effect on investment decisions in Generation X

- H2c : Motivation has a significant effect on investment decisions in generation Y
- H2d : Motivation has a significant effect on investment decisions for all generations
- H3a : Locus of control has a significant effect on investment decisions in the Baby Boomer generation
- H3b : Locus of control has a significant effect on investment decisions of Generation X
- H3c : Locus of control has a significant effect on investment decisions of Generation Y
- H3d : Locus of control has a significant effect on investment decisions for all generations
- H4a : Financial literacy has a significant effect on investment decisions of the Baby Boomer generation
- H4b : Financial literacy has a significant effect on investment decisions of Generation X
- H4c : Financial literacy has a significant effect on investment decisions of generation Y
- H4d : Financial literacy has a significant effect on investment decisions for all generations

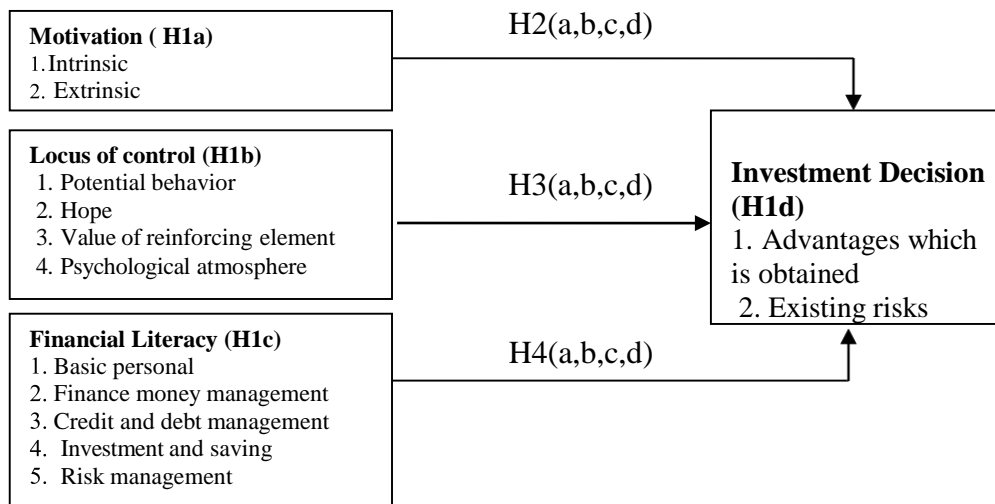


Figure 1. Research Framework

## Methods

### Participant

This research uses quantitative research with cross sectional research design because this research is conducted in a certain period of time on different and unsustainable objects. This research uses survey method. This research was conducted in several housing estates in the City of Surabaya in February 2019. Housing complexes

include Gunungsari Indah housing complex, Taman Pondok Indah housing complex, and other housing complexes. The population in this study was housewives with a family analysis unit. The population in this study were three different generations, namely the Baby Boomer generation with 54-72 years age group, X generation with 41- 53 years age group, and Y generation with 24-40 years age group. Answering in this study housewives with middle and upper economic status whether those who have invested or not. A total of 90 respondents were selected using quota sampling techniques with 30 respondents each in each generation.

### **Measurement**

The variables analyzed in this study were divided into two groups, namely the dependent variable (endogenous) and the independent variable (exogenous). The dependent variable in this study is investment decisions (Y), while the independent variables in this study are motivation (X1), locus of control (X2), and financial literacy (X3).

The motivation variable is defined as the impetus to take action related to investment. In this study, the questionnaire refers to Linawati (2014) with a modification consisting of two dimensions, namely intrinsic and extrinsic motivation with 10 indicators with Cronbach alpha 0.807. The locus of control variable is the social psychology dimension regarding the way a person sees in controlling the events that occur to him. In this study, the questionnaire used refers to Rotter (1966) with a modification consisting of four dimensions, namely potential behavior, expectations, reinforcement element values, and psychiatric atmosphere with 2 indicators each so that the total becomes 8 indicators with cronbach alpha 0.643. The financial literacy variable is defined as individual financial knowledge used in making financial decisions in order to achieve financial well-being. In this study, the questionnaire refers to the theory of Nababan and Sadalia (2012) with a modification consisting of five dimensions, namely basic personal, finance money management, credit and debt management, investment and saving, and risk management with a total of 21 indicators with cronbach alpha 0.839. Investment decision variables are defined as decisions taken by consumers in terms of investing based on existing risks and benefits. The questionnaire refers to the theory of Bateman and Zeithaml (1989) with a modification consisting of two dimensions, namely the benefits obtained and the existing risks with four indicators with cronbach alpha 0.805. This research variable used a Likert scale with four measurement scales, namely, strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The cut off used in grouping this scale measurement is based on Khomsan (2000) theory, namely low <60 percent, moderate 60-80 percent, and high > 80 percent.

