Investment Interest and Consumptive Behaviour of Student Investors: Between Rationality and Irrationality

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Abstract

The purpose of this study is to examine the tendency to invest and consume among student in North Sulawesi. Phenomenon in North Sulawesi province showed an increase in the number of stock investors dominated by young investors (university students). In making investment decision, they often act in irrational way (herding behavior). In contrast, other phenomena demonstrated a consumptive behavior of those young investors which contradict with investment interests. Populations of this research are 3468 student investors at Indonesia stock Exchange Investment Gallery in the North Sulawesi province. Using accidental sampling, the sample selected is 250 student investors. The analytical technique used is Covariance Based Structural Equation Modeling (CB-SEM). The results showed that investment interest mediate the effect of herding behavior on consumptive behavior. It implies the need to educate student investors on the importance of minimizing the consumptive behavior.

Minat Investasi dan Perilaku Konsumtif Investor Mahasiswa: Antara Rasionalitas dan Irrasionalitas

Abstrak

Penelitian ini bertujuan untuk mengkaji kecenderungan perilaku investasi dan konsumsi diantara pelajar di Sulawesi Utara. Fenomena di provinsi Sulawesi Utara (Sulut) menunjukkan peningkatan jumlah investor saham yang didominasi oleh investor pemula (mahasiswa). Dalam keputusan berinvestasi, investor mahasiswa sering bertindak secara irasional (*herding behavior*). Fenomena lainnya menunjukkan investor mahasiswa cenderung melakukan perilaku konsumtif yang bertolak belakang dengan minat investasi. Populasi dalam penelitian ini adalah investor mahasiswa yang tersebar pada Galeri Investasi Bursa Efek Indonesia (BEI) dalam universitas-universitas di provinsi Sulut sebanyak 3468 investor. Teknik pengambilan sampel menggunakan *accidental sampling* (*non probability sampling*) sebanyak 250 sampel investor. Teknik analisis yang digunakan adalah *Covariance Based Structural Equation Modeling* (*CB-SEM*). Hasil penelitian menunjukkan bahwa minat investasi memediasi pengaruh *herding behavior* terhadap perilaku konsumtif. Implikasi penelitian ini adalah perlunya edukasi terkait pentingnya meminimalkan perilaku konsumtif di kalangan mahasiswa sebagai investor pemula.

JEL Classification: G3, G34

INTRODUCTION

Financial literacy is the knowledge and ability to manage finances to improve welfare (Akmal & Saputra, 2016) which includes knowledge of investment, saving, and consumption (Ariadi et al., 2015). Financial literacy also aims to avoid someone from financial problems due to consumptive behavior.

Nowadays, financial literacy in stock investment becomes an interesting phenomenon for some university students in North Sulawesi province. This is indicated by the gaining number of stock investors in North Sulawesi province in 2014 with 2,700 investors with a percentage 60.91%, while in the previous year only 1,678 investors (market.bisnis.com). This number continues to gain up to November 2016 there were 3,468 which were dominated by beginners, especially university students (market. bisnis.com). The increasing number of student investors is inseparable from the breakthroughs made by the Financial Services Authority (FSA) province of North Sulawesi, Gorontalo, and North Moluccas; those are market deepening strategies and strengthening infrastructure, as well as the hard work of Representative Office of Indonesia Stock Exchange (ISE) in Manado which actively provides stock market education and establishes Investment Galleries in various universities in North Sulawesi province.

An increment of number of university student investor in North Sulawesi province is affected by the tendency of irrational behavior in stock investing. Irrational behavior in this study emphasized on herding behavior. Intuitively, investor can be said herd if the investor invests without knowing the decisions of other investors, and will not invest when investors know that other investors also decide not to invest. When investors are influenced by the decisions of other investors, it can lead investors to the inaccurate investment decisions (Bikhchandani & Sharma, 2001).

The emergence of allegations of herding behavior, consideration to that most student investors are classified as beginner investors, indicate that they have few investment frequency experiences. This statement is supported by Zaniarti et al. (2017) who found that most beginner student investors at ISE Investment Gallery with AB Mitra Sinarmas Sekuritas in Province of West Java perform herding behavior due to the lack of investment experience (with the frequency of investing as much as 1 to 3 times).

In addition, allegations of herding behavior were also due to the Manado people philosophy *"it is better not to eat as long as it is still stylish"* describing a lifestyle that was provocative, energetic, vulgar, materialist, egocentric, and hedonistic. As a real example of the philosophy, when a neighbor buy a car, it is likely that other neighbors will follow buy a car, although through credit. This is done only to obey the feeling of prestige, not to be outdone by other people in society life, and if associated with stock investors among students, it is possible for herding behavior to occur, because by owning feeling of a stock company, it might be able to create feelings of not being defeated among students in North Sulawesi province. Observing this phenomenon, it is suspected that the raising number of student investors is influenced by indications of herding behavior.

Meanwhile, students with high understanding level of financial literacy will increasingly have an interest to invest (Ariadi et al, 2015). The characteristics of person who is interested in investing can be seen from their efforts to learn about a type of investment (profits, weaknesses, investment performance), has an extra time to learn about the investment and effort to try to invest in the type of investment (without doing analysis), even increase the value (capital) of their existing investments (Kusmawati, 2011).

Although financial literacy, especially in the realm of stock investment has become attractive for students in North Sulawesi province, but financial literacy in the realm of consumption has not become important for students in the province of North Sulawesi, as most students

(investors and non-investors) in North Sulawesi province have tended to spend money to excessive consumption or consumption not for basic needs.

Some students from various regions in North Sulawesi province are known that they often visit malls to buy fashion products or enjoy culinary as their consumption matter (Tawarik et al., 2014). The buying behavior from students can be indicated as consumptive behavior. A person who behaves consumptively will use money inappropriately rather than spending money on things that are more useful, so that this can cause financial problems (Ariadi et al., 2015).

