

# The Investment Behavior through Supply Chain Strategy of Acehness Entrepreneurs, Indonesia

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**Abstract**— The aim of this is to analyze the investment behavior of Acehness entrepreneurs by considering the individual characteristics of entrepreneurs. This study was analyzed using a quantitative descriptive approach. The number of samples was 150 Aceh Entrepreneurs in 10 districts/cities in Aceh. The selected entrepreneurs who have been designated as Taxable Entrepreneurs (PKP) by the Directorate General of Taxes. The sampling technique used is judgment sampling. The research data collected by using a closed questionnaire. The results of the study show that Acehness entrepreneurs have risk-averse behavior in making investment decisions. The results of the study also show that Acehness entrepreneurs consider investments by sharia principles. Entrepreneurs with an older age tend to have alternative investments in financial assets. Factors of saturation and reliability cause this tendency. Older entrepreneurs are becoming increasingly uncomfortable with the business they are running right now, but they are worried about the significant risks of diversifying investment into financial assets. Education needs to be given about investing in the financial sector for Acehness entrepreneurs, especially for older entrepreneurs.

**Keywords**— Investment behavior, supply chain strategy, risk-averse, entrepreneurs.

## 1. Introduction

Investors in making investment decisions determined by behavior. In the traditional financial perspective, investors act rationally in making investment decisions for both risk and utility. In behavioral finance, investors act irrationally in making investment decisions but are influenced by psychological factors [1-3]. Making investment decisions by individual investors is a complex decision-making behavior that is influenced by rational and irrational factors that contribute to inefficiency. Inefficiency is caused by investor bias behavior. The effect of interaction and social

behavior causes investors to be irrational. Investors are joining in because of social and mass media influences [4]. Research on investor behavior based on personal characteristics still provides ambiguous evidence. Kannadhasan's study, for example, provides evidence of investor characteristics such as gender, education, and age, which have different effects on one's investment behavior [5]. Conversely, research, Alquraan et al., shows that age, gender, and income of investors have no difference in making investment decisions [6].

At present, there are more than 57,000 entrepreneurs from more than five million people from Aceh. The number of entrepreneurs in Aceh is still very lacking, based on the national average. The minimum number of entrepreneurs in Aceh must be 100,000 entrepreneurs. The lack of entrepreneurs in Aceh could be caused by the lack of creativity, innovation, and independence of these entrepreneurs [7]. Aceh's potential business is substantial to be developed, but there are still many business sectors that have not been touched and require the attention of all relevant parties. Currently, there are around 600 thousand Aceh taxpayers, based on data obtained from employers who registered tax amnesty in Aceh; there are 3,540 entrepreneurs who report as participants in tax amnesty [8]. There are still many entrepreneurs in Aceh who have not yet been confirmed as taxable entrepreneurs; this is because the behavior of Acehness entrepreneurs is still inherited and traditional. Many entrepreneurs in Aceh are still not orderly in paying taxes, businesses that do not involve with third parties so that they do not need tax administration, become partners of public companies and the government.

This research was conducted to look at the investment behavior of Acehness entrepreneurs by considering their characteristics. Acehness

entrepreneurs are suspected of having a fear of facing risks (risk averter). So far, Acehese entrepreneurs have invested only in real assets, not in financial assets such as investing in securities (stocks and bonds) on the stock market. The risk-averse attitude of Aceh businesspeople and the tendency of investment in real assets because they do not have sufficient information about the mechanism of investment in financial assets. Adequate information and the way the information presented by the company determines the model and behavior of investment decisions of certain individuals, [9-14]. Rational investors who have information about investment objects have less risk-averse behaviors [15].

Also, Acehese entrepreneurs who live in Islamic sharia areas are thought to consider Shari'a principles in making investment decisions. Investment in financial assets has a gharar element, so employers avoid investing in these assets. This study aims to analyze the behavior of Acehese entrepreneurs who allegedly hold Shari'a principles in choosing investment objectives by considering the personal characteristics of entrepreneurs. The individual attributes of entrepreneurs considered in this study include gender, age, education, and business experience.