### **Analysis**

The data that has been obtained is processed through the process of input, editing, coding, data cleaning, data analysis and data interpretation. Data processing and analysis were performed using Microsoft Excel, Statistical Package for Social Science (SPSS) 16.0, and Smart PLS 3.0. Data analysis was performed in a descriptive way to see the distribution of data, as well as the One Way ANOVA test as an analytical tool to test the research hypotheses and analyze the differences between the three groups namely the Baby Boomers generation, X generation, and Y generation.

Data processing and analysis were performed using SPSS 16.0, and Smart PLS 3.0. Data analysis used the ANOVA test as an analytical tool to test the research hypotheses and analyse the differences between the three groups.

## Findings

### Characteristics of Respondents

The age and year of marriage of respondents in this study vary. In generation Y, age is dominated in the range of 40-49 years. In generation X and Baby Boomers, age is dominated in the range of 50-59 years. In the Baby Boomer and X generations married most respondents were in 1986-1995, while in Y generation married most respondents were in the range of 2006-2015.

Table 1 Distribution of respondents based on demographic characteristics

Category	Gen BB	Gen X	Gen Y	All Gen
Age (Years)				
- 20-29	0.0	0.0	36.7	12.23
- 30-39	0.0	0.0	40.0	13.3
- 40-49	0.0	43.3	23.3	22.2
- 50-59	65.0	56.7	0.0	40.7
- 60-69	35.0	0.0	0.0	11.7
Year of Marriage				
- <1975	16.7	0.0	0.0	5.6
- 1976-1985	40.0	10.0	0.0	16.7
- 1986-1995	43.3	46.7	10.0	33.3
- 1996-2005	0.0	43.3	26.7	23.3
- 2006-2015	0.0	0.0	56.7	18.9
- > 2015	0.0	0.0	6.6	2.2
Family Size (person)				
- Large (> 7)	6.7	3.3	0.0	3.3
- Medium (5-7)	30.0	6.7	13.3	16.7
- Small (<4)	63.3	90.0	86.7	80.0
Family Cycle				
- I, rookie	0.0	3.3	30.0	11.1
- II, taking care of children (oldest child babies-30 months)	0.0	0.0	6.7	2.2
- III, the oldest child of preschool age	0.0	0.0	10.0	3.3
- IV, the oldest child of school age	0.0	6.7	26.7	11.1
- V, teenager	0.0	13.3	26.6	13.3
- VI, let go of young adults leaving the house	26.7	60.0	0.0	28.9
- VII, parents of middle age (retired)	43.3	16.7	0.0	20.0
- VIII, Retirement and elderly	30.0	0.0	0.0	10.0
Tribe				
- Java	100.0	96.7	100.0	98.9
- Madura	0.0	3.3	0.0	1.1

Recorded in the Baby Boomer generation, X generation, and large generation Y families are dominated in the small category. The size of the family referred to in this study includes the number of families outside the nuclear family living together or the number of dependents. Generally the Baby Boomer generation is at the stage of releasing the first child, so that children who are already married or out of the house are not counted in this case. Generation Y is generally in the early stages of marriage who are waiting for the presence of the first child or raising a school-age child. The size of this family will affect the way the family utilizes income and regulates household expenditure patterns.

The family cycle referred to in this study is adapted to the stages of family development. The Baby Boomer generation family cycle is spread in stages VI to VIII which is dominated by stage VII, namely families in the middle or retirement age with 43.3 percent. Generation X stages spread in stages IV to VII, which are dominated by stage VI, namely the family release of young adults with 60 percent. Generation Y spreads in stages I to V, which are dominated by stages VI and V, namely families with the oldest children of school age and adolescents with the same amount of 26.7 percent.