Students who have allowance less than IDR 1,000,000 prioritizes consumption of basic needs rather than consumption of extra needs (Ariadi et al, 2015). On contrary, a research from Gumulya and Widiastuti (2013) found that students with allowance less than IDR 1,000,000 have higher consumptive behavior than students who have allowance more than IDR 1,000,000. The Manado people's lifestyle, which is provocative, energetic, vulgar, materialist, egocentric, and hedonistic, is one of the causes for some students (investors and non-investors) in North Sulawesi province, indicates behaving consumptively.

There are indications of student investors in North Sulawesi province behaving consumptively (Mokalu, 2014; Tawarik et al., 2014). Students with high levels of financial literacy (likely to have an interest in investing due to investment knowledge) tend to prioritize consumption of basic needs rather than consumption of extra needs (Imawati et al, 2013; Ariadi et al, 2015; Harli et al, 2015).

Notwithstanding the high investment interest in North Sulawesi province by student investors, it turns out that some students (investors and non-investors) in North Sulawesi province also indicate consumptive behavior. Thus, this trigger the question of whether indications of high investment interest (due to financial literacy) may decrease the tendency of

consumptive behavior among student investors as explained by (Imawati et al., 2013; Ariadi et al., 2015; Harli et al., 2015).

The absence of personal financial literacy in the United States and cross-country students from various universities in US is caused by the lack of systematic personal financial education in US (Chen & Volpe, 1998).

Investment managers in developed countries did not show significant herding behavior (Bikhchandani and Sharma, 2001). The weakness of herding behavior studies in Taiwan (Demirer et al, 2009). The Indonesian stock market and the Asia Pacific global stock market in general have indications of herding behavior in market stress conditions, whereas in normal conditions and returns are very high, there is no indication of herding behavior (Wijayanto & Achsani, 2011).

Significant relationship between financial literacy, gender, and allowance with investment, saving, and consumption levels (Ariadi et al, 2015). Meanwhile, financial literacy and age had a significant negative effect on consumptive behavior on students (Harli et al, 2015).

This study aims to analyze the influence of financial literacy and herding behavior on investment interest and analyze the effect of investment interest on consumptive behavior among student investors in North Sulawesi province. The author believe that no or little prior research examine the same topic as we do. this, we expect an impactful result from our study.

Hypothesis Development
The Effect of Financial Literacy on Investment Interest

Financial literacy is knowledge and ability of individuals to understand how to manage finances (Chen & Volpe, 1998; Harli et al., 2015). financial literacy is a basic need for every individual to have a good knowledge of financial planning, so as to make personal financial decisions optimally (Harli et al, 2015).

One way for someone to avoid financial problems is to be given an introduction or lear-

ning about finance (financial literacy) related to investment, saving, and consumption (Ariadi et al, 2015). Interest is a feeling of being more like and feeling attracted in a thing or activity without being told (Kartika, 2014).

Kusmawati (2011) added that the characteristics of someone who is interested in investing can be determined by how much they are trying to find out about a type of investment, ranging from profits, weaknesses, investment performance, and so on. Furthermore, another feature that can be seen is that they will try to take the time to learn more about the investment or they immediately try to invest in this type of investment (without doing analysis), even adding to their existing investment. Further explanation by Ariadi et al. (2015) found that students with high levels of financial literacy, have greater interest to invest.

Based on several phenomena that occur in student investors in North Sulawesi province, as well as an explanation regarding financial literacy and investment interest, financial literacy can increase the interest to invest among student investors in North Sulawesi province.

H1: Financial literacy has a positive effect on investment interest among student investors in North Sulawesi province.

The Effect of Herding Behavior on Investment Interest

Natapura (2009) explains that rational investors will try to analyze all investment information obtained, while investors who are irrational, will invest if guided by instincts, following other investors (herding behavior), not accustomed to analyzing situations in detail and the condition of the business sector, even believing in the mystical aspects of the investment offered. Then, Bikhchandani and Sharma (2001) in their research explained that investors who follow others in investing must realize that the investment decisions are influenced by the actions of other investors. Intuitively, the investor can be said to be herd if he invests without knowing the decisions of other investors, and will not invest when he knows that other inves-

tors also decide not to invest. When investors are influenced by the other investors decisions, it leads to inaccurate investment decisions and increases volatility of the market.

Furthermore, Kusmawati (2011) added that the characteristics of someone who is interested in investing can be determined by how much they are trying to find out about a type of investment, ranging from profits, weaknesses, investment performance, and so on. Another feature that can be seen is that they will try to take the time to learn more about the investment or they immediately try to invest in this type of investment (without doing analysis), even adding to their existing investment.

Investors can immediately try to invest in a type of investment irrationally (Kusmawati, 2011). This may happen to student investors in North Sulawesi province, considering that most of them are beginner investors who are indicated to have a greater herding behavior than experienced investors.

Ackert and Deaves (2016) explain that the experience of investing will influence the investment decision- making. Investors will learn from mistakes that have been made before. As investors become more experienced and learning from previous mistakes, the investors will be braver and more rational in investing.

This is also supported by Zaniarti et al. (2017) who found that most student investors at the Investment Gallery of the Indonesia Stock Exchange (BEI) with AB Mitra Sinarmas Securitas in West Java province perform herding behavior. This might relate to the lack of experience with frequency investing only 1 to 3 times. Another reason for a herding behavior is the high return from investment. Herding due to favorable returns would be an attraction for investors and potential investors (Venezia et al., 2011; Fityani & Arfinto, 2015).

All student investors who were the samples in this study came from and resided in the North Sulawesi province and had the character of prestige (not to be outdone). They may have a feeling of pride when they become shareholders, because it shows their prestige to other investors who already owns shares of a company.

Based on several phenomena of student investors in North Sulawesi province, as well as explanations regarding herding behavior and investment interest, it raises the suspicion that with indications of herding behavior on student investors it can increase the number of student investors in North Sulawesi province (investment interest).