## 2. Literature Review

### 2.1 Investor Behavior

The attitude of investors in making investment decisions is determined by subjective and objective factors. Subjective factors are psychological factors that sometimes come out of the rational reasoning of investors. Follow-up behavior in investing is a reflection of investors' subjective considerations. Virlics mentions subjective factors including past earnings experience, feelings about future earnings, consideration of expected costs, knowledge of technical investment, and perceptions of risk. Objective factors represent investor behavior based on the rational attitude of investors in making investment decisions. Information received by investors determine objective attitude in decision making. In financial theory, investors are individuals who rationally act to maximize wealth (maximization) [16].

Successful investors are usually investors who are smart, confident, not afraid of change, and tend to

react positively to failure. The type of investment chosen by investors is an investment that provides a large return with a small risk. The attitude of investors to risk is determined by investor preference for risk. Investor preferences for risk include risk-averse, risk seeker, and risk-neutral. Investors' preference for risk is inconsistent, always changing, depending on the goals to be achieved, namely security or maximum results. The aim of the investor risk-averse is the security and objectives of the risk-taker investors are the maximum results [17].

### 2.2 Risk Averse

The attitude of investors to risk is determined by information received from various sources [18]. Information affects investors' perceptions of risk [19]. Investors change behavior/investment decisions based on learning outcomes, recognition of the company, the environment, and the information it processes [20]. The information about the company and its assets makes investors know the company that is the investment destination well. Investors tend to invest in well-known assets because well-known assets have a low risk [21].

Some Factors that determine investors avoid risk are usually at the stage of determining asset prices, prospects for economic growth, measures of market equity and credit risk, exchange rate fluctuations and negative sentiments that occur in the capital market. Investors will react to situations of low-interest rates by reducing their willingness to risk that arises. If investors expect the business climate to improve, they will divert some of their assets from short-term instruments into long-term bonds, [22]. On the contrary, Huang stated the implications of investors in avoiding risk because investors apply the precautionary principle [23-25].

Investors are overconfident of profits and oversensitive to losses. Investors who have experienced a loss in investment usually change the risk behavior of the inverter to become a risk seeker to get back the return on the losses they experience [26]. This is caused by the dual effect of risk tolerance: on the one hand, an investor's emotional reaction to losses can be reduced by a higher level of risk tolerance, but on the other hand higher risk tolerance levels are associated with

risky portfolios resulting in higher exposure to actual losses in the market decline [28-29].

When risk aversion increases, risk tolerance decreases [30]. Individuals with a high level of risk aversion, choose investment strategies that are low-risk, [31]. If someone experiences an increase in wealth, about relative risk aversion, the person takes action to avoid the risk of obtaining the expected investment utility [32]. Investors with lower risk preferences are more sensitive to large deviations [33]. Conversely, Investors who have a higher risk tolerance, are willing to accept greater risks to get investment from impatient investors [34]. Greater risk is usually willing to be accepted by investors when he knows his resources [35].

### 2.3 Risk Seeker

1. Investor behavior towards risk will be different when investors join a group. Group investors are more courageous in dealing with risks compared to individual investors. Individual investors are possible to change their decisions, from being less willing to take the risk of being more daring to take risks when joining groups. In groups, investors will face investment risks together, and through groups, investors can better understand investment projects carried out or companies that are investment objectives. Thus, typical investor behavior towards risk (risk averter or risk seeker) depends on reference [35, 36]. Individual investors are not reckless in making investment decisions if they do not have adequate information [1].

2. The Group investors have advantages compared to other investors; these advantages include teamwork, combining information and knowledge, and investment experiences among themselves. Group investors are better able to assess the market and identify quality investment instruments, so this group is more likely to achieve higher returns than the market average [31]. Investors who like risk are usually aggressive and speculative in planning their investment decisions. Psychologically, investors who like the risk of being more emotional in facing changes in stock prices based on overoptimism, optimism, and pessimism can result in increases and decreases in stock prices. Usually, in January, every year optimism related to the turn of the year may have implications for the stock market [8].

