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Analysis of Factors Influencing Students' Interest in Stock and Cryptocurrency Investments: A Study on Indonesian University Students' Behavioral Intentions Using the Theory of Planned Behavior

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ABSTRACT

Investment interest among Indonesian university students remains low, particularly in stocks and cryptocurrency. Data shows that most capital market investors in Indonesia have only completed high school, while undergraduate students have lower investment participation. Understanding the factors influencing students' investment interest is crucial to fostering financial literacy and economic growth. This study examines the factors affecting students' interest in investing in stocks and cryptocurrency using the Theory of Planned Behavior (TPB). A quantitative approach was employed, with data collected from 200 university students in Indonesia who have previously invested in stocks (n=100) or cryptocurrency (n=100). The study utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) for data analysis. Findings reveal that Perceived Behavioral Control (PBC) plays a significant mediating role in the relationship between Attitude Towards Behavior (ATB) and Intention to Invest (ITI) in the stock market. Meanwhile, Subjective Norms (SN) exert a more substantial influence on cryptocurrency investment, directly and indirectly. This indicates that financial literacy and confidence in decision-making are key drivers for stock investments, whereas social influence plays a dominant role in cryptocurrency investments. The results highlight the need for educational institutions to integrate financial literacy programs and provide simulated investment experiences to enhance students' investment confidence and motivation.

Keywords: Stock, Forex, Crypto, Generation Z, Theory of Planned Behavior.
JEL Code: G11, F31, E42, J10, D91.

I.   Introduction

Indonesia has a large GDP in ASEAN, reflecting its position as one of the region's strongest economies. However, despite this economic strength, its income per capita remains significantly lower than that of neighboring countries such as Singapore, Brunei, and Malaysia (Ahdiat, 2023). This disparity highlights the need for continuous economic development, particularly in fostering financial growth and individual wealth

accumulation. One of the most effective ways to achieve economic prosperity at the national and individual levels is through investment, a key driver of financial security and long-term wealth creation. Investing is significant in leading investors to achieve their financial objectives (Gunawan, 2024). This shows that individuals can generate additional income streams by actively investing, building financial stability, and improving their overall economic well-being. Moreover, investments contribute to job creation, business expansion, and overall economic productivity, ultimately leading to sustainable national growth. Investment benefits private individuals and plays a vital role in enhancing infrastructure development, improving educational facilities, and strengthening healthcare services (Alamsyah et al., 2023). These factors collectively support the long-term economic resilience of a country.

Despite the evident benefits of investing, many students in Indonesia remain hesitant to engage in investment activities. Given this economic backdrop, it is concerning that many young individuals, especially those from Generation Z, have not fully recognized investing as an opportunity to improve their financial security. Data indicates that most capital market investors in Indonesia originate from individuals with only a high school education or lower (PT Kustodian Sentral Efek Indonesia, 2024). This suggests that higher education does not necessarily translate into greater investment participation among young adults. Students, particularly those from Generation Z, currently form a large proportion of Indonesia's population (Kusnandar, 2023), which gives them immense potential to become key players in the financial sector. However, this potential remains largely untapped as many students lack sufficient exposure, knowledge, and motivation to invest in financial markets actively. While much research has explored investment behaviors in general, there is limited focus on the motivations of Indonesian university students, particularly regarding the emerging phenomenon of cryptocurrency, alongside the well-established investment vehicle of stocks. Cryptocurrency is seen as the future of investment, while stocks have proven returns over the years. This study aims to fill this gap by comparing the motivations behind students' interest in asset classes—stocks and cryptocurrency—and exploring what drives their decision to invest in these two distinct assets, despite their significant importance.

Given this economic backdrop, it is concerning that many young individuals, especially those from Generation Z, have not fully recognized investing as an opportunity to improve their financial security. Recent research by Draper et al. (2023) shows that although Indonesia has significant investment potential, a large portion of Generation Z has not yet embraced investing. In contrast, Generation Z is technology savvy, and according to Handayani and Sriyanto (2025), financial technology (fintech) has emerged globally as a transformative force in the financial industry. Among the various innovations, blockchain technology stands out as a key phenomenon. In recent years, investing in stocks and cryptocurrency has required technology to access the platform. This phenomenon shows that the Z generation should have the capability to access investment, in addition to accessing education online regarding investment, and both technology capability and education access should be their catalyst for investing.

There has been a significant increase in investment participation, particularly in emerging asset classes such as cryptocurrency and stocks. The number of crypto investors in Indonesia has now reached 20.9 million (Kementerian Perdagangan RI, 2024), while the stock market continues to expand, with 5.7 million registered Single Investor Identifications (SID) (BEI, 2024). These figures indicate a growing interest in investment opportunities, but the underlying factors that motivate students to participate in these financial markets remain unclear. Understanding what drives students to invest is essential for developing effective financial literacy programs and increasing participation in the stock and crypto markets. Meanwhile, the foreign exchange (forex) market, once a dominant investment vehicle in Asia, has seen a decline in enthusiasm among Indonesian investors. Forex trading, or currency trading, has long been recognized as an avenue for high-risk, high-reward speculation. According to Forex In RS, the global forex industry has 9.6 million active traders, with Asia accounting for the largest share at 4.6 million traders. However, despite its popularity in the region, Indonesia has a notably lower interest in forex trading. One primary reason for this reluctance is the perception that forex is too risky, leading to significant financial losses among traders. While forex trading has

the potential to generate consistent profits when managed effectively, many traders struggle with its volatility and complexity, making it a less appealing option compared to stocks or cryptocurrency (Muttaqin, 2021)."

Among the various investment choices available, each financial instrument carries distinct risks and rewards, making it essential for students to carefully assess which type of investment aligns best with their financial goals, risk tolerance, and level of knowledge. While some students may be drawn to the structured and regulated nature of stock market investments, others may prefer the high-return potential of cryptocurrency trading, despite its speculative nature. This study examines the factors influencing students' investment decisions, specifically in stocks and cryptocurrency. By comparing these two investment options, this research seeks to identify the key motivators behind students' investment intentions and determine which psychological and behavioral factors play the most significant role in shaping their decision-making process. Understanding what drives students to invest is essential for developing effective financial literacy programs and increasing participation in Indonesia's stock and crypto markets. This study utilizes the Theory of Planned Behavior (TPB) to explore the psychological and behavioral factors influencing students' investment intentions in stocks and cryptocurrency. The collected data will be analyzed using PLS-SEM (Partial Least Squares Structural Equation Modeling) to examine the relationships between psychological factors, such as attitude, subjective norms, perceived behavioral control, and investment intentions.

II.   Literature Review and Hypothesis Development

2.1   Theory of Planned Behavior

According to Sulastri (2023), the Theory of Planned Behavior, developed by Icek Ajzen in 1985, explains how human behavior is driven by intention, which is influenced by three main factors (1) Attitude – An individual's evaluation of a behavior, whether positive or negative (2) Subjective Norms – The perceived social pressure to perform or not perform a specific behavior (3) Perceived Behavioral Control – An individual's belief in their ability to perform the behavior successfully. The Theory of Planned Behavior (TPB) expands the Theory of Reasoned Action (TRA) by incorporating perceived behavioral control, recognizing that an individual may intend to act but could be hindered by external or internal constraints. The Theory of Planned Behavior originates from the Theory of Reasoned Action (Ajzen & Fishbein, 1980), which has certain limitations in predicting human behavior. TPB is considered relatively more effective in studying human behavior than the Theory of Reasoned Action (Ajzen, 1991). According to the TPB model, behavior is predicted by behavioral intention, which is determined by (a) attitude: a person's positive and negative approach toward the natural environment, (b) subjective norms: rules and regulations developed by society to follow certain norms, and (c) perceived behavioral control: the ease or difficulty of performing a specific behavior (Nurhayani et al., 2022).