H2: Herding behavior has a positive effect on investment interest in student investors in North Sulawesi province.

Effect of Investment Interest towards Consumptive Behavior

The Theory of Planned Behavior explains the importance of behavioral control (perceived behavioral control) as resources and opportunities available to someone in dictating or determining the formation of a behavior (Ajzen, 1991). Behavior control also has an impact on the intention and action of someone. Behavior control plays an important part in the Theory of Planned Behavior . The relative importance of intention and control of behavior in predicting behavior is expected to vary in all different situations and behaviors. As explained in The Theory of Reasoned Action, when a person's behavior and situation are strengthened, intention alone must be sufficient to predict behavior. With the addition of behavioral control, it must become more useful as a will control for a decrease in behavior. Thus, intention and control of behavior can contribute significantly in predicting behavior.

Interest is a feeling of being more like and feeling interested in something or activity without being told (Kartika, 2014). The characteristics of someone who is interested in investing can be determined by how much they are trying to find out about a type of investment, ranging from profits, weaknesses, investment performance, and so on (Kusmawati, 2011). Another feature that can be seen is that they will try to take the time to learn more about the investment or they immediately try to invest in this type of investment (without doing analysis), even adding to their existing investment.

The estuary of the consumptive behavior notion is the behavior of buying goods irrationally or not on the basis of needs (Sumartono, 2002). Operationally, consumptive behavior has several indicators, among others, is buying a product because of the lure of gifts, buying a product because the packaging is attractive, buying a product to maintain self-appearance and prestige, buying a product at a price (not based on benefits or uses), buying a product just keeping a status symbol, using a product because of the element of conformity to the model that advertises, the emergence of an assessment that buying high-priced products will create high self-esteem, and try more than two similar products (different brands).

Yuniarti (2015) explains consumptive behavior is a form of wasteful and excessive consumption behavior, prioritizing desires rather than needs, and can be interpreted as a lifestyle that is extravagant. Astuti (2013) and Ariadi et al. (2015) explain if consumptive behavior continues to occur it will result in financial conditions becoming uncontrolled and will lead to wasteful actions, which can lead to financial problems.

In seeing the influence of investment interest on consumptive behavior, knowledge of finance (financial literacy) is also needed. As explained by Ariadi et al. (2015) that financial knowledge is also related to investment, saving, and consumption which aims so that one can avoid financial problems resulting from excessive consumption (not on basic needs).

Financial literacy, especially in the realm of stock investment, has become an interesting thing, because students in the province of North Sulawesi have realized the benefits of investing by showing an increase in the number of North Sulawesi provincial student investors. However, it is also explained that the importance of financial literacy in the realm of consumption is not too important for students in North Sulawesi province (investors and non-investors). It is said that it is not too important because some students in North Sulawesi province have indicated that they have not realized the importance

of money, because they tend to spend their money on excessive consumption or consumption rather than on basic needs.

Research from Mokalu (2014) and Tawarik et al. (2014) showed that there are indications of student investors in North Sulawesi province to behave consumptively. Nonetheless, Ariadi et al. (2015), Harli et al. (2015), and Imawati et al. (2013). Analyzed the effect of financial literacy on consumptive behavior found that students with high levels of financial literacy (likely to have investment interest due to investment knowledge) tended to prioritize consumption of basic needs rather than consumption of extra needs.

Based on several phenomena that occur in student investors in North Sulawesi province, as well as explanations related to investment interest and consumptive behavior, there is an indication that a high investment interest (due to knowledge of investment from student investors) can reduce indications of consumptive behavior to student investors in North Sulawesi province.

H3: Investment interest has a negative effect on consumptive behavior on student investors in North Sulawesi province.

The following is the model used in this study:
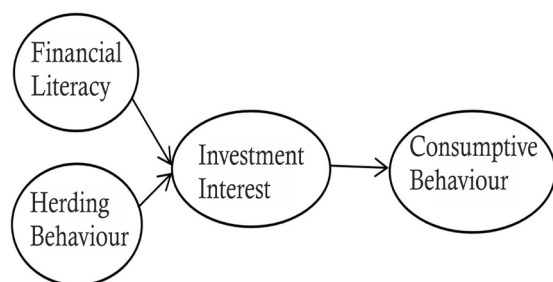
Figure 1:Research Model

METHOD

This research is explanatory research which aims to explain the influence between variables through testing hypotheses, namely the effect of financial literacy on investment interest,

the influence of herding behavior on investment interest, and the effect of investment interest on consumptive behavior in student investors in North Sulawesi province.

The population used in this study were student investors spread across the Investment Gallery of the Indonesia Stock Exchange (IDX) in 8 campuses in North Sulawesi province namely Sam Ratulangi University (1544 student investors), Klabat University (645 student investors), Manado State University (956 investors students), Unika De La Salle (113 student investors), Manado State Polytechnic (179 student investors), Indonesian Tomohon Christian University (5 student investors), STIE Eben Haezar Manado (23 student investors), and Manado State Islamic Institute (3 student investors), with a total population of 3468 student investors.

In this study using Covariance Based Structural Equation Modeling (CB-SEM) method with the minimum requirements of the sample size specified must be N > 200 in order to get good results (Boomsma, 2001), so that the sample used was 250 respondents of student investors.

Furthermore, from eight university in North Sulawesi province which are the location of student investors, sampling is carried out on four campuses, namely Sam Ratulangi University, Klabat University, Manado State University, and Unika De La Salle, using accidental sampling (non probability sampling) techniques where any student investor who meets with the researcher is then seen as suitable as a source of information, the data is taken in order to reach a predetermined number of samples.

The following are the variables and indicators used to measure the effect of financial literacy on investment interest, the influence of herding behavior on investment interest, as well as the influence of investment interest on consumptive behavior on student investors in North Sulawesi province. The indicators of financial literacy variables use the Guttman scale in the form of a statement into the checklist table with the specified rating level that is True =

1 and False = 0, as well as indicators of herding behavior variables, investment interests, and consumptive behavior using Likert scale in the statement form into a table checklist with the same distance level of assessment that is Strongly Agree, Agree, Doubt, Disagree, and Strongly Disagree.