### 2.4 Neutral Risk

The behavior of these investors does not care about the risks posed by the investments they make; these investors place themselves in the middle of the spectrum between high-risk investments and non-risky investments [19]. These investors tend to maximize the certain value and avoid something uncertain. This type of investor is an investor who is sufficient to accept the risk, but will not want to take more risks to try to get a higher level of return [37-44]. The level of return they expect is usually higher than risk-averse investors, and of course, they also have an acceptable minimum risk.

Understanding of investor risk is an important thing to know by neutral investors about risk. Their investment risk is measured by finding a deviation between the expected return and the actual return. The greater the deviation means, the greater the level of risk [28]. Assessing the level of prospects for risky stocks is only from the expected returns. The level of risk is irrelevant to investors who are neutral to risk, which means there is no demand for compensation from the risks borne. For these investors, the level of equivalent certainty of a portfolio is the same as the expected rate of return [23]. Investors who choose neutral attitudes toward the risk of not having adequate information, or indicating they do not have valuable information on the price of assets that exist in competitive capital markets [11].

### 2.5 Relationship of Personal Characteristics to Investment Behavior

Based on a theory of reasoned action developed by Fishbein and Ajzen, individual behavior is indirectly influenced by external variables, then interacts with environmental factors in determining behavior [18]. These external variables are demographics, personality characteristics, beliefs about objects, attitudes toward objects, task characteristics, and situational. The individual characteristics of investors also determine the attitude of investors to risk besides being influenced by the information obtained and the environment, [18, 24]. Jagongo & Mutswenje mentions investment decisions as a function of several factors that include market characteristics, individual risk profiles, and accounting information

[27]. These individual characteristics include age, gender, education, and experience. Age has an important role in making decisions [42]. Men and women almost have the same behavior in making investment decisions [17].

Demographic factors play different roles in financial risk tolerance and financial risk behavior [30]. Risk preference is closely related to gender, age, income, and education [22]. Age and education affect risk tolerance [7]. A person's experience determines his behavior [15]. Social groups that have lower education, position, and health tend to be risk aversion [29].

Men have lower risk aversion compared to women [13, 21, 22, 47, 48]. Male investors have higher self-esteem than female investors, so male investors are more courageous in making investment decisions [4]. Women are four times more likely than men to choose risk-free investments, and only one-third of them choose to invest in assets that have high risk, [14]. The age level of a person determines his behavior towards financial risk [30]. Older people are more tolerant of risk compared to younger ages [22]. Older investors usually have the better emotional maturity and long business experience so they are more tolerant of risk and have less risk aversion.

The entrepreneurs with a lower level of education is more careful about risks in making investment decisions, [30]. The entrepreneur who have higher education and knowledge are more tolerant of risk [22]. Investors who have a higher education background than investors who do not have a higher education background are certain to have a better understanding of investment along with the risks. As a result, investors with higher education are more willing to take investment risks compared to investors with low education levels. The experience provides lessons for investors in making investment decisions. With experience, someone has a greater sense of investment risk and can develop a good investment strategy. Investors who are more experienced take greater risks than less experienced investors [4].

### 3. Research Methodology

#### 3.1 Sample of data

The object of this study is entrepreneurs in 10 regencies/cities in Aceh. The regencies/cities are

Aceh Tamiang Regency, Langsa City, East Aceh Regency, North Aceh Regency, Lhokseumawe City, Bireuen Regency, Bener Meriah Regency, Central Aceh District, Gayo Lues Regency, and Southeast Aceh District. The sampling technique used is judgment sampling, which is based on certain considerations. The number of samples in this study was 150 people with a sample distribution in each district/city were 15 entrepreneurs.

#### 3.2 Method of collecting data

The research data was obtained by distributing questionnaires to Aceh entrepreneurs in the districts/cities, which were the research areas. Researchers did not obtain research data on Taxable Entrepreneurs (PKP) through secondary sources such as the tax office and the Central Statistics Agency (BPS) both at the district/city and provincial levels. To overcome this problem, researchers collected data by visiting entrepreneurs who were the target of the research respondents. The initial step was taken by researchers to ascertain the research respondents, including Taxable Entrepreneurs (PKP), was by asking whether the respondents had been confirmed as Taxable Entrepreneurs. If the intended respondent has been designated as a PKP, the next step that the researcher will do is ask his willingness to fill out the research questionnaire. If the intended respondent has not been confirmed as PKP, the respondent is not used as the sample of this study, and the researcher is looking for other prospective respondents.

