



Article Type: Research Paper

Investment Decisions on the Crowdfunding Platform Based on the Theory of Planned Behavior

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Abstract

Research aims: Few studies on crowdsourcing have been conducted concerning Indonesian investors and fund providers. This study, therefore, aims to examine the role of investment intentions by investors with the influence of attitudes, subjective norms, and perceived behavioral control for investment decisions and the role of investment intentions as mediating variables on the relationship between perceived behavioral control and investment decisions.

Design/Methodology/Approach: The research sample involved 100 investor respondents on a crowdfunding platform that had obtained permission from the Financial Services Authority (OJK). The analysis in this study then utilized PLS-SEM with SmartPLS 3.0.

Research findings: The study results demonstrated that while attitudes and perceived behavioral control positively affected investment intentions, subjective norms did not. Besides, perceived behavioral control positively affected investment intentions and crowdfunding investment decisions. Meanwhile, investment intention had a positive effect on crowdfunding investment decisions.

Theoretical Contribution/Originality: This study used the Theory of Planned Behavior (TPB) to examine the role of investment intention by investors with the influence of attitudes, subjective norms, and perceived behavioral control for investment decisions and the role of intention as a mediating variable on the relationship between perceived behavioral control and investment decisions.

Practitioners/Policy Implications: The implications of research in crowdfunding decision-making based on investors' considerations are attitudes, perceived behavioral control, and investment intentions.

Research Limitations/Implications: This research was limited to investment decisions in TPB-based crowdfunding only, so further research is needed to observe other aspects besides psychological factors, such as testing the level of education, income, gender, and others, that may strengthen investment decisions on the crowdfunding platform.

Keywords: Theory of Planned Behavior; Attitude; Subjective Norms; Perceived Behavioral Control; Investment Intention; Crowdfunding



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THIS ARTICLE IS AVAILABLE IN:

<http://journal.umy.ac.id/index.php/mb>

DOI: [10.18196/mb.v14i1.16494](https://doi.org/10.18196/mb.v14i1.16494)

CITATION:

Yulandreano, E., & Rita, M. R. (2023). Investment Decisions on the Crowdfunding Platform Based on the Theory of Planned Behavior. *Jurnal Manajemen Bisnis*, 14(1), 36-52.

ARTICLE HISTORY

Received:

12 Oct 2022

Revised:

24 Jan 2023

13 Feb 2023

Accepted:

20 Feb 2023



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Introduction

MSMEs in developing countries have difficulty accessing finance and are less likely to receive formal bank financing (Rosavina et al., 2019). MSMEs are also considered unbankable and high-risk. In this regard, financial innovations can deal with MSME problems using financial technology. Financial technology can be classified into third-party payment systems, peer-to-peer lending, and crowdfunding (Hsueh & Kuo, 2017).

Third-party payment systems are payment systems through third parties (Mao et al., 2020). Peer-to-peer lending is a financial service that brings lenders to borrowers (Freedman & Jin, 2017), and crowdfunding is a fundraising system for entrepreneurs (Ahlers et al., 2015; Vulkan et al., 2016).

Specifically, crowdfunding can provide alternative funding that can be accessed with a broader and more flexible reach since MSMEs are not burdened with collateral to get funding. Crowdfunding managers offer shares on a platform as compensation for the investments made by investors. For project financing or securities crowdfunding, the Financial Services Authority (OJK) issued rules through regulation No. 57/POJK.04/2020. The potential to attract investors other than friends, family members, or local businesses is significant to encourage MSMEs to seek external equity (Collins & Baeck, 2014; Vismara, 2018). Crowdfunding is also an MSME financing solution to obtain funding by issuing shares so investors can invest and profit from crowdfunding. In Indonesia, the crowdfunding platform has been operating since 2018. The number of investors and the investment value for MSMEs increased, as shown in Table 1. The total value of investors in 2018 was 1,139, an increase in 2020 by 22,300. A similar trend involved the investment value in 2018 of IDR 5.563 billion, which increased to IDR 191 billion.

Table 1 Investment Growth on Crowdfunding Platforms

Year	Number of Investors	Investment Value (Rp Billions)
2018	1,139	5.563
2019	2,932	28.217
2020	22,300	191

Source: Aprihasyyati and Fitria (2021); Rika (2021)

In crowdfunding investments, some factors influence success and failure (Short et al., 2017). These include supporting perspectives and motivation to engage and support crowdfunding financially (Macht & Weatherston, 2015; Troise & Tani, 2020), post-guarantee satisfaction with crowdfunding processes, and outcomes (Xu et al., 2016). Thus, the nature of the perspective and psychology supports financial contributions in crowdfunding (McKenny et al., 2016). The nature of a supportive perspective depends on the crowdfunding model that can be used due to the motivation to support non-investment activities or investments in crowdfunding (Belleflamme et al., 2014; Macht & Weatherston, 2015; Mollick, 2014).