This study used a questionnaire to collect data. The data collection process starts on May 22, 2017 until July 28, 2017, by visiting the Investment Gallery of the Indonesia Stock Exchange (IDX) which is spread over 4 campuses namely Sam Ratulangi University (Unsrat), Klabat University (Unklab), Manado State University (Unima), and Unika De La Salle (De La Salle) to administer the research permit as the first stage, then the next step is to distribute the questionnaire which details can be seen in Table 1.

the loading factor (Ferdinand, 2002).The GoF indices that will be used in this study can be seen in Table 2.

Table 2. Goodness of Fit (GoF) Index

Goodness of Fit Index	Cut-off value
Chi square	Expected to be small
Probability	≥ .05
RMSEA	≤ .08
GFI	≥ .90
AGFI	≥ .90
CMIN/DF	≤ 2.00
TLI	≥ .90
CFI	≥ .95

Table 1. Questionnaires Distribution

Date	Location	Process	Distribution	
			Distributed	Returned
22-26 May	Unsrat, Unklab, Unima, and De La Salle.	Permission		
29 Mei-02 June	Unsrat	Distribution	7	7
05-09 June	Unsrat	Distribution	50	50
12-16 June	Unima	Distribution	59	59
19-23 June	Unsrat and Unima	No distribution (Unsrat and Unima semester break).		
19-23 June	Unklab	Distribution	32	32
03-07 July	De La Salle	Distribution	15	15
10-14 Juli	De La Salle	Distribution	31	31
17-21 Juli	Unsrat	Distribution	20	20
24-28 Juli	Unsrat	Distribution	36	36
	Total Questionnaire		250	250

The test of validity and reliability of the financial literacy, herding behavior , investment interest and consumptive behaviors using Confirmatory Factor Analysis (CFA) through the Analysis of Moment Structure (AMOS 24) application by observing the Goodness of Fit (GOF) evaluation and test the significance of

The significance factor loading test was carried out through two stages of analysis based on lambda value (factor loading) and factor weight (regression weight), where the factor loading of each indicator must be ≥ 0.5 and the Critical Ratio (CR) value of each indicator on regression weight must be ≥ 2.0 (Pakereng,

2017). Then to test reliability using the reliability construct test by calculating the instrument reliability index used (composite reliability), where the reliability construct value must be ≥ 0.7 (Ferdinand, 2002).

Where Std. Loading is obtained from standardized loading (lambda value). is measurement error of each indicator. Then testing the assumptions of structural equation models covering assumptions of sample adequacy, assumptions of data normality, and assumptions of outliers (Pakereng, 2017). Furthermore, a repeat evaluation of the GOF index results is carried out whether the GOF indices have shown the required acceptance value or not. If the GOF indices have not shown the required value, it is necessary to consider modifying the model by modifying the model through the modification index, so that it can minimize the Chi square value (Ferdinand, 2002). Finally testing the hypothesis is done by analyzing the value of Critical Ratio (CR) and Probability (P).

RESULT AND DISCUSSION

Retrieving data on student investor respondents in North Sulawesi province was conducted on May 22, 2017 until July 28, 2017, with the number of respondents collected as

many as 250 samples. Respondents investors student taken directly from the Gallery Investments Indonesia Stock Exchange (IDX) spread on four campuses: University of Sam Ratulangi University Klabat, Manado State University, and De La Salle Catholic University by distributing questionnaires to a sampling technique accidental sampling (non probability sampling), where any student investor who meets with the researcher is then deemed suitable as a source of information, then the data is taken to reach a predetermined number of samples of 250 samples. Characteristics of student investor respondents include age, gender, monthly allowance, and frequency of investment which can be seen in Table 3.

Table 3 shows the characteristics of respondents based on age, gender, monthly allowance, and frequency of investment from a sample of 250 respondents to student investors. It can be seen that the majority of respondents were student investors (206) with a percentage of 82.4% aged between 17-21 years and the remaining 44 student investors with a percentage of 17.6% aged between 22-25 years.

In addition, this study was dominated by female respondents as many as 154 student investors with a percentage of 61.6%, compared to male respondents as many as 96 student inves-

Table 3. Characteristics of Respondents

Characteristics	Number of Respondents	Percentage (%)
Age		
17-21 years	206	82.4
22-25 years	44	17.6
Gender		
Man	96	38.4
Women	154	61.6
Monthly allowance		
IDR 100.000 - IDR 900.000	145	58
IDR1.000.000-IDR5.000.000	105	42
Frequency of Investing		
3 - 10 times	225	90
11 - 20 times	20	8
21 - 1000 times	5	2

tors with a percentage of 38.4%. Then the majority of respondents were in 145 student investors with a percentage of 58% having a monthly allowance of between IDR 100.000 up to IDR 900.000 compared to respondents of 105 student investors with a percentage of 42% having a monthly allowance of between IDR 1.000.000 to IDR 5.000.000. The investment frequency of the sample, it can be seen that the majority of respondents are in 225 student investors with a percentage of 90% having a frequency of investing between 3 to 10 times, compared to 20 student investors having a frequency of investing 11 to 20 times with a percentage of 8% and 5 investors students who have a frequency of investing between 21 to 1000 times with a percentage of 2%.

Based on the samples characteristics, there is an indication of the high herding behavior in student investors in North Sulawesi province. One indication is caused by the lack of frequency of investment from the majority of student investors, which is between 3 and 10 times invested. Majority of novice student investors at the Investment Gallery of the Indonesia Stock Exchange (IDX) with AB Mitra Sinarmas Securitas in West Java province have herding behavior due to the lack of investment experience with the frequency 1 to 3 times, so that student investors do not make rational decisions (Zaniarti et al, 2017).

the majority of student investors having a minimum investment frequency in stock of 3 up to 10 times. Ariadi et al. (2015) also explained that the the courage of students to invest depends on their pocket money.