The Theory of Planned Behavior (TPB) can explain how students' intention to invest is shaped by three main factors: attitude, subjective norms, and perceived behavioral control. A positive attitude toward investing increases students' motivation to participate. Subjective norms, such as the influence of family, friends, or mentors, encourage or discourage investment intentions based on social expectations. Perceived behavioral control refers to students' beliefs about their ability to invest successfully; the higher the sense of control, the stronger their intention. These three factors influence whether students feel motivated, supported, and able to invest. Therefore, TPB provides a comprehensive framework for understanding students' investment intentions and behavior (Paramita et al, 2018).

2.1.1.   Attitude towards Behavior

According to Pandurugan and Al Shammakhi (2023), **attitude towards behavior** refers to an individual's perception of a specific action, including a positive or negative evaluation. This attitude reflects how much a person supports or opposes a particular behavior, often influenced by personal beliefs, experiences, and values. In the context of behavioral theory, attitude toward behavior is a factor that

influences a person's intention to engage in that action. The more positive an individual's attitude toward a behavior, the more likely they will be motivated to perform it.

Meanwhile, another research design, Attitude Towards Behavior, is an individual's cognitive and emotional tendency toward a specific action (Sulastri, 2023). This attitude is shaped by direct experience, social influence, and cultural factors that affect how an individual perceives and reacts to a behavior. Attitudes consist of three components: affective (emotional), cognitive (belief-based), and behavioral (tendency to act). In behavioral science, attitudes are studied to understand their impact on choices, habits, and social behavior. Positive attitudes encourage the intention to act, while negative attitudes create resistance. Organizations and policymakers often target attitude change to promote healthier, ethical, or socially responsible behaviors.

Another research study by Pravin and Parmar in 2023 explained that attitude towards behavior among university students significantly influences their involvement in the stock market. Positive attitudes, such as openness to learning, tolerance for risk, and a proactive mindset, encourage students to explore investments, stay informed, and make well-measured decisions. Conversely, negative attitudes, such as fear of loss or rejection of financial knowledge, can hinder participation and lead to missed opportunities. Students who view investment as valuable and achievable tend to develop responsible financial habits, contributing to long-term wealth accumulation and participation in the stock market. Ultimately, their behavioral attitude shapes their financial outcomes and the overall investor base in the stock market. While previous studies have explored the role of attitude towards behavior in influencing investment behaviors, particularly in traditional markets like stocks, limited research has been conducted on how attitude towards behavior impacts Indonesian university students in both stock and cryptocurrency markets. This research aims to fill this gap by studying the role of attitude towards behavior in the stock market for Indonesian students while diving into the cryptocurrency market.

2.1.2.   Subjective Norms

Subjective norms refer to an individual's perception of how others expect them to behave in a particular situation. This perception is influenced by direct communication, observation of others' behavior, and prevailing social norms. According to Lokuge and Kumari (2023), subjective norms relate to a person's social pressure regarding whether they should engage in a specific behavior. This pressure comes from important social groups, such as family, friends, colleagues, and society. If someone believes those close to them approve of a behavior, they are likelier to engage in it. Conversely, if they feel that the behavior is not approved, they may avoid it.

Subjective Norms or subjective norms refer to an individual's perception of social pressure to engage or not engage in a particular behavior. These norms reflect an individual's beliefs about the opinions of significant others around them, such as family, friends, or colleagues, which influence their decisions. If an individual believes that important people in their environment approve of a particular behavior, they are more likely to be influenced to follow that expectation. In behavioral theory, subjective norms play an important role in shaping a person's intention or motivation to act, as individuals often consider social approval or disapproval before performing a particular action (Pandurugan & Al Shammakhi, 2023). Subjective norms significantly influence students' behavior in the stock market. Students who value investment and financial literacy tend to adopt positive investment behaviors when surrounded by individuals who value investment. Support and encouragement from trusted sources can enhance their confidence and willingness to participate in the stock market. On the other hand, if the social environment does not encourage risk-taking or views investment negatively, students may avoid involvement in the stock market. Therefore, subjective norms play an important role in shaping attitudes, investment decisions, and student participation in financial markets, impacting personal growth and market dynamics (Hidayati & Destiana, 2023). While previous studies have explored the role of subjective norms in investment behavior, there is a limited focus on how these norms influence Indonesian university students in the context of both stock and cryptocurrency markets. This research aims to fill this gap by studying the impact of subjective norms on students' decisions to engage in

these two important asset classes, exploring how social pressures and perceived approval shape their investment intentions.

2.2   Perceived Behavioral Control

According to Pandurugan and Al Shammakhi (2023), perceived behavioral control refers to an individual's belief in their ability to perform a specific action, including their perception of ease or difficulty, which is influenced by experience, resources, and internal and external constraints. Nugraha and Prasetyaningtyas (2023) further explain that this concept reflects an individual's belief in their likelihood of successfully carrying out a behavior, closely related to past experiences, perceived barriers, and the availability of resources. The higher the perceived control, the greater the intention, motivation, and tendency of an individual to engage in a particular behavior.

According to Kumari et al (2022), Perceived Behavioral Control refers to the extent to which an individual feels they have control over a particular behavior, considering both internal factors (skills, knowledge, confidence) and external factors (time, money, opportunities). Strong control increases motivation and the likelihood of action, while low control can lead to doubt or avoidance. Unlike attitudes and subjective norms, which focus on personal beliefs and social pressures, perceived behavioral control considers both real and perceived barriers that affect behavior. This concept is widely used in health, business, and education to design interventions that empower individuals to take action. Perceived behavioral control refers to students' belief in their ability to successfully perform a specific behavior, such as investing in the stock market. When students feel confident in their financial knowledge and skills, they are more likely to engage in stock market activities, make informed decisions, and manage risks effectively. A high level of control can reduce anxiety and increase willingness to participate. Conversely, students who doubt their abilities may avoid investing because they fear failure or lack confidence. Therefore, perceived behavioral control significantly influences students' participation, affecting their financial growth and contributions in the stock market (Ainiyah, 2023). While previous studies have examined the role of perceived behavioral control in influencing investment behaviors, particularly in traditional markets like stocks, limited research has been conducted on how PBC acts as a mediator between attitudes and actual investment behaviors among Indonesian university students, especially in the context of the growing cryptocurrency market. This study aims to fill this gap by exploring the mediating role of PBC in students' investment decisions in both the stock and cryptocurrency markets, helping to understand how their beliefs about control over investment behaviors affect their engagement in these markets.

2.3   Intention to Invest

Intention to invest refers to an individual's or a company's conscious decision to allocate financial resources to specific assets or projects to generate future profits (Pandurugan & Al Shammakhi, 2023). This intention is influenced by internal factors such as financial goals, risk perception, confidence, and risk tolerance, as well as external factors including economic conditions, government policies, interest rates, and inflation, which determine investment profitability (Nugraha & Prasetyaningtyas, 2023). In business, investment intention involves strategically allocating capital for projects, acquisitions, or research, guided by market opportunities, profit expectations, regulations, and the company's long-term growth objectives (Nurhayani et al., 2022).