The location of residence and the culture of the environment can influence a person in knowledge, values, and spending patterns. According to Sumarwan (2011) the living environment will influence a person's consumption pattern. Respondents in this study were dominated by Javanese and 3.3 percent Madurese. This is because Surabaya is a city that is still inhabited by indigenous people, so respondents with Javanese are mostly found in this study.

The characteristics of respondents in each generation differ based on income, education and occupation. The different socio-economic characteristics of each generation will affect one's consumption patterns in managing household expenditure patterns. According to Gilarso (2004) family consumption expenditure can be influenced by various factors including income, number of family members, working hours, and education level. According to Hanum (2011) someone's income will affect one's consumption patterns. The greater the income owned, the consumption pattern will also increase. Dewi (2016) said that the level of education especially housewives has a significant effect on household actual food consumption. This mother's education level is related to her attitude in choosing and determining her household food consumption patterns.

The total income and expenditure of the respondent's family varies. In this study total income and expenditure are divided into four categories. In generation X and Y generation, total income and expenditure were dominated in the range of Rp 5,000,000-10,000,000 with the same amount of 83.3 percent. In the Baby Boomer generation total income and expenditure was dominated in the range of less than or equal to Rp. 3,000,000 with a total of 53.3 percent. In general, the Baby Boomer generation has passed the working age. Respondents in this generation are still working, but some others use retirement salaries, are self-employed, and many receive income from children to fulfill their daily needs. At a p-value less than 0.1, there is a significant difference between the expenditure of the Baby Boomer generation with generation Y and generation X. The largest expenditure is owned by generation Y with an average of Rp8,533,331.

Wife and husband education in this study is very diverse. In the Baby Boomer generation, wife and husband education is dominated at the high school level. In



generation X and generation Y the education of wife and husband is dominated at the undergraduate level I. At a p-value of less than 0.1, there is a significant difference between the average length of wife education between the Baby Boomer generation with the Y generation and the X generation. The highest level of education is owned by generation X with an average length of education of 14.66 years. The level of education of these respondents can be the things that affect respondents in terms of motivation, locus of control, financial literacy, and investment decisions taken. In addition, the varying levels of education provide respondents with a variety of jobs. The work of the wife and husband in this study is very diverse. In the Baby Boomer generation, the husband's work is dominated by entrepreneurs and wives as mothers.

Table 2 Distribution of respondents based on social economic characteristic

Category	Gen BB	Gen X	Gen Y	All Gen
Husband's Income (IDR)				
- ≤ 3.000.000	56.7	0.0	0.0	18.9
- 3.000.001-5.000.000	40.0	53.8	82.3	58.7
- 5.000.001-10.000.000	3.3	42.3	17.2	62.8
- >10.000.001	0.0	3.9	0.0	1.3
Wife's Income (IDR)				
- ≤ 3.000.000	83.4	36.7	23.3	47.8
- 3.000.001-5000.000	13.3	53.3	76.7	47.8
- 5.000.001-10.000.000	3.3	10.0	0.0	4.4
- >10.000.001				
Total Family Income (IDR)				
- ≤ 3000000	53.3	0.0	0.0	17.7
- 3.000.001-5000.000	16.7	10.0	16.7	14.6
- 5.000.001-10.000.000	26.7	83.3	83.3	64.4
- >10.000.001	3.3	6.7	0.0	3.3
Family Total Expenditure (IDR)				
- < 3.000.000	53.3	0.0	0.0	17.7
- 3.000.001-5.000.000	16.7	10.0	16.7	14.5
- 5.000.000-10.000.000	26.7	83.3	83.3	64.4
- >10.000.000	3.3	6.7	0.0	3.33
Husband's Education				
- SD	0.0	0.0	3.3	1.1
- High School	56.7	17.7	41.3	38.6
- Diploma	10	0.0	0.0	3.3
- S1	33.3	82.3	55.3	57.0
- S2				0.0
Wife's Education				
- SD	3.3	0.0	3.3	2.2
- High School	63.3	27.0	46.7	45.7
- Diploma	6.7	6.7	0.0	4.5
- S1	26.7	63.3	50.0	46.7
- S2	0.0	3.0	0.0	1.0
Husband's Job				
- Entrepreneur	60	3.7	0.0	21.23
- General employees	16.7	78.3	96.7	63.9
- Civil servants	13.3	6.0	4.3	7.87
- Retired	10.0	12.0	0.0	7.33
Wife's Job				
- IRT	83.4	36.7	23.3	47.9