#### 3.3 Data analysis

This study uses a quantitative descriptive approach. The frequency test is used to measure respondents' perceptions of the behavior of their investments from the results of a questionnaire that has been circulated. The researcher seeks to identify the behavior of Acehnese entrepreneurs in making investment decisions in the field of financial assets by considering the personal characteristics of entrepreneurs. Personal characteristics that are considered are gender, age, education, and experience. The relationship between the entrepreneur's personal characteristics and investment behavior was tested using crosstab. Crosstab is a statistical method for measuring the strength of the relationship between two available

variables. This research method is descriptive. Therefore, testing the relationship of investment behavior of entrepreneurs with their characteristics is suitable to be tested by the crosstab method.

#### 4. Result and Discussion

The characteristics of the respondents of this study are presented in Table 1 below:

**Table 1.** Characteristic of Respondent

| No | Indicator  | Frekuensi | Percentage (%) |
|----|--|-----------|----------------|
| 1. | Age  |           |                |
|    | 20-30 year   | 29        | 19.3           |
|    | 31-40 year   | 59        | 39.3           |
|    | > 40 year  | 62        | 41.3           |
|    | Total  | 150       | 100.0          |
| 2. | Gender   |           |                |
|    | Male   | 118       | 78.7           |
|    | Female   | 32        | 21.3           |
|    | Total  | 150       | 100.0          |
| 3. | Education  |           |                |
|    | SMA (Senior High school)                           | 81        | 54.0           |
|    | D3   | 15        | 10.0           |
|    | Bachelor   | 42        | 28.0           |
|    | Master   | 2         | 1.3            |
|    | Doctor of philosophy                               | 10        | 6.7            |
|    | Total  | 150       | 100.0          |
| 4. | Types of Business                                  |           |                |
|    | Mining and excavation                              | 1         | .7             |
|    | Processing industry                                | 6         | 4.0            |
|    | Electricity, Gas, and Water                        | 4         | 2.7            |
|    | Contraction  | 10        | 6.7            |
|    | Trending and Retail                                | 97        | 64.7           |
|    | Accommodation and Food and Beverage Services       | 10        | 6.7            |
|    | Transportation, Warehousing, and Telecommunication | 4         | 2.7            |
|    | Real Estat, Rental and Corporate Services          | 4         | 2.7            |
|    | Education Services                                 | 3         | 2.0            |
|    | Others   | 11        | 7.3            |
|    | Total  | 150       | 100.0          |

|    |                   |     |       |
|----|-------------------|-----|-------|
| 5. | Experience (year) |     |       |
|    | 3 Years           | 32  | 21.3  |
|    | 4 Years           | 6   | 4.0   |
|    | > 5 Years         | 112 | 74.7  |
|    | Total             | 150 | 100.0 |

From the 150 respondents studied. Respondents aged 20-30 years amounted to 29 people (19.3%), respondents aged 31-40 amounted to 59 people (39.3%), and respondents aged over 40 years amounted to 62 people (41.3%). Based on gender, the entrepreneurs who were the respondents of the majority of this study were men who reached 118 entrepreneurs (78.7%), the remaining 32 entrepreneurs (21.3%) were female entrepreneurs.

The entrepreneurs with the last level of education of senior high school/equivalent dominate the respondents of this study, reaching 81 entrepreneurs (54%). The number of respondents with the second most education is the graduates of S1 (S1) education totaling 42 people (28%), the next are entrepreneurs with the latest education Diploma 3, Strata 3, and Strata 2, each of which amounted to 15 people (10%), 10 people (6.7%), and 2 people (1.3%).