Intention to invest refers to an individual's conscious decision and willingness to allocate financial resources to specific assets, projects, or markets. Personal financial goals, risk perception, and expected returns shape this intention. Psychological factors such as confidence, risk tolerance, and market sentiment influence this intention. Furthermore, external factors like economic conditions, government policies, and financial trends play a significant role. Investors form their intentions based on in-depth research, market analysis, and

advice from financial experts. Ultimately, this intention becomes the first step toward making actual investment decisions (Pandurugan & Al Shammakhi, 2023)

Pandurugan and Al Shammakhi (2023) identify several factors influencing intention to invest, including attitude towards behavior, subjective norms, and perceived behavioral control. Their findings suggest that attitudes towards behavior and subjective norms do not significantly influence intention to invest, while perceived behavioral control does. In contrast, Lokuge and Kumari (2023) found that attitude and subjective norms significantly impact intention to invest. Furthermore, investment knowledge, emotional stability, risk avoidance, and uncertainty avoidance also significantly influence investment intentions. Building on the Theory of Planned Behavior (TPB), intention to invest is a key component in the formation of behavior. As discussed in the previous sections, attitudes, subjective norms, and perceived behavioral control (PBC) are significant antecedents to investment intention. According to TPB, the stronger the positive attitude and perceived control over investment decisions, and the more supportive the social norms, the more likely an individual will form a firm intention to invest. While previous studies have explored the factors influencing intention to invest, there is limited research on the specific factors affecting the investment intentions of Indonesian university students, particularly in the context of both stock and cryptocurrency markets. This research aims to fill this gap by investigating how attitudes, subjective norms, and perceived behavioral control contribute to students' investment intentions in these two asset classes, considering the unique socio-economic context of Indonesia.

2.4 Attitude Towards Behavior on Perceived Behavioral Control

The relationship between attitude towards behavior and perceived behavioral control is crucial in understanding speculative investment behaviors, particularly in stocks and cryptocurrency investments. Building on the Theory of Planned Behavior (TPB), attitude towards behavior refers to an individual's positive or negative evaluation of performing a specific behavior, which directly influences their perceived control over engaging in that behavior (Pandurugan & Al Shammakhi, 2023). A growth-oriented positive attitude enhances perceived behavioral control by encouraging individuals to seek information actively, understand risks, and make informed decisions, ultimately improving their financial literacy (Lokuge & Kumari, 2023). On the other hand, excessive confidence or extreme caution can hinder the development of financial literacy and limit an individual's financial behavioral control, thus affecting their overall investment decisions (Pandurugan & Al Shammakhi, 2023).

Given the interconnected nature of attitudes and perceived behavioral control outlined in TPB, it is expected that students with a positive attitude towards investment will feel more capable of engaging in investment behaviors in the stock market and cryptocurrency markets. Specifically, students with a more positive attitude will likely exhibit higher perceived control over their investment decisions, as their confidence in making informed, calculated decisions will increase. Therefore, the relationship between attitude towards behavior and perceived behavioral control is crucial in shaping students' intentions to invest in both asset classes. This relationship leads to the following hypotheses:

$H1_a$: Attitude towards behavior significantly affects perceived behavioral control in the stock market.
$H1_b$: Attitude towards behavior significantly affects perceived behavioral control in cryptocurrency.

Hypotheses $H1_a$ and $H1_b$, as illustrated in the conceptual framework (Figure 1), propose that attitude towards behavior has a significant effect on perceived behavioral control in both stock market (H1a) and cryptocurrency ($H1_b$) investments. As shown in the framework, the relationship between attitudes and perceived control is essential in shaping students' confidence and readiness to make informed investment decisions.

2.5   Subjective Norms on Perceived Behavioral Control

Subjective norms also play a crucial role in shaping perceived behavioral control in speculative investments. Individuals are more likely to be motivated to enhance their financial literacy when their social circle, such as family, friends, or colleagues, supports or expects their participation in investments (Lokuge & Kumari, 2023). Conversely, if their environment is unsupportive or even disapproving, individuals tend to avoid or miss out on opportunities to learn about investing. Furthermore, the behavior of influential figures or peers can serve as an example, encouraging individuals to gain a deeper understanding of investment risks and strategies (Pandurugan & Al Shammakhi, 2023). Given the influence of subjective norms on an individual's behavior and perceived control, it is expected that students whose social environments encourage investment participation will feel more confident and motivated to engage in both stock market and cryptocurrency investments. Students who perceive positive social pressure to invest will likely demonstrate higher perceived behavioral control, as their social support and role models will strengthen their belief in their ability to engage with these investment opportunities. This relationship leads to the following hypotheses:

$H2_a$: Subjective norms significantly affect perceived behavioral control in the stock market.
$H2_b$: Subjective norms significantly affect perceived behavioral control in cryptocurrency.

Hypotheses $H2_a$ and $H2_b$, represented in the conceptual framework (Figure 1), indicate that subjective norms significantly affect perceived behavioral control in both stock market (H2a) and cryptocurrency (H2b) investments. The framework highlights the importance of social influences in shaping students' confidence and their perceived ability to engage in these investment behaviors.

2.6   Perceived Behavioral Control on Intention to Invest

Perceived behavioral control, which is reflected through financial literacy, significantly impacts students' investment intentions in speculative markets such as stocks and cryptocurrency. Individuals with high financial literacy have a better understanding of risks and the complexities of speculative markets, increasing their confidence in making informed and well-planned investment decisions (Pandurugan & Al Shammakhi, 2023). Conversely, individuals with low financial literacy tend to avoid speculative investments as they feel unprepared to face potential risks and market volatility (Kumari et al., 2022). As discussed in the previous sections, attitudes and subjective norms shape perceived behavioral control by influencing students' ability to engage in investment activities. Building on the Theory of Planned Behavior (TPB), it is expected that students with higher perceived behavioral control, primarily shaped by their financial literacy, will be more likely to form the intention to invest in stocks and cryptocurrencies. The stronger the belief in their ability to manage risks and make informed decisions, the more likely they will act and engage in these markets. This leads to the following hypotheses:

$H3_a$: Perceived behavioral control significantly affects intention to invest in the stock market.
$H3_b$: Perceived behavioral control significantly affects intention to invest in cryptocurrency.

Hypotheses $H3_a$ and $H3_b$, as shown in the conceptual framework (Figure 1), suggest that perceived behavioral control has a significant effect on the intention to invest in the stock market (H3a) and cryptocurrency (H3b). The framework illustrates how students' perceived control over their investment decisions, influenced by their financial literacy, directly impacts their intention to participate in both asset classes.

2.7 Attitude Towards Behavior on Intention to Invest

Attitude towards behavior also plays a crucial role in shaping students' intention to invest in speculative markets. A positive attitude toward financial risk tends to increase the willingness to engage in high-risk investments with the potential for high returns (Sulastri, 2023). Conversely, a risk-averse attitude may reduce investment interest, while overconfidence can lead to impulsive decisions without proper preparation (Pandurugan & Al Shammakhi, 2023). Given that attitude towards behavior influences intention to invest, a balanced attitude between optimism and caution is predicted to be a key factor in increasing students' intention to invest in both the stock market and cryptocurrency. Students with a positive attitude towards investment are expected to be more confident and motivated to explore investment opportunities in both asset classes. In contrast, a negative or overly cautious attitude may hinder their willingness to invest. This leads to the following hypotheses:

$H4_a$: Attitude towards behavior significantly affects intention to invest in the stock market.
$H4_b$: Attitude towards behavior significantly affects intention to invest in cryptocurrency.

These hypotheses are visually represented in the conceptual framework (Figure 1), where attitude towards behavior influences intention to invest both in the stock market ($H4_a$) and cryptocurrency ($H4_b$). As shown in the framework, the direct effect of attitudes on intention to invest is depicted, underlining the importance of individuals' evaluation of investment behavior in shaping their investment intentions.