Category	Gen BB	Gen X	Gen Y	All Gen
- Civil servants	13.3	13.3	0.0	8.9
- Entrepreneur	0.0	10.0	16.7	8.9
- General employees	3.3	40.0	60.0	34.3

### Motivation

Motivation is defined as an impulse to take actions related to investment. Motivational variables in this study were divided into two dimensions, namely intrinsic and extrinsic motivation. In general, respondents believe that investment is influenced by intrinsic motivation. Table 3 presents the distribution of respondents based on dimensional index categories and motivational variables in each generation. In the intrinsic motivation dimension generation Y, generation X, and the total group have an index which is dominated in the medium category. In the Baby Boomer generation the index is dominated by the average category. This shows that the Baby Boomer generation has the averageest intrinsic motivation among others. In the extrinsic motivation dimension, the index of all generations is dominated by the average category. This indicates that according to respondents extrinsic motivation is not the thing that encourages respondents in making investment decisions. Overall, respondents' motivation in making investment decisions is in the medium category.

Table 3 Distribution of respondents and ANOVA test motivation and dimension variables

Category	Gen BB	Gen X	Gen Y	All Gen	(p-value)
<b>Intrinsik Motivasion</b>					
- Average	60.0	36.7	26.7	41.0	
- Medium	40.0	56.7	70.0	55.7	
- High	0.0	6.6	3.3	3.3	
- Average	48.53 <sup>a</sup>	58.13 <sup>bc</sup>	59.70 <sup>bc</sup>	55.46	0.008***
<b>Ekstrinsik Motivasion</b>					
- Average	100.0	96.7	93.3	96.7	
- Medium	0.0	3.3	6.7	3.3	
- High	0.0	0.0	0.0	0.0	
- Average	39.33	40.50	42.77	40.87	0.225
<b>Motivation</b>					
- Average	46.7	40.0	23.3	36.7	
- Medium	50.0	56.7	76.7	61.1	
- High	3.3	3.3	0.0	2.2	
- Average	43.87 <sup>a</sup>	49.30 <sup>bc</sup>	51.27 <sup>bc</sup>	48.14	0.007***

\*\*\*Significant on  $p < 0.01$ , Gen BB = Baby Bomers Generations, Gen X= X Generations, Gen Y= Y Generations

### Locus of Control

Locus of control is a dimension of social psychology regarding a person's perspective in controlling the events that occur to him. Locus of control variables in this study were divided into four dimensions, namely the potential for behavior, expectations, the value of the reinforcing elements, and the psychological atmosphere. Table 4 presents respondents' distribution based on dimension index and locus of control variable between generations. In the dimensions of my culture potential, generation Y is dominated by an index in the medium category and the other generation

is dominated by an index with a average category. This dimension is related to the possibility of the desired outcome in life.

This indicates that the Baby Boomer generation has a average value regarding the belief in the ability to achieve the desired results in the future. In the expectation dimension, the three generations have indexes that are dominated by the medium category. This indicates that the respondent is quite capable of facing the possibility of various events that will arise and be experienced. Respondents have the confidence to be able to solve problems and change important things in their lives.

Table 4 Distribution of respondents and ANOVA test locus of control and dimension variables