Monthly allowance of less than IDR 1,000,000 is also an indication of consumptive behavior in student investors. This is also explained by Gumulya and Widiastuti (2013) in his research on Esa Unggul University students that students with pocket money less than IDR 1,000,000 have higher consumptive behavior than students who have pocket money more than IDR 1,000,000. This is because the purchase of goods (clothing) carried out by Esa Unggul University students with pocket money less than IDR 1,000,000 prioritizes their emotions in dressing to make them look attractive and cool (confident), namely by buying expensive branded clothes. The emotional volatility of students will influence decision making including in buying decisions (Gumulya and Widiastut, 2013).

Validity testing uses Confirmatory Factor Analysis (CFA) through the Analysis of Moment Structure (AMOS 24) application by paying attention to the Goodness of Fit (GoF) evaluation and the significance factor loading test (Ferdinand, 2002). The test results with the cut-off value can be seen in Table 4.

Table 4. Results of the Goodness of Fit (GoF) Index

Goodness of Fit Index	Cut-off Value	Analysis Results	Evaluation
Chi square	Expected to be small	965.567	Unfit
Probability	≥ .05	.000	Unfit
RMSEA	≤ .08	.062	Fit
GFI	≥ .90	.815	Marginal
AGFI	≥ .90	.790	Unfit
CMIN/DF	≤ 2.00	1.963	Fit
TLI	≥ .90	.764	Unfit
CFI	≥ .95	.780	Unfit

Most student investors have a monthly allowance of less than IDR 1,000,000, indicating their lack of capital in investing as evidenced by

Table 4 shows the results of the GoF index. It is seen that the relatively high Chi square value of 965.567 means that the observed co-

variance matrix is different from the predicted one, causing the probability value to be smaller then the significane level. The value of Chi square is sensitive to the magnitude of the number of

index (GFI) which causes the model not to be fit. So from that the model needs to be improved by doing a significance test of the loading factor with the results in Table 5.

Table 5. The Lambda Value (Factor Loading) Repetition

			Estimate
Investment_ Interest	<---	Financial_Literacy	unidentified
Investment_ Interest	<---	Herding_Behavior	
Consumptive_ Behavior	<---	Minat_Investasi	
FL_5	<---	Financial_Literacy	unidentified
HB_6	<---	Herding_Behavior	
HB_5	<---	Herding_Behavior	
HB_4	<---	Herding_Behavior	
HB_3	<---	Herding_Behavior	
HB_2	<---	Herding_Behavior	
HB_1	<---	Herding_Behavior	
MI_1	<---	Investment_Interest	
MI_2	<---	Investment_Interest	
MI_3	<---	Investment_Interest	
MI_4	<---	Investment_Interest Invest-	
MI_5	<---	ment_Interest	
MI_6	<---	Investment_Interest	
PK_5	<---	Consumptive_Behavior	
PK_6	<---	Consumptive_Behavior	
PK_7	<---	Consumptive_Behavior	

samples so it needs to be seen also the value of other indices. The TLI index shows an unfavorable value of 0.764 from the cut-off value must be ≥ 0.95, meaning there are still multi-item factors or some indicators that do not support relationships between variables, so there is a need to throw some of these indicators but as a variable requirement still have other indicators that support relationships between variables.

The CFI index shows an unfavorable value of 0.780 from the cut-off value must be ≥ 0.95. The CFI index is similar to the TLI index that there are still multi-item factors or some indicators that do not support relationships between variables. The GoF evaluation still has 5 unfavorable indices, namely (Chi square , Probability , AGFI, TLI, and CFI) and 1 marginal

Table 5 shows that repeated CFA testing and repeat factor loading analysis cannot be performed or an error occurred. To overcome this problem, what must be done first is to make improvements to the testing of CFA validity, reliability testing, assumption of structural equation model assumptions, but have not included the financial literacy variable in these tests (non-full model).

After testing of non-full models is done, then the financial literacy variable is incorporated into the research model (full-model) with the status that was previously unobserved variable (not measured directly (requires indicators) becomes observed variable (measured directly (without indicators). Repair results Confirmatory Factor Analysis (CFA) non full-

Table 6. Value Weight Factor (Regression Weight) Non Full-Model replay

			Estimate	S.E.	C.R.	P	Label
HB_1	<---	Herding_Behavior	1.000				
HB_2	<---	Herding_Behavior	1.529	.129	11.881	***	par_1
HB_3	<---	Herding_Behavior	1.235	.113	10.889	***	par_2
HB_4	<---	Herding_Behavior	1.254	.127	9.882	***	par_3
HB_5	<---	Herding_Behavior	1.123	.127	8.859	***	par_4
HB_6	<---	Herding_Behavior	1.046	.128	8.156	***	par_5
MI_1	<---	Investment_Interest	1.000				
MI_2	<---	Investment_Interest	1.250	.137	9.107	***	par_6
MI_3	<---	Investment_Interest	1.403	.163	8.629	***	par_7
MI_4	<---	Investment_Interest	1.536	.174	8.816	***	par_8
MI_5	<---	Investment_Interest	1.207	.156	7.721	***	par_9
MI_6	<---	Investment_Interest	1.430	.180	7.969	***	par_10
PK_5	<---	Consumptive_Behavior	1.000				
PK_6	<---	Consumptive_Behavior	.832	.091	9.146	***	par_11
PK_7	<---	Consumptive_Behavior	.714	.082	8.692	***	par_12

modeling replicates based on the regression weight factor can be seen in Table 6. Each indicator does not have a CR value of ≤ 2.0, which means that all indicators are dimensionless and significant (valid) in reflecting latent variables. Reliability test is shown in Table 7.