2.8 Subjective Norms on Intention to Invest

Subjective norms play a significant role in influencing investment intentions in speculative markets. Social support from family, friends, or colleagues can enhance confidence and interest in investing, as investments are perceived as a socially desirable activity (Sulastri, 2023). When individuals feel that their social circle encourages investment behaviors, they are more likely to form the intention to engage in these behaviors. Conversely, an unsupportive environment or disapproval of high-risk investments may lead individuals to avoid or postpone investing (Nugraha & Prasetyaningtyas, 2023). Furthermore, positive examples from influential figures within one's social circle can encourage greater interest in speculative investments, as these examples motivate participation. Building on the Theory of Planned Behavior (TPB), where subjective norms influence intention, students surrounded by supportive peers and family members are expected to have a higher intention to invest in speculative markets. The more students perceive their social environment as approving investments, particularly in stocks and cryptocurrency, the more likely they are to form the intention to invest in these asset classes. Thus, subjective norms are expected to have a significant effect on intention to invest in both the stock market and cryptocurrency, as formulated in the following hypotheses:

$H5_a$: Subjective norms significantly affect intention to invest in the stock market.
$H5_b$: Subjective norms significantly affect intention to invest in cryptocurrency.

The relationships outlined in $H5_a$ and $H5_b$ are reflected in the conceptual framework (Figure 1), demonstrating how subjective norms influence students' intention to invest in the stock market and cryptocurrency. The framework highlights that positive social influences, such as encouragement from family and peers, can significantly affect investment intentions, a key factor in this study.

2.9 Perceived Behavioral Control as a Mediator Between Attitude Towards Behavior and Intention to Invest

Perceived behavioral control is crucial in mediating the relationship between attitude towards behavior and intention to invest in speculative markets. A positive attitude toward investment can encourage individuals to improve their financial literacy, making them more prepared to face investment risks (Pandurugan & Al Shammakhi, 2023). This financial literacy enhances confidence and readiness to make investment decisions, ultimately transforming a positive attitude into a concrete investment intention. Conversely, without sufficient financial literacy, a positive attitude alone may not be enough to foster investment intention, as individuals may still feel uncertain and unprepared to handle market risks.

Building on the Theory of Planned Behavior (TPB), where attitudes influence perceived behavioral control. In turn, perceived behavioral control influences intention; perceived behavioral control is expected to mediate the relationship between attitude towards behavior and intention to invest. This mediation effect suggests that a positive attitude can lead to greater financial literacy, enhancing perceived control over investment decisions, thereby increasing the intention to invest in stocks and cryptocurrencies. Therefore, perceived behavioral control is predicted to function as an important mediator in the relationship between attitude and investment intention in both the stock market and cryptocurrency, as formulated in the following hypotheses:

$H6_a$: Perceived behavioral control mediates the effect of attitude towards behavior on intention to invest in the stock market.

$H6_b$: Perceived behavioral control mediates the effect of attitude towards behavior on intention to invest in cryptocurrency.

The role of perceived behavioral control (PBC) as a mediator between attitude towards behavior and intention to invest is illustrated in H6a and H6 b, as shown in the conceptual framework (Figure 1, using a dotted line. According to the framework, PBC, through enhancing financial literacy, mediates the relationship between positive attitudes and the actual intention to invest in stocks and cryptocurrency.

2.10 Perceived Behavioral Control as a Mediator Between Subjective Norms and Intention to Invest

Perceived behavioral control also serves as a crucial mediator between subjective norms and intention to invest in speculative markets. Positive subjective norms encourage individuals to explore speculative investments, but without adequate financial literacy, they may hesitate to take action due to a lack of understanding of investment risks. Financial literacy helps individuals comprehend and manage investment information, increasing their confidence in translating positive social norms into real investment actions. Conversely, individuals with low financial literacy may struggle to convert social encouragement into concrete investment intentions.

Building on the Theory of Planned Behavior (TPB), where subjective norms influence perceived behavioral control, it is expected that perceived behavioral control, through financial literacy, will mediate the relationship between subjective norms and intention to invest. When individuals perceive social encouragement and support from their social circle, their financial literacy will empower them to translate these social norms into actual investment behavior confidently. On the other hand, those lacking in financial literacy may find it difficult to act on social influences, thereby hindering their intention to invest. Therefore, perceived behavioral control, through financial literacy, functions as an important mediator between subjective norms and intention to invest in both the stock market and cryptocurrency, as formulated in the following hypotheses:

H7a: Perceived behavioral control mediates the effect of subjective norms on intention to invest in the stock market.

H7$_b$: Perceived behavioral control mediates the effect of subjective norms on intention to invest in cryptocurrency.

The mediating role of perceived behavioral control in the relationship between subjective norms and intention to invest is presented in H7$_a$ and H7$_b$. As depicted in the conceptual framework (Figure 1), the framework shows that while subjective norms may encourage investment behavior, PBC, particularly financial literacy, mediates the transition from social influences to actual investment intentions, affecting both stock market and cryptocurrency investments. Grounded in the literature that has been thoroughly reviewed, this study aims to explore various factors influencing students' interest in investing in the stock market and cryptocurrency. Through the analysis conducted, this research is expected to provide valuable new insights and contribute to informed practices in financial behavior.
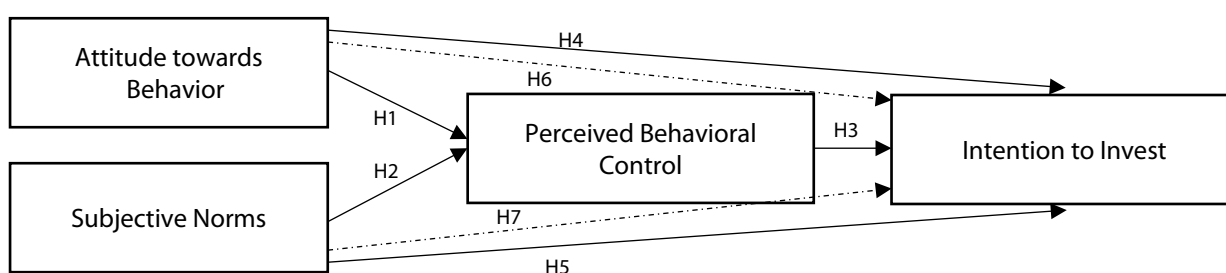

Figure 1. Conceptual Framework

III.   Research Method

This study employs a quantitative and causal approach to examine the factors influencing students' interest in investing in stocks and cryptocurrency in Indonesia. The respondents are Indonesian students who have previously invested in either stocks or cryptocurrency. The study successfully gathered responses from 200 participants, meeting the minimum required sample size of 200 respondents (100 for stock investments and 100 for cryptocurrency investments). Through this approach, the researcher aims to determine whether changes in one variable (independent variable) lead to changes in another variable (dependent variable).

3.1.   Research Design

This study employs a quantitative and causal approach to examine the cause-and-effect relationships between research variables. This method systematically analyzes how attitude towards behavior, subjective norms, and perceived behavioral control influence students' intention to invest. This design is chosen as it identifies statistical relationships between variables that can be measured objectively.

3.2.   Data Collection Method

Primary data is information collected firsthand by a researcher for a specific purpose. Raw, unprocessed data is collected directly from the source, often through surveys, interviews, observations, or experiments. In this study, primary data were collected through a survey using a questionnaire distributed to university students in Indonesia. The survey was conducted online, through Google Forms, and the questionnaire was designed to capture demographic information (such as age, gender, year of study, and prior investment experience) and to represent each research variable based on the Theory of Planned Behavior (TPB). The response scale used in the questionnaire is a Likert scale ranging from 1 to 5. The Likert

scale is a psychometric scale used in questionnaires to measure attitudes, opinions, or perceptions. This scale typically consists of a series of statements with various response options, allowing respondents to indicate their level of agreement or disagreement (Sekaran & Bougie, 2020). While secondary data refers to information already collected by someone else for a different purpose, it is data that a researcher can use without having to collect. Secondary data to support this study was sourced from research journals, books, and articles related to the TPB and investment behaviors. Secondary data for this study was obtained from books and research journals.