The type of business run by Aceh Entrepreneurs, entrepreneurs engaged in extensive and retail trade are the most entrepreneurs, reaching 97

entrepreneurs (64.7%), then followed by entrepreneurs engaged in construction, and Provision of Accommodation and Provisioning Eating Drinking is 10 entrepreneurs each (6.7%). Very few entrepreneurs who became respondents to this study were entrepreneurs engaged in mining and quarrying, only 1 entrepreneur (0.7%).

Based on the experience of running a business, entrepreneurs with an experience of more than 5 years amount to 112 entrepreneurs (74%). Entrepreneurs with 3 years experience amounted to 32 people (21.3%) and entrepreneurs with 4 years of work experience amounted to 6 people (4%). Overall, Aceh Entrepreneurs already have a good experience in running their businesses well.

#### 4.1 Result

This study focuses on the behavior of entrepreneurs on risk as measured by ten indicators. This indicator is discussed one by one descriptively. The summary of the ten indicators is described in table 2 below:

**Tabel 2.** Behavior Indicator of Entrepreneurs (N=150)

|   |  | SA   |      | A    |      | N    |      | DA   |     | SDA** |     |
|---|--|------|------|------|------|------|------|------|-----|-------|-----|
|   |  | Freq | %    | Freq | %    | Freq | %    | Freq | %   | Freq  | %   |
| 1 | Don't invest in risky projects   | 43   | 28.7 | 71   | 47.3 | 33   | 22   | 2    | 1.3 | 1     | 0.7 |
| 2 | High investment risk does not necessarily provide a high level of profit | 43   | 28.7 | 67   | 44.7 | 36   | 24   | 3    | 2.0 | 1     | 0.7 |
| 3 | Investment security  | 83   | 55.3 | 60   | 40   | 6    | 4.0  | 0    | 0   | 1     | 0.7 |
| 4 | Prefer investing instead deposit money in the bank                       | 66   | 44   | 57   | 38   | 9    | 6.0  | 7    | 4.7 | 11    | 7.3 |
| 5 | Convenient with current investment                                       | 55   | 36.7 | 60   | 40   | 31   | 20.7 | 3    | 2.0 | 1     | 0.7 |

|    |  |     |      |    |      |    |     |   |     |   |     |
|----|--|-----|------|----|------|----|-----|---|-----|---|-----|
| 6  | Experience determines of level business risk             | 69  | 46   | 69 | 46   | 9  | 6.0 | 3 | 2.0 | 0 | 0   |
| 7  | Tend to invest in real assets                            | 71  | 47.3 | 52 | 34.7 | 11 | 7.3 | 7 | 4.7 | 9 | 6.0 |
| 8  | It is important to invest in sharia-based assets         | 68  | 45.3 | 64 | 42.7 | 15 | 10  | 3 | 2.0 | 0 | 0   |
| 9  | Profit and halal investment                              | 88  | 58.7 | 59 | 39.3 | 2  | 1.3 | 0 | 0   | 1 | 0.7 |
| 10 | The principle of honesty, justice and trust in investing | 119 | 79.3 | 28 | 18.7 | 2  | 1.3 | 0 | 0   | 1 | 0.7 |

Note: SA= Strongly Agree, A= Agree, N= Neutral, DA= Disagree, SDA= Strongly disagree

## 4.2 Discussion

Aceh entrepreneurs included in the group of entrepreneurs who are risk aversion. They have an interest in investing but investing in real assets, and it is difficult to move from investment projects to tangible assets to investment projects in financial assets. Acehese entrepreneurs also find it challenging to develop investments both in the form of expanding business segments and diversifying investments as indicated by their comfort in investments that have been carried out. The reluctance of employers to move from investment projects that have been carried out is due to the limited information obtained by employers about new investments, especially investment in financial assets. In line with the finding by Septyanto and Adhikara, he proves that when an investor does not have sufficient information about the company being the investment destination [39]. The investor is risk aversion and irrational and chooses to invest in low-risk assets. These results are also consistent with findings [1, 4, 6, 16].

The information changes employers' preferences for risk. Increasing employers' preference for risk causes entrepreneurs to be more tolerant of risk. Entrepreneurs are willing to accept a higher risk of getting investment from people who are impatient if the entrepreneur has a higher risk tolerance [41]. Entrepreneurs behave at risk avoidance when faced with high uncertainty and risk about the expected results of their investments [32]. The characteristics of risk aversion Acehese entrepreneurs make them less tolerant of investment risks and choose investments that have low risk. Such characteristics are by the findings of Gordon et al. and Outreville [21, 34].