Categori	Gen BB	Gen X	Gen Y	All Gen	(P-Value)
<i>Potential for Behavior</i>					
- Average	50.0	50.0	30.0	43.3	
- Medium	46.7	40.0	56.7	47.8	
- High	3.3	10.0	13.3	8.9	
- Average	58.00	58.57	62.90	59.82	0.254
<i>Hope</i>					
- Average	10.0	3.3	3.3	5.6	
- Medium	90.0	86.7	93.4	90.0	
- High	0	10.0	3.3	4.4	
- Average	64.40	67.73	66.03	59.82	0.105
<i>Reinforcement Elements</i>					
- Average	36.7	36.7	6.7	11.1	
- Medium	46.6	60.0	73.3	76.7	
- High	16.7	3.3	20.0	12.2	
- Average	62.83 <sup>a</sup>	68.30 <sup>bc</sup>	70.03 <sup>bc</sup>	67.06	0.092*
<i>Psychology Atmosphere</i>					
- Average	36.7	36.7	30.0	34.4	
- Medium	46.6	60.0	56.7	54.4	
- High	16.7	3.3	13.3	11.1	
- Average	63.53	60.70	61.77	62.00	0.717
<i>Locus of Control</i>					
- Average	56.7	26.7	16.7	33.3	
- Medium	43.3	70.0	80.0	64.4	
- High	0	3.3	3.3	2.2	
- Average	62.27	63.80	65.23	63.77	0.316

\*Significant on  $p < 0.1$ , Gen BB = Baby Bomers Generations, Gen X= X Generations, Gen Y= Y Generations

In the dimensions of the reinforcement elements and psychological atmosphere is dominated by the index in the medium category. This indicates that the respondent has a fairly good value in terms of having confidence in the way out of the problem and other matters that become his choice. As a whole the locus of control variable is dominated by index with medium category in generation X and Y. In the Baby Boomer generation is in the average category. This variable is a dimension of social psychology regarding a person's perspective in controlling the events that occur to him. This perspective and belief is one of the things considered in determining investment decisions.

### Financial Literacy

Financial literacy is defined as individual financial knowledge used in financial decision making in order to achieve financial prosperity. The financial literacy variable in this study is divided into five dimensions. These dimensions are basic personal, money management, credit and debt management, saving and investment, and risk management. Table 5 presents dimensions index categories and intergenerational financial literacy variables. In the dimensions of money management and credit and debt management the index of each generation is dominated in the medium category. This indicates that respondents have sufficient knowledge about how to manage credit and debit finances.

Table 5 Distribution of respondents and ANOVA test financial literacy and dimension variable

Category	Gen BB	Gen X	Gen Y	All Gen	(P-Value)
<i>Basic Personal</i>					
- Average	53.3	23.3	20.0	2.2	
- Medium	46.7	73.4	76.7	65.6	
- High	0.0	3.3	3.3	2.2	
- Average	55.33 <sup>a</sup>	62.53 <sup>bc</sup>	62.43 <sup>bc</sup>	60.10	0.003***
<i>Money Management</i>					
- Average	3.3	0.0	0.0	2.2	
- Medium	93.4	73.3	73.3	83.3	
- High	3.3	26.7	26.7	14.4	
- Average	66.77	73.67	11.70	70.51	0.333
<i>Credit and Debt Mangament</i>					
- Average	43.3	26.7	30	33.3	
- Medium	56.7	73.3	66.7	65.6	
- High	0.0	0.0	3.3	1.1	
- Average	60.50	62.70	63.47	62.22	0.376
<i>Saving and Investment</i>					
- Average	53.3	43.3	26.7	41.1	
- Medium	43.4	50.0	73.3	55.6	
- High	3.3	6.7	0.0	3.3	
- Average	58.43	62.50	63.70	61.54	0.238
<i>Risk Management</i>					
- Average	80.0	63.3	46.7	63.3	
- Medium	20.0	33.4	53.3	35.6	
- High	0.0	3.3	0.0	1.1	
- Average	47.30 <sup>a</sup>	55.73 <sup>bc</sup>	59.03 <sup>bc</sup>	54.02	0.000***
<i>Financial Literacy</i>					
- Average	56.7	26.7	16.7	33.3	
- Medium	43.3	70.0	80.0	64.4	
- High	0.0	3.3	3.3	2.2	
- Average	58.37 <sup>a</sup>	64.23 <sup>bc</sup>	64.47 <sup>bc</sup>	62.36	0.002***

\*\*\*Significant on  $p < 0.01$ , Gen BB = Baby Bomers Generations, Gen X= X Generations, Gen Y= Y Generations

On the basic dimensions of personal, saving and investment, and financial literacy variables, the Baby Boomer generation is dominated by indexes with average categories. This indicates that the Baby Boomer generation has financial knowledge, knowledge about savings, and knowledge about investment that is averageer than other generations. In terms of risk management, only generation Y has a average index dominance in the medium category and others. This indicates that risk management is

still a task that must be widely studied. Risk becomes something that is feared by the respondent so it has a tendency to avoid it.