Calculation of construct reliability (CR) based on standardized loading (lambda value) and the value of measurement error of each of the indicators in each variable (herding behavior = 0.86, investment interest = 0.92, and consumptive behavior = 0, 75) has a CR value of ≥

Table 7. Tests Construct Reliability

Indikator		Variabel	Std. Loading	Error	Construct Reliability (CR)
HB_1	<---	Herding_Behavior	.656	.501	.86
HB_2	<---	Herding_Behavior	.905	.196	
HB_3	<---	Herding_Behavior	.805	.312	
HB_4	<---	Herding_Behavior	.740	.490	
HB_5	<---	Herding_Behavior	.657	.628	
HB_6	<---	Herding_Behavior	.590	.773	
MI_1	<---	Investment_Interest	.603	.225	.92
MI_2	<---	Investment_Interest	.745	.160	
MI_3	<---	Investment_Interest	.719	.236	
MI_4	<---	Investment_Interest	.768	.211	
MI_5	<---	Investment_Interest	.627	.288	
MI_6	<---	Investment_Interest	.662	.336	
PK_5	<---	Consumptive_Behavior	.887	.256	.75
PK_6	<---	Consumptive_Behavior	.710	.646	
PK_7	<---	Consumptive_Behavior	.641	.695	

0.7. This means that the indicators are reliable and consistent in reflecting latent (reliable) variables. Tests for repeat data normality can be seen in Table 8.

Table 8. Testing the Data Normality of Repetition

Variable	Min	Max	Skew	c.r.	Curtosis	c.r.
PK_7	1.000	5.000	-.087	-.481	-.882	-2.448
PK_6	1.000	5.000	-.039	-.217	-.887	-2.462
PK_5	1.000	5.000	.174	.964	-.930	-2.582
MI_6	2.000	5.000	-.251	-1.392	-.766	-2.128
MI_5	3.000	5.000	-.516	-2.866	-.694	-1.927
MI_4	3.000	5.000	-.388	-2.152	-.679	-1.885
MI_3	3.000	5.000	-.393	-2.183	-.667	-1.852
MI_2	3.000	5.000	-.335	-1.860	-1.193	-3.313
MI_1	3.000	5.000	-.292	-1.621	-1.218	-3.383
HB_6	1.000	5.000	-.361	-2.003	-.564	-1.566
HB_5	1.000	5.000	-.252	-1.397	-.189	-.525
HB_4	1.000	5.000	.262	1.454	-.609	-1.691
HB_3	1.000	5.000	.086	.478	-.507	-1.407
HB_2	1.000	5.000	.220	1.222	-.501	-1.390
HB_1	1.000	5.000	.016	.088	-.441	-1.223
Multivariate					2.918	.879

Table 8 shows the test for repeat data normality. It can be seen that most of the values of CR skewness (univariate) have values that are between -2.58 to +2.58 and there is one value of CR skewness on the MI_5 indicator that has a value slightly greater than -2.58 which is -2.86 which means univariate distribution of abnormal data. Although the data is not normally distributed univariately, it can be tolerated because it turns out the data are normally distributed multivariately by having a CR kurtosis (multivariate) value that is between -2.58 to +2.58 which is 0.879, which means the assumption of normality fulfilled. If the assumption of data normality has been fulfilled, then there is no need to do a repeat outlier test (Santoso, 2011).
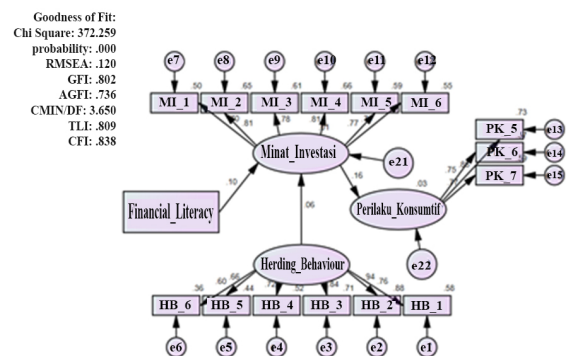
After completing the improvement of CFA validity testing, reliability testing, testing the assumptions of non-full-model structural equation models, then the financial literacy variable will be incorporated into the research model (full-model) with the status that was unobserved as the observed variable that can be seen in Figure 2.

Figure 2: Full-Model Structural Equation

The GoF evaluation on structural equations has been modified can be seen in Table 9.

Table 9. Goodness of Fit (GoF) Full- Structural Equation Model After Modification

Goodness of Fit Index	Cut-off Value	Analysis Results	Evaluation
Chi square	Expected to be small	80.058	Fit
Probability	≥ .05	.267	Fit
RMSEA	≤ .08	.023	Fit
GFI	≥ .90	.949	Fit
AGFI	≥ .90	.905	Fit
CMIN/DF	≤ 2.00	1.097	Fit
TLI	≥ .90	.993	Fit
CFI	≥ .95	.996	Fit

Table 9 shows the GOF full-model structural equation after being modified. It is seen that the chi square value is relatively small at 80.058 with good status, meaning that the observed covariance matrix is not different from the one predicted, so it has a good probability value of 0.267. The value of chi square is sensitive to the magnitude of the number of samples so it needs to be seen also the value of other indices.

The RMSEA index shows a good value of 0.023, which means that the RMSEA index is able to replace the chi square index that is sensitive in measuring the amount of the sample. The GFI index shows a good value of 0.949, which means the residual value (difference) between the theory (hypothesis) and the sample data (observed value) is small. The AGFI index shows a good value of 0.905, where the AGFI index is a development of the GFI index whose value has been adjusted to the degrees of freedom where the degrees of freedom are also small, namely 73. The smaller the degrees of freedom the AGFI value even better.

The CMIN/ DF index shows a good value of 1.097, which means the GOF index has a strong relationship with the expected number of estimated coefficients. The TLI index shows a good value of 0.993, which means that

multi-item factors or some indicators that do not support the relationship between variables have been discarded, so that only 15 indicators remain in this research model that support relationships between variables. The CFI index shows a good value of 0.996, where the CFI index is similar to TLI in interpreting index values.