3.3. Measurement of Variables

This study uses an online questionnaire to gather data from university students in Indonesia. The questionnaire includes questions that measure the four key variables in the study: Attitude Towards Behavior (ATB), Subjective Norms (SN), Perceived Behavioral Control (PBC), and Intention to Invest (ITI). To make sure these variables are measured correctly, we first need to define what each variable means and explain how we will measure them. According to Bougie & Sekaran (2020), operational variables are used to design a questionnaire and help researchers determine the instruments needed to measure variables in the study. Operational variables are the tools used to measure each variable studied in this research (Sugiyono, 2019). In simpler terms, operational variables are the specific things we measure in the survey to represent the bigger ideas (variables) we study. The questions asked in the questionnaire represent these variables, which are broken down into sub-variables and are known as indicators.

1. Attitude Towards Behavior (ATB)
   Purpose: To measure whether students have a positive or negative view of investing in stocks or cryptocurrency, with Sub-Variables:
   a) Behavioral Belief: Students think this might happen if they invest.
   b) Outcome Evaluation: This is the student's belief on the outcome of investing
2. Subjective Norms (SN)
   Purpose: To measure how much students feel pressure from people around them (like family, friends, and colleagues) to invest with Sub-Variables:
   a) Normative Beliefs: What students believe to be the opinions or influences from those close to them (e.g., family, friends, colleagues).
   b) Motivation to Comply: This is how much students want to follow these expectations
3. Perceived Behavioral Control (PBC)
   Purpose: To measure how confident students feel about their ability to invest, and their control towards the action of investing, through financial literacy, of how much they know about finance and risks, with sub-Variables: Financial Literacy: The level of an individual's understanding of the stock market and cryptocurrency. Financial literacy reflects how well individuals feel they understand the stock market and cryptocurrency, shaping their perceived behavioral control (PBC) over investment behavior.
4. Intention to Invest (ITI)
5. Purpose: To measure whether students plan to invest shortly with sub-Variables Behavioral Intention: Reflects an individual's willingness and commitment to take investment actions in the stock market and cryptocurrency after careful consideration

Table 1. Variables Measurement

Variables	Sub Variable	Code	Operational Definition	Scale and Source
Attitude	Behavioral Outcome	ATB1	Investment in a speculative market (Stock / Cryptocurrency) is a wise choice.	Interval Scale

Variables	Sub Variable	Code	Operational Definition	Scale and Source
		ATB2	Investing in a speculative market (Stock / Cryptocurrency) motivates me to save money.	Pandurugan dan Al Shammakhi (2023)
		ATB3	Investment helps to know more about the investment tools.	
		ATB4	Understanding the speculative market (Stock / Cryptocurrency) makes us aware of options in the investment market (e.g, Warrant, ETF, Right Issue), (e.g, Futures)	
	Behavioral Belief	ATB5	Investing in a speculative market (Saham / Cryptocurrency) makes me feel intelligent.	
		ATB6	Investing makes me economically independent.	
		ATB7	Investing in a speculative market (Saham / Cryptocurrency) is online, which is easy to operate and time-saving.	
Subjective Norms	Normative Belief	SN1	My family members feel that investing in a speculative market (Stock / Cryptocurrency) is a safe decision.	Interval Scale Pandurugan dan Al Shammakhi (2023)
		SN2	My friends feel that investing in a speculative market (Stock / Cryptocurrency) is a safe decision.	
		SN3	My family members feel that I am giving a good example to my siblings by investing in a speculative market	
	Motivation to Comply	SN4	I consider my family members' opinions before making any decision on investment.	
		SN5	It is important to listen to friends' opinions, as it helps me to maintain the image of a good friend.	
		SN6	I want to be viewed as conventional in decisions regarding investment.	
		SN7	Social media groups are very educational and encouraging to invest in the Stock market or Forex. Market Cryptocurrency (Stock / Cryptocurrency)	
Perceived Behavioral Control	Financial Literacy	PBC1	I always try to get information from various sources to make an learnt decision in investing money.	Interval Scale Pandurugan dan Al Shammakhi (2023)
		PBC2	My decision to invest is based on the past financial returns in the market.	
		PBC3	My decision to invest is based on the future financial returns in the market.	
		PBC4	I never unthinkingly get into any investment without any knowledge of the instrument	
Intention to Invest		ITI1	A complete understanding of investment tools would encourage and get me interested in investing	Interval Scale Pandurugan dan Al
		ITI2	I am encouraged to invest if the risk factor is less, which depends on the	

Variables	Sub Variable	Code	Operational Definition	Scale and Source
			understanding of the speculative market (Stock / Cryptocurrency)	Shammakhi (2023)
		ITI3	I understand that investment in a speculative market (Stock / Cryptocurrency) is risk-controlled, so it is important to create awareness about	

3.4. Data Sample

Sampling is conducted because studying an entire population is often impractical due to time, cost, or logistical constraints (Sekaran & Bougie, 2020). The research sample consists of students from Indonesian universities who have previously invested in either stocks or cryptocurrency. Given the population of approximately 9.32 million university students in Indonesia, Slovin's formula was applied to calculate the appropriate sample size for this study. Therefore, this study applies Slovin's formula to determine the appropriate sample size, as follows:

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{9.320.000}{1+9.320.000(0.1)^2}$$

$$n = 100$$

Therefore, the minimum sample size for this study is 100 students in Indonesia who have previously invested in either stocks or cryptocurrency. The sample size of 200 students (100 for stock investments and 100 for cryptocurrency investments) was chosen to ensure sufficient statistical power for hypothesis testing.

3.5. Data Analysis Techniques

The data analysis method used in this study is Partial Least Squares Structural Equation Modeling (PLS-SEM). According to Garson (2016), Partial Least Squares (PLS) is sometimes referred to as "Projection to Latent Structures" because there may be multiple X components and multiple Y components, and the arrows connecting components to their indicators may reflect or reverse. The reason for choosing PLS-SEM as the analytical technique used for this study is that PLS-SEM is appropriate for assessing relationships between latent variables (not directly measurable, such as behavior), and with a limited sample size. It allows testing the validity and reliability of research instruments and evaluating the significance of relationships between hypothesized variables in this study. While SEM determines the relationship between latent variables, regression only supports observed variables (measurable, such as age). There are two main analytical techniques in SEM, PLS-SEM and CB-SEM, but PLS-SEM is still preferred due to SEM-CB being used to test theories. In contrast, this study aims to study the relationship between variables. According to Sekaran and Bougie (2016), hypothesis testing is a statistical procedure used to determine the results of a survey or experiment to obtain useful findings. In hypothesis testing using statistical values, with a 5% alpha level, the t-statistic value used is 1.96. If the calculated t-value < t-table value, the null hypothesis is rejected (indicating a significant regression coefficient), and the alternative hypothesis stated in this study is accepted at a 5% significance level.

IV.   Results and Discussion

4.1.   Statistical Result

The SEM-PLS analysis consists of two testing stages, the outer model evaluation and the inner model estimation. While the outer model evaluates the measurement model, which shows how well the indicators represent the variables. This stage focuses on the indicators' reliability (Cronbach's alpha, composite reliability) and validity (outer loading, AVE, HTMT). The structural model clearly explains the relationships between variables, supported by VIF, F Square, and R-Square. Validity testing is conducted to determine the ability of the indicators to measure the variables; in other words, to assess whether the indicators are valid representations of the measured variables. Meanwhile, reliability testing is performed to assess the consistency of responses obtained.