### Investation Decision

Investment decisions are defined as decisions taken by consumers in terms of investing based on the existing benefits and risks. Investment decision variables in this study are divided into two dimensions, namely the benefits gained and the risks obtained. Table 6 presents the dimensions and variables of investment decisions between generations. In the dimension of profit obtained, the index distribution of each generation is different. In generation Y it is dominated by the medium category. Generation X is dominated by the high category. The Baby Boomer generation is dominated by the average category. This indicates that each generation has a different view of the benefits in terms of investment.

Table 6 Distribution of respondents and ANOVA test investment decision and dimension variable

Categori	Gen BB	Gen X	Gen Y	All Gen	(P-Value)
Benefits Gained					
- Low	53.3	30.0	23.3	35.6	
- Medium	36.7	33.3	56.7	42.2	
- High	10.0	36.7	20.0	22.2	
- Average	54,07	66,87	65,67	62,20	0.120
Risk Obtained					
- Low	56.7	33.3	33.3	38.9	
- Medium	33.3	36.7	36.7	42.2	
- High	10.0	30.0	30.0	18.9	
- Average	52.97	64.63	63.43	60.34	0.270
Investment Decision					
- Low	56.7	33.3	30.0	40.0	
- Medium	33.3	36.7	50.0	40.0	
- High	10.0	30.0	20.0	20.0	
- Average	53.53	65.80	64.53	61.29	0.160

### Comparison of Motivation, Locus of Control, and Financial Literacy, and Investment Decisions between Generations

The findings on the motivational variables obtained results that the majority of respondents in each generation stated investment is important. Investments are considered capable of controlling family finances and meeting long-term needs. For generation X and generation Y, investment is considered as an alternative that can help the family economy. Unlike the case with the Baby Boomer generation. For the Baby Boomer generation, investment is not enough to play a role in helping the economy.

In the locus of control variable, most respondents in each generation believe that future life is determined by hard work and is inseparable from outside influences such as luck and fate. Respondents claimed to be able to face life problems and change important things in life. Respondents can do what they have in mind to improve family finances. Respondents claimed to have a way out to solve family financial problems and have control and confidence in what was chosen in their lives.

In the financial literacy variable, most respondents have understood the principles of personal financial management to family management strategies. In the dimensions of credit and debit management, the Baby Boomer generation has the lowest percentage compared to other generations regarding the knowledge of the benefits of debit and credit cards. Unlike the case with knowledge of the factors considered in debt and debt management, the Baby Boomer generation has a higher percentage than generation X and generation Y. In the savings and investment dimension, all respondents know the benefits, place, and the right way to save. In terms of investment, most respondents know the benefits of making long-term investments, but not all respondents know the right type and method of investment.

In the investment decision most respondents both the Baby Boomer generation, generation X, and generation Y consider that the search for information about the benefits and risks of investment is an important thing to do. Based on indicators of investment decision making based on profit and risk, most of the Baby Boomer generation said this was not important enough. Baby Boomers tend to choose investment types with low risk, even though the returns are also low. Unlike the case with Generation X and Generation Y, where most of the benefits and risks that will be gained are important in making investment decisions.

Table 7 The effects of motivation, locus of control, and financial literacy on investment decision

Path Coef	Gen BB(a)		Gen X(b)		Gen Y(c)		All Gen (d)	
	B	Conclusion	B	Conclusion	B	Conclusion	B	Conclusion
Motivation → Investment Decision (H2)	0.295	Accept H2	0.278	Accept H2	0.156	Accept H2	0.353**	Accept H2
Locus of control → Investment Decision (H3)	0.239	Accept H3	0.262	Accept H3	0.179	Accept H3	0.190**	Reject H3
Financial Literarion → Investment Decision(H4)	0.419**	Accept H4	0.312	Accept H4	0.548**	Accept H4	0.323**	Accept H4
<i>Adjusted R Square</i>	0.759		.400					

Note : \*\*\*Significant on p<0.05, Gen BB = Baby Bomers Generations, Gen X= X Generations, Gen Y= Y Generations