Based on the evaluation of the full- structural GOF model after being modified, it can be said that all GOF indices are in accordance with the Cut-off Value so that the model developed becomes fit.

Hypothesis Testing

Hypothesis testing is carried out after modifying the full-structural model equation which can be seen in Table 10. The results of testing the full-structural equation model hypothesis after being modified. The test results from hypothesis 1 provide evidence that hypothesis 1 is rejected because it has a CR value smaller than 1.666 and a P value greater than the 0.05 significance level, so that it can be said to positively influence financial literacy on investment interest in student investors in North Sulawesi province.

The test results from hypothesis 2 show that hypothesis 2 is accepted because it has a CR value greater than 1.666 and a P value smaller than the 0.05 significance level, so it can be said that the positive influence of herding behavior on investment interest in student investors in North Sulawesi province is significant.

The test results from hypothesis 3 indicate that hypothesis 3 is accepted because it has a CR value greater than 1.666 and value of P smaller than the significance level of 0.05, so it can be said that the positive influence of investment interest on consumptive behavior in student investors in North Sulawesi province is significant.

The result show that financial literacy does not significantly effect the investment interest of student investors in North Sulawesi province. The difference in the types of data contained in each variable in this study might causes all financial literacy indicators to be insignificant, and can also cause errors in the subsequent analysis stages. The type of interval data should be used

Table 10. Testing of Full-Structural Equation Model Hypothesis after Modification

			Estimate	S.E.	C.R.	P	Label
Investment_Interest	<---	Herding_Behavior	.083	.038	2.162	.031	par_13
Investment_Interest	<---	Financial_Literacy	.028	.031	.924	.355	par_15
Consumptive_Behavior	<---	Investment_Interest	.463	.228	2.034	.042	par_14
HB_1	<---	Herding_Behavior	1.000				
HB_2	<---	Herding_Behavior	1.132	.093	12.216	***	par_1
HB_3	<---	Herding_Behavior	.961	.087	11.091	***	par_2
HB_4	<---	Herding_Behavior	1.083	.109	9.971	***	par_3
HB_5	<---	Herding_Behavior	.946	.102	9.235	***	par_4
HB_6	<---	Herding_Behavior	.862	.101	8.563	***	par_5
MI_1	<---	Investment_Interest	1.000				
MI_2	<---	Investment_Interest	1.167	.125	9.375	***	par_6
MI_3	<---	Investment_Interest	1.297	.132	9.844	***	par_7
MI_4	<---	Investment_Interest	1.450	.154	9.434	***	par_8
MI_5	<---	Investment_Interest	1.408	.155	9.084	***	par_9
MI_6	<---	Investment_Interest	1.713	.195	8.804	***	par_10
PK_5	<---	Consumptive_Behavior	1.000				
PK_6	<---	Consumptive_Behavior	.819	.085	9.641	***	par_11
PK_7	<---	Consumptive_Behavior	.811	.078	10.357	***	par_12

Description: ***: significance at P value ≤ 0.01

in SEM, because nominal or ordinal data types can explicitly lead to SEM analysis errors that cause a smaller correlation matrix coefficient in SEM (Sarjono & Julianita, 2015).

Although financial literacy variables are not significant in this study, it does not mean that student investors in North Sulawesi province do not have good financial literacy. This can be proven by the results of the average total score = 2323 of the 13 indicators of the financial literacy question asked on 185 student investors in North Sulawesi province having an average value of 12.55, which means that most student investors in North Sulawesi province has good financial literacy in terms of investment because filling in the correct answer is close to the highest value of 13.

The tests that have been conducted show that herding behavior has a significant positive effect on investment interest in student investors in North Sulawesi province, which means that the higher herding behavior can increase investment interest in student investors in North Sulawesi province. The characteristics of someone who is interested in investing can be determined by how much they are trying to find out about a type of investment, ranging from profits, weaknesses, investment performance, and so on (Kusmawati, 2011). Another feature that can be seen is that they will try to take the time to learn more about the investment or they immediately try to invest in this type of investment (without doing analysis), even adding to their existing investment. So that this will be the beginning of investors' herding behaviour .

The cause of herding behavior might relate to the fact that most student investors are classified as beginner investors so they have minimal investment frequency experience where the majority of respondents (225 student investors with a percentage of 90%) investing only 3 to 10 times. This finding is also supported by research from Zaniarti et al. (2017) who found that most beginner student investors at the Investment Gallery of the IDX with AB Mitra Sinarmas Securitas in West Java province had herding behavior which one of them was caused by the lack of investment experience only one to three times, so that student investors do not make rational decisions.

The experience of investing frequency and training investors in investing has an influence on investment decision making rationally or irrationally (Ackert & Deaves, 2016). Investors will learn from mistakes that have been made before. The more experienced investors and learning from previous mistakes, the investor will slowly become brave and rational in investing.

In addition, profitable returns will attract investors and potential investors, so that many investors and potential investors will invest in these shares and can trigger an increase in the number of investors due to herding behavior (Venezia et al., 2011; Fityani & Arfinto., 2015).

The third cause of herding behavior relate to the sample origin who come from and reside in the province of North Sulawesi, so that they have prestige (do not want to loose) because they feel like participating by owning the company's stock which is possible to create feeling of pride because it does not want to be outdone by other investors who own stock of a company.

The character tempest of lifestyle of Manado city, where in community life, there is a crisis of local wisdom (imitation culture) that is stated in the term for Manado people, namely "it is better not to eat as long as it is still stylish" (Mokalu, 2014). The life principles of Manado people who are provocative, energetic, vulgar, materialist, egocentric, and hedonistic. As a real example of the term, when a neighbor buys a car, it is likely that other neighbors will follow to buy a car, even if it is credit. This is done only to obey the feeling of prestige, not to be outdone by others in social life.