Research by Rodriguez-Ricardo et al. (2018) on the general audience of potential investors conducted in Spain revealed that innovation and social identification with the crowdfunding community had a positive effect on intentions to participate, attitudes toward helping others, and interpersonal connectivity, which indirectly determined the intention to contribute to successful crowdfunding, mediated by social identification with the crowdfunding community. Investors' perceptions of the level of product innovation presented to determine their positive attitudes towards and involvement in crowdfunding. A study by Aprihasyyati and Fitria (2021) on crowdfunding investors in Indonesia depicted that MSME performance and investor confidence positively influenced investment intentions through the crowdfunding platform.

In using the Theory of Planned Behavior (TPB) proposed by Ajzen (1991), it relates to the intentions and decisions of investors in crowdfunding investments. TPB, in this case, is human behavior influenced by attitudes, subjective norms, and perceived behavioral control that can impact a person's decision to invest in crowdfunding. Attitudes, subjective norms, and perceived behavioral control are of concern because the information obtained will effectively foster an intention to take action. Intention to take action is fostered through subjective norms that will influence investors' actions. Since investors' knowledge about crowdfunding investments is not deep, investors' intentions to get involved will change over time. No investor can get involved in crowdfunding contributions without making considerations as a first step.

Research by Shneor and Munim (2019) used 560 investors as respondents who invested in crowdfunding in Finland-Mesenaatti. The results uncovered that subjective attitudes, norms, and perceived behavioral control positively affected investment intentions. However, Nakjin & Lee's (2020) research on 261 investors who invested in crowdfunding in South Korea demonstrated that subjective attitudes and norms positively affected intentions, and perceived behavioral control did not affect intentions. In fact, a person's behavioral intentions will influence investment decisions in crowdfunding (Shneor & Munim, 2019; Wasiuzzaman et al., 2021). Investment decisions are one of the essential factors that affect financial ability and financial well-being. Identifying factors related to relevant investment decisions is critical for individuals (Janor et al., 2016). Investment decisions also consider the returns obtained, the risks that arise, and the period for investing.

Since investors show growth in investments in crowdfunding platforms, it is necessary to examine investment growth through attitude factors, subjective norms, and perceived behavioral control in increasing intentions for investment decisions. This research has a problem formulation, namely, how are crowdfunding investment decisions seen from the perspective of TPB, considering that few studies on crowdsourcing have been conducted concerning Indonesian investors and fund providers. This study, thus, aims to examine the role of investment intentions by investors with the influence of attitudes, subjective norms, and perceived behavioral control for investment decisions and the role of investment intentions as mediating variables on the relationship between perceived behavioral control and investment decisions. Further, the benefit of theoretical research is to explore several factors influencing crowdfunding investment decisions based on TPB, which suggests that individual intentions to act are the determinants of investment decisions. Meanwhile, the managerial benefits broaden the understanding of crowdfunding investment decision-making from an investor's perspective.

Literature Review and Hypotheses Development

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) proposed by Ajzen (1991) is used in studying human behavior. TPB is a development of the Theory of Reasoned Action (TRA), which is a theory

of behavior under the control of the individual oneself (Fishbein & Ajzen, 1975). This theory is inadequate because a person's intentions toward behavior are shaped by two factors: attitudes and subjective norms. It is based on the assumption that TPB adds one factor: perceived behavioral control (Ajzen, 1991). This addition controls the behavior of individuals limited by the resources used to perform a behavior. Moreover, one's attitude towards a behavior refers to the favorable or unfavorable evaluation of individual behavior. Subjective norms and perceived behavioral control are essential in shaping intentions as social factors (Ajzen, 1991). It refers to the social pressure an individual feels to decide what action to take or not take.

Furthermore, individual behavior is viewed to be influenced not only by an individual's evaluation of behavior but also by the evaluation of others. Perceived behavioral control refers to something that can be easier and more difficult. However, it is considered a perception that an action can be easily performed (Cho, 2017). Intentions can find expression in a person's behavior, and individuals are free to decide whether or not to perform the behavior (Ajzen, 1991). The better the attitude towards the behavior, the higher the subjective norm. The greater the perceived behavioral control, it will affect the intention to make a decision (Boudewyns, 2013).