Hypothesis testing evaluated through the p-value; if the value of the p-value is less than or equal to 0.05, then the influence between variables can be said to be significant. However, if the value of the p-value is more significant than 0.05, then the effect between variables is included in the category not significant. The results showed that all variables of motivation, locus of control, and financial literacy significantly influence investment decisions in each generation, unlike the case with the locus of control that shows no significant effect on groups of all generations. Table 1 presents the results of testing the SEM model hypothesis in the form of path coefficients, and the information of the

hypothesis is accepted or rejected. Table 1 also shows the value of R Square investment decisions for each generation. The results obtained indicate that investment decisions are influenced by the factors studied at 58.0 percent (generation Y), 40.0 percent (generation X), 75.9 percent (Baby Boomer generation), and 56.4 percent (total group), and the rest are influenced by other factors not examined in this study.

Based on Table 7, motivational (H2) p-value for each generation, and groups of all generations have values less than 0.05. It indicates that motivation has a significant effect on investment decisions. Thus all hypotheses, both H2a, H2b, H2c, and H2d, are accepted.

In the locus of control (H3) variable, the p-value of the whole group has a value higher than 0.05. It indicates that the locus of control does not significantly influence investment decisions. Unlike the case with the results in each generation, the p-value was smaller than 0.05. It indicates that the locus of control has a significant effect on investment decisions in each generation. Thus, only the H3d hypothesis is rejected, while the H3a, H3b, and H3c hypotheses are accepted.

In the financial literacy (H4), the p-value for each generation and the whole group is smaller than 0.05. It indicates that financial literacy has a significant effect on investment decisions. Thus all hypotheses for both H4a, H4b, H4c, and H4d are accepted.

### Discussion

The test results of the influence of motivation variables indicate that motivation has a significant effect on investment decisions for each generation and total group. The results showed that intrinsic motivation is an encouragement for respondents to determine investment decisions as seen from the large average value. Unlike the case with extrinsic variables that have a small average value. This indicates that the influence of friends, relatives, relatives, advertisements, promotions, and trends does not significantly influence investment decisions taken. The results of this study are in line with Kusmawati (2011) who said motivation has an influence on investment interests in women. This result is also in line with Yuwono (2011) who said motivation is one of the factors that influence investors regarding the amount of interest in investing in shares. In the intrinsic motivation dimension, generation Y, generation X, and the whole group have an index that dominated in the moderate category. Unlike the case in the Baby Boomer generation, the index dominated in the average category. Overall there are significant differences between the Baby Boomer generation against Generation X and Y. Based on the average results, it can be seen that, overall, Generation Y has the highest average. It indicates that generation Y has a higher investment motivation compared to other generations.

Locus of control test results show that locus of control has a significant effect on the investment decisions of each generation. Based on this research found that investment is one of the ways that respondents believe is the best way to control their financial destiny in the future. In addition to investment, social gathering, savings, and insurance are also things that are chosen to prepare for long-term needs. This is in accordance with Ariani (2015) which says that locus of control affects the investment decisions taken by someone. This was also confirmed by Annisa (2011) in her research

which concluded that locus of control had a positive effect on the phenomenon of someone deciding to increase their investment.

Unlike the case with the results of the influence test on the group of all generations which states that the locus of control does not significantly influence investment decisions. This is in accordance with the research of Wardani and Sukirno (2014), Ikram (2016), and Candra (2019) which states that locus of control has no relationship to investment decision making. In the locus of control index, the index dominated by the moderate category in the X and Y generations. While in the Baby Boomer generation is in a average category. It is because the Baby Boomer generation tends to find it challenging to find solutions to financial problems. The dimensions of the reinforcement element values of the Baby Boomer generation has a significant difference between generation X and generation Y. Overall, Generation Y has the highest average on the locus of control variable. It indicates that among the other generations, generation Y has the best locus of control.