The hypothesis that has been made in this study that investment interest has a negative effect on consumptive behavior is different from the findings obtained, namely investment interest has a significant positive effect on consumptive behavior on student investors in North Sulawesi province. This means that the higher investment interest has not been able to reduce the high consumptive behavior of student investors in North Sulawesi province. Thus, this finding is different from previous studies which in their study did not analyze the effect of investment interest on consumptive behavior, but rather analyzed the financial literacy effect towards consumptive behavior, but there are indicators of investment knowledge in variables financial literacy finds that students with high levels of financial literacy (likely to have an interest in investment due to investment knowledge) tend to prioritize consumption of basic needs rather than consumption of extra needs (Ariadi et al., 2015; Harli et al., 2015; Imawati et al., 2013).

Interest is a feeling of being more like and feeling interested in something or activity without being told (Kartika, 2014). The characteristics of someone who is interested in investing can be determined by how much they are trying to find out about a type of investment, ranging from profits, weaknesses, investment performance, and so on (Kusmawati 2011). Another feature that can be seen is that they will try to take the time to learn more about the investment or they immediately try to invest in this type of investment (without doing analysis), even adding to their existing investment.

The results of the discussion with two lecturers of the faculty of economics and business at one of the universities where sampling took place explained that, it is true that the interest of students to invest in stocks is high, which is marked by an increase in the number of student investors, but in investing in shares, most of the student in-

vestors only invest for a short period of time for one week or one month. Then the shares are resold, the results of which will be used to travel to the mall with the aim of enjoying culinary, buying branded goods, or watching movies in theaters.

Based on the results of the discussion, reflecting that most student investors in North Sulawesi province invest in shares whose results are used to buy extra needs, where the purchase of extra needs leads to the occurrence of consumptive behavior.

One reason most student investors in North Sulawesi province behave consumptively, because the majority of student investors are 145 investors with a percentage of 58% having a monthly allowance of between IDR 100,000 to IDR 900,000 compared to the remaining 105 investors with a percentage of 42% having pocket money monthly between IDR 1,000,000 to IDR 5,000,000 which means that most student investors have pocket money that is ≤ IDR 1,000,000. Student investor monthly allowance ≤ IDR 1,000,000 which might make student investors in North Sulawesi province seek additional funds through stock investments to meet their extra needs.

Students with allowance IDR 1,000,000 had higher consumptive behavior than students who had allowance ≥ IDR 1,000,000 (Gumulya and Widiastuti, 2013). Another cause of student investors in North Sulawesi province is consumptive behavior, namely considering that all student investors come from and reside in the province of North Sulawesi, where the lifestyle of the Manado people in social life has the term " it is better not to eat as long as it is still stylish", where the term describes the principle of lifestyle of Manado people who are provocative, energetic, vulgar, materialist, egocentric, and hedonistic (Mokalu, 2014).

This finding is also supported by research from Tawarik et al. (2014) which explains that some students from various regions in North Sulawesi province are known to frequently visit malls to buy fashion products or enjoy culinary as their consumption material, where the purchase shows a lifestyle materialist and hedonist which leads to consumptive behavior.

CONCLUSION AND RECOMMENDATION

Based on the stages of research that has been done in analyzing the effect of financial literacy on investment interest, the effect of herding behavior towards investment interest, as well as the effect of the investment interest of the consumptive behavior in investors student in the province of North Sulawesi, it can be concluded that (1) financial literacy does not have significant effect on investment interest, (2) herding behavior has a significant positive effect on investment interest, which means high investment interest in student investors in North Sulawesi province because it is influenced by the existence of herding behavior from student investors, and (3) investment interest has a significant investment interest has a significant positive effect on consumptive behavior, which means that even though student investors in North Sulawesi province have a high interest in investing because they have good financial knowledge, it turns out that student investors in North Sulawesi province are still consumptive.

Based on the conclusions that have been described, the information that can be given to related institutions, namely FSA, IDX, and universities in North Sulawesi province, that conditions occur in the increasing number of student investors in North Sulawesi province has irrational behavior (herding behavior) and consumptive behavior. Although it is undeniable that one of the perpetrators of the herding behavior and consumptive behavior of student investors was because the North Sulawesi student investors were authentic with the lifestyle of Manado people who had the character of not being outdone by others, provocative, energetic, vulgar, materialist, egocentric, and hedonistic, but there is nothing wrong for FSA, IDX, and universities in North Sulawesi province to always teams up in a more appropriate direction in providing good financial planning education including rational behavior and behavioral impact irrational in investment decisions, as well as the benefits of stock investing and the dangers of consumptive behavior. Thus, it is expected student investors in North Sulawesi

province will no longer be herding behavior and not behave consumptively because it can lead to financial problems.

It is known that the cause of the insignificant positive effect of financial literacy on investment interest is because of the different types of data from financial literacy variables that use nominal or categorical measurement scales compared to the types of data from the three other variables namely herding behavior variables, investment interests, and consumptive behavior interval measurement scale. For this reason, in order to expedite further research, it is recommended that the same measurement scale be used, namely interval, because indeed the interval measurement scale that is appropriate is used for Structural Equation Modeling (SEM) based research.

It has been attempted to solve the nominal data problem on the financial literacy variable, namely by converting the nominal data into interval data using the Successive Interval Method, but still not successful because the results of the conversion produce decimal numbers, which is different from the interval data of the three other variables, namely variables herding behavior, investment interest, and consumptive behavior in the form of integers. So that it is expected that further research will use the type of interval data for the four financial literacy, herding behavior, investment interests, and consumptive variables from the beginning of the respondents' data collection.

The contextual indicator of financial literacy in its influence on investment interest is still wide because it has a discussion regarding investment, saving and insurance knowledge. For further research, the contextual financial literacy indicators are focused on investment knowledge.

The discussion of herding behavior in this study did not discuss in detail who was the reference or role model of the herding of student investors in North Sulawesi province. For further research to explain who is the reference or role model of herding behavior such as investment managers, lecturers, friends, or family.

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