4.1.1.   Convergent Validity for Stock Data

Convergent validity assesses whether the indicators used to measure a variable correlate highly with each other, ensuring that they measure the same concept. This validity is evaluated using Outer Loadings and average variance extracted AVE. Outer Loading is used to measure whether each indicator represents the variable well, while AVE is used to assess whether all indicators represent the variable well. According to Hair et al. (2022), an indicator is considered valid if its Outer Loading value exceeds 0.7 and the AVE value exceeds 0.5. If any indicator has a factor loading below the acceptable threshold, it may be removed to improve the model's validity.

Table 2. Outer Loading Factors for Stock Data

Variables	Indicator	Outer Loading	AVE	Explanation
Attitude Towards Behavior	ATB1	0.815	0.579	Valid
	ATB2	0.716		Valid
	ATB3	0.759		Valid
	ATB4	0.820		Valid
	ATB5	0.715		Valid
	ATB6	0.761		Valid
	ATB7	0.734		Valid
Subjective Norms	SN1	0.766	0.604	Valid
	SN2	0.840		Valid
	SN3	0.737		Valid
	SN4	0.816		Valid
	SN5	0.783		Valid
	SN6	0.686		Not Valid
	SN7	0.804		Valid
Perceived Behavioral Control	PBC1	0.743	0.619	Valid
	PBC2	0.836		Valid
	PBC3	0.736		Valid
	PBC4	0.828		Valid
Intention to Invest	ITI1	0.710	0.578	Valid
	ITI2	0.840		Valid
	ITI3	0.724		Valid

Based on the test results, it is found that all AVE values are above 0.500, while one outer loading value is below 0.700. However, according to Hair et al. (2022), outer loading values in the range of 0.400 to 0.700 can

still be used as long as the AVE value is above 0.500. Therefore, it can be concluded that the convergent validity in this study has been met.

4.1.2. Discriminant Validity for Stock Data

Discriminant validity is used to ensure that the indicators of a variable are distinct from f^2 he the indicators of other variables and do not measure the same concept. Discriminant validity in this study is measured using the Heterotrait-Monotrait Ratio (HTMT). The variable can be considered valid if the HTMT value is less than 0.900.

Table 3. Discriminant Validity for Stock Data

	ATB	ITI	PBC	SN
ATB				
ITI	0.898			
PBC	0.890	0.838		
SN	0.798	0.870	0.761	

It can be seen from Table 3 that all variables have met the discriminant validity criteria, as all values are below the recommended threshold of 0.90. This means that each indicator is well predicted by its respective construct.

4.1.3. Reliability Test for Stock Data

The reliability test is used to measure the consistency of responses obtained. Reliability testing in PLS can be conducted using Cronbach's Alpha and Composite Reliability (CR). Composite Reliability accounts for the weights from outer loadings. The rule of thumb is that the value of Cronbach's alpha or composite reliability should be greater than 0.7, although a value of 0.6 is still acceptable.

Table 4. Reliability Test Result for Stock Data

Variabel	Cronbach's Alpha	Composite Reliability	Explanation
Attitude Towards Behavior	0.879	0.906	Reliable
Subjective Norms	0.640	0.804	Reliable
Perceived Behavioral Control	0.793	0.866	Reliable
Intention to Invest	0.890	0.914	Reliable

It can be seen in Table 4 that one variable has a value below 0.700; however, since values above 0.600 are still acceptable, all variables are considered reliable as they have Cronbach's alpha and composite reliability values above 0.600.

4.1.4. Multicollinearity for Stock Data

Multicollinearity can be assessed using the Variance Inflation Factor (VIF). VIF determines whether the independent variables, such as ATB, PBC, and SN, overlap or correlate too strongly when explaining the dependent variable, ITI. This value measures the variability of a selected independent variable that is not explained by other independent variables. A VIF value between 1 and 5 indicates no multicollinearity between variables (Hair et al., 2022).

Table 5. Multicollinearity Test Result for Stock Data

	ATB	ITI	PBC
ATB		2.927	2.071
ITI			
PBC		2.450	
SN		2.196	2.071

The VIF values for all research variables are less than 5.00, indicating no multicollinearity among the independent variables in this study.

4.1.5. R-Square for Stock Data

R-squared measures the ability of exogenous variables to explain endogenous variables. In simpler terms, R-squared measures the extent to which all independent variables contribute to explaining the dependent variable. It helps predict whether the model is strong or weak.

Table 6. R-Square Test Result for Stock Data

Variables	R Square	R Square Adjusted
Perceived Behavioral Control	0.592	0.583
Intention to Invest	0.622	0.611

Table 6 shows that the R-Square value for the Perceived Behavioral Control variable is 0.592, meaning that 59.2% of Perceived Behavioral Control can be explained by Attitude Towards Behavior and Subjective Norms. Other variables outside this study explain the remaining 41.8%. The R-Square value for the Intention to Invest variable is 0.622, indicating that Attitude Towards Behavior, Subjective Norms, and Perceived Behavioral Control can explain 62.2% of Intention to Invest. Other variables outside this study explain the remaining 38.8%.

4.1.6. F-Square for Stock Data

The f-Square or f^2 effect size test is a measure used to assess the "relative impact" of an exogenous variable on an endogenous variable. In simpler terms, f-squared measures how much influence one independent variable has on the dependent variable. The f^2 measurement is also called the effect of change in R^2. The guidelines for evaluating f^2 are that values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively.

Table 7. F-Square Test Result for Stock Data

Path Analysis	F-Square	Explanation
Attitude Towards Behavior → Perceived Behavioral Control	0.413	Large Effects
Subjective Norms → Perceived Behavioral Control	0.060	Small Effects
Perceived Behavioral Control → Intention to Invest	0.159	Medium Effects
Attitude Towards Behavior → Perceived Behavioral Control	0.043	Small Effects
Subjective Norms → Perceived Behavioral Control	0.093	Small Effects

Table 7 shows that the effect of Attitude towards Behavior on Perceived Behavioral Control has an F-squared value of 0.413, which falls into the big effect category. The effect of Subjective Norms on Perceived Behavioral Control has an F-squared value of 0.060, which falls into the small effect category. The effect of Perceived Behavioral Control on Intention to Invest has an F-squared value of 0.159, which falls into the medium effect category. The effect of Attitude towards Behavior on Perceived Behavioral Control has an F-squared value of 0.043, which falls into the small effect category. The effect of Subjective Norms on Perceived Behavioral Control has an F-squared value of 0.093, which falls into the small effect category.

4.1.7. Hypothesis Test Results for Stock Data

Table 8. Hypothesis Test Result for Stock Data

	Hypothesis	Original sample	T Stat > 1.96	P Value < 0.05	Explanation
H1	ATB → PBC	0.591	4.78	0.000	Significant
H2	SN → PBC	0.226	1.612	0.108	Not Significant
H3	PBC → ITI	0.384	3.654	0.000	Significant
H4	ATB → ITI	0.218	1.923	0.055	Not Significant
H5	SN → ITI	0.277	2.425	0.016	Significant
H6	ATB → PBC → ITI	0.227	2.804	0.005	Significant
H7	SN → PBC → ITI	0.087	1.456	0.146	Not Significant

The hypothesis test results in Table 8 show that 3 out of 7 hypotheses are supported, and two hypotheses are rejected. The following are the conclusions from the testing results:

1. Attitude towards Behavior has a significant effect on Perceived Behavioral Control.
2. Subjective norms do not significantly affect Perceived Behavioral Control.
3. Perceived Behavioral Control has a significant effect on Intention to Invest.
4. Attitude towards Behavior does not significantly affect Intention to invest.
5. Subjective norms have a significant effect on Intention to invest.
6. Attitude towards Behavior significantly affects Intention to Invest through Perceived Behavioral Control.
7. Subjective norms do not significantly affect Intention to invest through Perceived Behavioral Control.