The results of the test of the influence of financial literacy in each generation and total group show the results that financial literacy has a significant effect on investment decisions. This indicates that the better one's knowledge of finance, the greater the influence in determining investment decisions. Enough financial literacy regarding finance, especially about the type and investment system makes respondents more responsible in determining investment decisions. This is also in accordance with Cliff (2011) which shows that financial knowledge is a significant factor in investment decision making. Someone who has higher financial knowledge has better financial behavior and is responsible. In terms of investment, financial literacy will help investors to provide an explanation and understanding of investors' reasoning patterns in rational and emotional terms when making decisions. A good understanding of financial literacy is expected to increase understanding and awareness of financial institutions, products and services. This is expected to be utilized by the community in meeting financial needs and improving financial welfare. The results of this study are also in line with research conducted by Putri and Rahyuda (2017), Putri and Hamidi (2019), Dewi and Purbawangsa (2018), and Wibowo (2018) which states that financial literacy has a significant effect on investment decisions. In the financial literacy variable, the overall results dominated by the moderate category. Unlike the case with the Baby Boomer generation, which is in the average category. This difference is due to different levels of knowledge. In the basic dimensions of personal, risk management, and financial literacy variables, there are significant differences between the Baby Boomer generation with generation X and generation Y. On average, generation Y has the highest average value. It means that generation Y has the best financial literacy among other generations. On average, generation Y has the highest average value. It means that generation Y has the best financial literacy among other generations. Several factors cause the difference in the results of financial literacy in each generation. The Baby Boomer generation, generation X, and generation Y are the generation that lives in different socioeconomic conditions. The differences in age, income, and education can be factors that influence a person's level of financial literacy. It is folaverageing Suryanto and Rasmini (2018), which states that a person's age, education level, and income simultaneously influence the financial literacy they have.

In the investment decision variable, overall, there is no significant difference between each generation in terms of profit, risk, or investment decision variables. On



average, Generation X has the highest average in the profit dimension. It means that for generation X, profits are considered in investment decision making. It is folaverageing Christanti and Mahastanti (2011), who said that the age and education level of investors influence the investment decisions taken. Investors aged 25-29 years old and 50-54 years old tend to consider many factors in making investment decisions, while those under 25-29 years old vice versa. This difference is caused by experience and emotional factors that start to differ at each stage of age.

## **Conclusion and Recommendation**

### **Conclusion**

In the intrinsic motivation dimension generation Y, generation X, and the total group have an index which is dominated in the medium category. Unlike the case in the Baby Boomer generation the index is dominated in the low category. While in the extrinsic motivation dimension, the index of all generations is dominated in the low category. In the locus of control variable the index is dominated by the medium category in the X and Y generations. While the Baby Boomer generation is in the low category. In the financial literacy variable, the overall results are dominated by the medium category. Unlike the case with the Baby Boomer generation which is in the low category. This difference is caused by the different levels of knowledge, especially in terms of basic personal, saving and investment, and risk management.

Based on the ANOVA test, it has been found that the variables of motivation and financial literacy are significant differences between the Baby Boomers generation with generation X and generation Y. In the intrinsic motivation dimension, the value of reinforcing elements, basic personal, and risk management also found significant differences between the Baby Boomers generation with generation X and generation Y. Generation Y has the highest average among other generations on motivation, locus of control, and financial literacy. Unlike the case with investment decision variables, which on average are in the X generation group.

Based on the results of the test of influence on each generation, the results show that motivation, locus of control, and financial literacy have a significant effect on investment decisions. In the total group only motivation and financial literacy have a significant effect on investment decisions, while the locus of control does not.

### **Recommendation**

There are several factors that influence investment decisions but are not examined in this study such as consumer confidence and risk perception of investment products themselves. In subsequent studies researchers can use new research models by developing different factors as mentioned. Also in terms of comparing generations it would be better if the number of respondents taken was more. It is hoped that the results obtained can illustrate the truth and the differences between the three generations can be increasingly visible.

In this study it was found that investment decisions in the Baby Boomer generation tended to be low, financial literacy and locus of control were also low. The Baby Boomer generation needs to add insight or information about finance and investment in order to continue to prepare for the needs of his old age. This can also be a condition that can be learned for generation X and generation Y even though

investment decisions are in the medium category, this generation still needs to increase knowledge about finance and investment in order to make investment decisions that suit your needs and abilities. Investment can be used as a way for each generation to prepare for long-term financial needs. For the future research, the scholars could consider to study the perceived risk, institution-based trust (Yuliati, Dradjat, & Simanjuntak, 2020), or emotions (Simanjuntak, Nur, Sartono, & Sabri, 2020) as the predictors of investment decisions.

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