Investors with low-risk preferences are sensitive to large deviations [20]. The results of this study prove the age of employers determines behavior towards risk. Older entrepreneurs tend to change their behavior from risk aversion to risk-takers. This study also documents older entrepreneurs becoming increasingly uncomfortable with current forms of investment. This study supports some research results that document risk preferences are closely related to the age of the entrepreneur [22, 42]. The findings of this study prove that older Acehese entrepreneurs tend to move from the real sector to invest in the financial sector, such as investment in capital market securities. The tendency of older entrepreneurs to invest in the financial sector indicates the entrepreneur's saturation of the investment he has made today. Older entrepreneurs have been in business for a long time so they need to get new conditions and conditions about the form of investment they will make. Older entrepreneurs usually have higher assets and personal welfare so they are more established. This condition allows them to be willing to take greater investment risks by expanding the investment sector to financial assets. In addition, older investors usually have the better emotional maturity and long business experience so that they are more tolerant of risk and have less risk aversion. The findings of this study are in line with the results of Grable's study, which showed investors with an older age had a lower tolerance towards the risk compared to younger investors [22]. Kannadhasan proves the age of a person determines his behavior towards financial risk [30].

The age of entrepreneurs is an interesting finding of this research. Older entrepreneurs are not only ready to become risk-takers and want to diversify investments into financial assets, but also have a tendency not to consider Islamic principles in

investing. The older the age of Acehese entrepreneurs, the more they ignore sharia principles in investing. Other personal characteristics such as gender, education, and entrepreneurial experience do not have a relationship with the attitude of employers to risk, consideration of sharia principles, principles of honesty and halal investment, and diversification of investment into financial assets. This study does not support the results of research by Gordon et al., Grable, Barber & Odean and Dohmen et al. which prove male investors are more courageous about investment risk-taking compared to women [4, 13, 21, 22]. The results of this study also do not support the research conducted by Ert & Haruvy, who proved someone's experience in determining their behavior towards investment risk [15]. This research is also not in line with the results of the study. Barber & Odean states that investors with higher education are more willing to take investment risks compared to investors with low levels of education [4].

## 5. Conclusion

The results of this study prove that Aceh Entrepreneurs have risk avoidance characteristics (risk averter). They prefer to invest in assets that have a low risk. Investment in new projects is difficult to do because the entrepreneurs feel comfortable with the investment project that is being carried out. In addition to risk aversion, Acehese entrepreneurs consider sharia principles in choosing the type of investment and are not merely profit-oriented. The halal investment factor is taken into consideration in making investment decisions.

The age of entrepreneurs is an important part that determines the behavior of Acehese entrepreneurs against risk. Older entrepreneurs can choose investments in financial instruments. They are becoming increasingly uncomfortable with the business they are running right now, but they are worried about the huge risk of diversifying investment into financial assets. Older entrepreneurs may have run their businesses for a longer period so they are saturated with their current investments and are willing to shift to investing in financial instruments. Another reason older entrepreneurs are willing to invest in the financial sector due to the establishment factor.

## 6. Suggestions

1. Capital markets and securities companies need to increase their role in socializing to entrepreneurs about the procedures for investing in the stock market, returns, and investment risks.

2. The Government / Financial Services Authority (OJK) needs to prepare regulations that can protect entrepreneurs who want to invest in the stock market. Regional entrepreneurs who invest in the stock market are likely to become minority investors. Therefore, OJK needs to prepare regulations that can guarantee equity and return for minority investors.

Local governments/employers' associations need to be involved in the socialization of the capital market to entrepreneurs. Finally; Educational institutions need to be actively involved in conducting promotions and outreach on investment in financial assets, especially investments in securities, benefits, and investment risks in financial assets. This socialization must also emphasize a low-risk aspect in choosing investment in the form of securities given the character of Acehese entrepreneurs who avoid risk.

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