4.1.8. Convergent Validity for Cryptocurrency

Convergent validity assesses whether the indicators used to measure a variable correlate highly with each other, ensuring that they measure the same concept. This validity is evaluated using outer loadings and average variance extracted (AVE). Outer loading is used to measure whether each indicator represents the variable well, while AVE is used to assess whether all indicators represent the variable well.

Table 8. Convergent Validity Test Result for Cryptocurrency Data

Variable	Indicator	Outer Loading	AVE	Explanation
Attitude Towards Behavior	ATB1	0.718	0.584	Valid
	ATB2	0.840		Valid
	ATB3	0.813		Valid
	ATB4	0.764		Valid
	ATB5	0.700		Valid
	ATB6	0.726		Valid
	ATB7	0.781		Valid
Subjective Norms	SN1	0.747	0.546	Valid
	SN2	0.792		Valid
	SN3	0.798		Valid
	SN4	0.738		Valid
	SN5	0.768		Valid
	SN6	0.697		Valid
	SN7	0.617		Valid
Perceived Behavioral Control	PBC1	0.745	0.564	Valid
	PBC2	0.703		Valid

Variable	Indicator	Outer Loading	AVE	Explanation
	PBC3	0.775		Valid
	PBC4	0.778		Valid
Intention to Invest	ITI1	0.845	0.597	Valid
	ITI2	0.824		Valid
	ITI3	0.632		Valid

Based on the test results, it is found that all AVE values are above 0.500, and all outer loading values are above 0.700. According to Hair et al. (2022), outer loading values in the range of 0.400 to 0.700 can still be used if the AVE value is above 0.500. Therefore, it can be concluded that the convergent validity in this study has been met.

4.1.9.   Discriminant Validity for Cryptocurrency Data

Discriminant validity is used to ensure that the indicators of a variable are distinct from the indicators of other variables and do not measure the same concept. Discriminant validity in this study is measured using the HTMT value. HTMT is the ratio of correlations between traits and correlations within traits. The variable can be considered valid if the HTMT value is less than 0.900.

Table 9. Discriminant Validity Test Result for Cryptocurrency Data

	ATB	ITI	PBC	SN
ATB				
ITI	0.693			
PBC	0.700	0.838		
SN	0.603	0.765	0.791	

It can be seen from the table that all variables have met the discriminant validity criteria, as all values are below the recommended threshold of 0.90. This means that each indicator is well predicted by its respective construct.

4.1.10.   Reliability for Cryptocurrency Data

The reliability test is used to measure the consistency of responses obtained. Reliability testing in PLS can be conducted using Cronbach's Alpha and Composite Reliability. Composite Reliability accounts for the weights from outer loadings. The rule of thumb is that the value of Cronbach's alpha or composite reliability should be greater than 0.7, although a value of 0.6 is still acceptable.

Table 10. Reliability Test Results

Variables	Cronbach's Alpha	Composite Reliability	Explanation
Attitude Towards Behavior	0.881	0.886	Reliable
Subjective Norms	0.860	0.863	Reliable
Perceived Behavioral Control	0.741	0.742	Reliable
Intention to Invest	0.656	0.687	Reliable

It can be seen in Table 10 that one variable has a value below 0.700. However, since values above 0.600 are still acceptable, all variables are considered reliable as they have Cronbach's alpha and composite reliability values above 0.600.

4.1.11. Multicollinearity for Cryptocurrency Data

Multicollinearity can be assessed using the Variance Inflation Factor (VIF). VIF is used to determine whether the independent variables, such as ATB, PBC, and SN, overlap or correlate too strongly when explaining the dependent variable, ITI. This value measures the variability of a selected independent variable that is not explained by other independent variables. A VIF value between 1 and 5 indicates no multicollinearity between the variables (Hair et al., 2022).

Table 11. Multicollinearity Test Result for Cryptocurrency Data

	ATB	ITI	PBC
ATB		1.596	1.392
ITI			
PBC		1.925	
SN		1.806	1.392

The VIF values for all research variables are less than 5.00, indicating no multicollinearity among the independent variables in this study.

4.1.12. R-Square for Cryptocurrency Data

R-squared measures the ability of exogenous variables to explain endogenous variables. In simpler terms, R-squared measures the extent to which all independent variables contribute to explaining the dependent variable. It helps predict whether the model is strong or weak.

Table 12. R-Square Test Results for Cryptocurrency Data

Variable	R Square	R Square Adjusted
Perceived Behavioral Control	0.480	0.470
Intention to Invest	0.451	0.434

Table 12 shows that the R-Square value for the Perceived Behavioral Control variable is 0.480, meaning that the Attitude towards Behavior and Subjective Norms variables can explain 48% of the Perceived Behavioral Control variable. Other variables outside of this study explain the remaining 52%. The R-Square value for the Intention to Invest variable is 0.451, meaning that the Attitude towards Behavior, Subjective Norms, and Perceived Behavioral Control variables can explain 45.1% of the Intention to Invest variable. Other variables outside of this study explain the remaining 54.9%.

4.1.13. F-Square for Cryptocurrency Data

The f-Square or f^2 effect size test is a measure used to assess the "relative impact" of an exogenous variable on an endogenous variable. In simpler terms, f-squared measures how much influence one independent variable has on the dependent variable. The f^2 measurement is also called the effect of change in R^2. The guidelines for evaluating f^2 are that values of **0.02**, **0.15**, and **0.35** represent small, medium, and large effects, respectively.

Table 13. F-Square Test Result for Cryptocurrency Data

Path Effects	F Square	Explanation
Attitude Towards Behavior -> Perceived Behavioral Control	0.146	Medium Effect
Subjective Norms -> Perceived Behavioral Control	0.297	Medium Effect
Perceived Behavioral Control -> Intention to Invest	0.074	Small Effect
Attitude Towards Behavior -> Perceived Behavioral Control	0.055	Small Effect
Subjective Norms -> Perceived Behavioral Control	0.084	Small Effect

Table 13 shows that the effect of Attitude towards Behavior on Perceived Behavioral Control has an F-squared value of 0.146, which falls into the medium effect category. The effect of Subjective Norms on Perceived Behavioral Control has an F-squared value of 0.297, which also falls into the medium effect category. The effect of Perceived Behavioral Control on Intention to Invest has an F-squared value of 0.074, which falls into the small effect category. The effect of Attitude towards Behavior on Perceived Behavioral Control has an F-squared value of 0.055, which falls into the small effect category. The effect of Subjective Norms on Perceived Behavioral Control has an F-squared value of 0.084, which also falls into the small effect category.

4.1.14. Hypothesis Test Results for Cryptocurrency Data

Table 14. Hypothesis Test Result for Cryptocurrency Data

	Hypothesis	Original sample	T Stat > 1.96	P Value < 0.05	Explanation
H1	ATB -> PBC	0.325	3.003	0.003	Significant
H2	SN -> PBC	0.463	4.205	0.000	Significant
H3	PBC -> ITI	0.28	2.076	0.038	Significant
H4	ATB -> ITI	0.22	1.797	0.073	Not Significant
H5	SN -> ITI	0.288	2.365	0.018	Significant
H6	ATB -> PBC -> ITI	0.091	1.637	0.102	Not Significant
H7	SN -> PBC -> ITI	0.13	1.996	0.003	Significant

The hypothesis test results in Table 14 show that 2 out of 7 hypotheses are supported, and two hypotheses are rejected. The following are the conclusions from the testing results:

1. Attitude towards Behavior has a significant effect on Perceived Behavioral Control.
2. Subjective norms have a significant effect on Perceived Behavioral Control.
3. Perceived Behavioral Control has a significant effect on Intention to Invest.
4. Attitude towards Behavior does not significantly affect Intention to invest.
5. Subjective norms have a significant effect on Intention to invest.
6. Attitude towards Behavior does not significantly affect Intention to Invest through Perceived Behavioral Control.
7. Subjective norms significantly affect Intention to invest through Perceived Behavioral Control.

4.2. Discussion

The first analysis investigated the effect of Attitude Toward Behavior (ATB) on Perceived Behavioral Control (PBC). The results revealed a significant relationship in both the stock and cryptocurrency markets. This finding underscores the role of individual attitudes in shaping perceived control over investment behaviors, especially in speculative markets. A positive attitude toward investing typically encourages individuals to seek information, understand associated risks, and make informed decisions, ultimately enhancing their sense of control. For example, individuals who believe investing in financial markets can improve their financial well-being are more likely to proactively educate themselves, strengthening their confidence in making investment decisions.

However, extremes in attitude—overly cautious or excessively optimistic—can be counterproductive. While a highly cautious individual may avoid investing altogether due to fear, even when acknowledging potential benefits, an overly optimistic investor might underestimate risks, leading to impulsive and speculative decisions (Suriyanti & Mandung, 2024). These dynamics highlight the importance of maintaining a balanced attitude that fosters long-term investment sustainability.

The second analysis examined the influence of Subjective Norms on PBC. Findings show that while subjective norms did not significantly affect PBC in the stock market, they significantly affected cryptocurrency. This suggests that social influence may be more prominent in newer or less conventional asset classes. In the context of cryptocurrency, where peer influence, online communities, and social trends are prevalent, individuals are more likely to feel capable of participating when encouraged by their social environment. For instance, when peers actively invest in crypto assets, individuals may feel motivated to explore and understand these markets, thereby increasing their perceived control. In contrast, in the stock market, social encouragement may not translate into increased PBC, particularly if individuals lack the required knowledge, skills, or financial resources. Since PBC is rooted more in individual competencies and constraints than external approval, social norms alone cannot influence perceived control (Suryadi & Anggraeni, 2023). These contrasting results are supported by prior findings (Hasmidyani et al., 2022; Suryadi & Anggraeni, 2023), illustrating the differential impact of subjective norms across market types.

The third test assessed the relationship between PBC and Intention to invest. The results indicate that PBC significantly predicts investment intention in both markets. Individuals with a strong sense of control, often grounded in financial literacy, are more likely to pursue investment opportunities. Financial literacy enables individuals to evaluate risk and return, navigate market complexities, and make strategic decisions. For instance, students who deepen their understanding of financial instruments and market behavior are better equipped to assess investment opportunities, enhancing their willingness to invest (Nugraha & Prasetyaningtyas, 2023; Kumari et al., 2022). Consequently, PBC is a critical determinant of investment intention in stock and cryptocurrency contexts.

The fourth analysis explored the direct effect of ATB on Intention to invest. Surprisingly, the results indicate that ATB does not significantly influence investment intention in either market. While attitude reflects one's evaluation of investment behaviors, it does not directly translate into action. This may be due to intervening factors such as risk aversion, emotional barriers, or financial constraints. For instance, although an individual may recognize the potential benefits of investing, fear of loss, lack of confidence, or limited resources may deter them from committing to investment decisions (Pandurugan & Al Shammakhi, 2023). Hence, a favorable attitude alone cannot stimulate investment behavior without accompanying factors such as confidence and capability.

The fifth analysis examined the effect of Subjective Norms on Intention to Invest. Results show a significant influence in both markets, suggesting that social support is decisive in shaping investment behavior. A supportive social environment can increase self-confidence and reduce apprehension, making speculative investments appear more attainable (Hidayati & Destiana, 2023). Conversely, negative or discouraging social norms may dissuade individuals from taking financial risks (Rahadjeng & Fiandari, 2020). These findings reaffirm the importance of interpersonal and social dynamics in shaping financial decision-making.

The sixth analysis assessed the indirect effect of ATB on Intention to invest through PBC. In the stock market, this indirect relationship was significant, indicating that a positive attitude can enhance PBC, influencing investment intention. This suggests that when individuals are positively disposed toward investing and simultaneously acquire relevant knowledge and skills, their confidence grows, leading to actionable investment behavior. In contrast, this mediating effect was not observed in the cryptocurrency market. The absence of this relationship may be attributed to barriers such as limited experience, technological unfamiliarity, or unfavorable financial conditions, which inhibit the translation of positive attitudes into perceived control.

The Theory of Planned Behavior (TPB) posits that ATB and PBC are distinct constructs. While ATB reflects one's general evaluation of behavior, PBC is concerned with the perceived ease or difficulty of performing it. In line with this distinction, a positive attitude alone does not necessarily elevate perceived control. Investment confidence is more closely associated with actual competencies and resource access than favorable perceptions alone.

The seventh analysis explored the mediating role of PBC in the relationship between Subjective Norms and Intention to Invest. Results show that this mediation was significant in the cryptocurrency market but not the stock market. In cryptocurrency, peer pressure, social media influence, and participation in digital communities contribute to a heightened sense of control and intention to invest. In contrast, stock market investors rely more heavily on personal experience and internal resources than on social endorsement. Lack of technological access or financial capital may also contribute to this divergence.

Finally, the comparative analysis of both markets reveals distinct behavioral patterns. In the stock market, investment intention is primarily driven by a combination of positive attitude and PBC. This highlights the critical role of self-confidence and financial knowledge in fostering investment behavior. Conversely, subjective norms exert a more decisive influence in the cryptocurrency market, directly and indirectly. These findings suggest that social influence is more impactful in emerging financial domains where individual experience is limited. In sum, strengthening financial education and enhancing individual competencies appear essential for stock investments. Meanwhile, in cryptocurrency markets, leveraging peer networks and online communities may be more effective in encouraging investment behavior. These insights offer valuable implications for designing targeted educational and social strategies to promote informed and confident participation in diverse financial markets.

4. Conclusion

This study successfully identified differences in the behavior and attitudes of students in Indonesia towards two types of investment markets: the stock market and the cryptocurrency market. In the stock market, the attitude towards behavior has a greater impact on intention to invest through perceived behavioral control. Meanwhile, in the cryptocurrency market, subjective norms were found to have a more substantial influence on intention to invest than attitude towards behavior, both directly and indirectly. To increase students' investment interest in the stock and cryptocurrency markets, educational institutions can integrate financial literacy into the curriculum and provide simulated investment experiences through apps and demo accounts. Encouraging classroom discussions, seminars, and alums engagement can help shape social norms that support investment, while mentorship and easily accessible learning resources can enhance students' perceived behavioral control. With this strategy, students can become more confident and motivated to invest, supporting long-term financial independence. These findings support the Theory of Planned Behavior (TPB), which suggests that increasing perceived behavioral control through education and practical experience can strengthen students' intention to invest. However, the limitations of this study are that it considers the vast social media influence on investing behavior, due to the nature of the Theory of Planned Behavior (TPB), which only takes into account Attitude towards Behavior, Subjective Norms, and Perceived Behavior Control as factors driving intention results.

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