The Effect of Attitude on Investment Intention

Attitude is an overall evaluation of behavior by an individual. Individual behavior assessment has a good viewpoint (Ajzen, 1991). Shneor and Munim (2019) affirmed that attitudes are judgments that can be beneficial, advantageous, and essential for the individual. Individual beliefs also determine attitudes toward behavior about a person's subjective assessment of the surrounding environment (Ajzen, 2005). A belief can be found by connecting a predictable behavior with various benefits or losses that can be obtained by doing or not doing the behavior. Thus, an attitude is an evaluation of individual behavior that has a good view, is beneficial, is useful, is valuable, and is essential for the individual. Having a good viewpoint, being useful, being valuable, and being essential is needed to benefit crowdfunding investors. In other words, the better the attitude in crowdfunding involvement, the higher the level of intention towards individual contribution.

Studies by Nakjin and Lee (2020) and Shneor and Munim (2019) showed that attitudes positively affected investment intentions in crowdfunding. A positive attitude believes that crowdfunding investments can be profitable and increase the intention to invest. Based on previous research, this study formulated the first hypothesis as follows:

H₁: Attitude has a positive effect on investment intentions.

The Effect of Subjective Norms on Investment Intention

Subjective norms are a person's feelings or assumptions about people's expectations, present in one's life regarding what he/she does or does not do (Ajzen, 1991). Based on

Shneor and Munim (2019), subjective norms are determined by individuals who are driven to respond well with the support of the views of individuals or groups. In addition, a person believes that one's friends and relatives will also join in similar actions (Fishbein & Ajzen, 1975).

Thus, subjective norms are beliefs about the expectations of individuals to perform or not perform an action or behavior based on the opinions of others. The implementation of subjective norms has interpersonal and external influences that will impact the formation of subjective norms (Bhattacharjee, 2000). Sources of interpersonal influence are friends, family, colleagues, and experienced individuals. Meanwhile, parties outside the organization, namely the mass media, expert opinions, and non-personal information, are sources of external influence that individuals consider in their behavior. The greater the subjective norm considered favorable for crowdfunding engagement, the higher the level of investment intention.

The influence of subjective norms in this study is intellectualization as a social influence on individual intentions to use or not to use crowdfunding investments. Research by Nakjin and Lee (2020) and Shneor and Munim (2019) revealed that subjective norms positively affected investment intentions in crowdfunding. People in an environment surrounded by a positive influence on investing in crowdfunding will have the intention to invest compared to those in an environment less amenable to crowdfunding investments. Based on previous research, this study devised the second hypothesis as follows:

H₂: Subjective norms have a positive effect on investment intentions.

The Effect of Perceived Behavioral Control on Investment Intention and Crowdfunding Investment Decisions

Perceived behavioral control is defined by Ajzen (1991) as the perceived ease or difficulty of performing a behavior. Shneor and Munim (2019) discovered that behavioral control could be interpreted as understanding the ease or difficulty of acting based on one's resources. Someone with subjective attitudes and norms supporting specific actions will depend on the perceived behavioral control support.

The existence of supporting factors provides a vital role in terms of regulating behavioral control. Conversely, the fewer supporting factors an individual feels, the individual will find it challenging to understand the behavior (Ajzen, 2005). Hence, perceived behavioral control is an individual's understanding of the ease and difficulty in perception or anticipation based on experiences or obstacles in performing a behavior. Individuals with capital support, mastery of technology, knowledge, investor confidence in themselves, and minor barriers to carrying out behavior will have a substantial investment intention for investment decisions in crowdfunding.

Further, the potential and capacity of an individual to perform specific actions define perceived behavioral control (Ajzen, 1991). This perception has two dimensions: a person's level of control in acting and his/her confidence level in completing the action. Studies by La Barbera and Ajzen (2020) and Shneor and Munim (2019) depicted that perceived behavioral control positively affected investment intentions. A positive influence reflects that if potential investors feel they have confidence in themselves with the support of capital, technology mastery, and strong knowledge of crowdfunding, the intention to invest in crowdfunding will increase.

Research by Kurniawan (2019), Paul et al. (2016), and Pérez and Egea (2019) also revealed that perceived behavioral control had a positive effect on investment decisions. Behavioral control perceived to have a positive influence reflects potential investors' belief that having confidence in themselves with capital support, technology mastery, and strong crowdfunding knowledge will improve crowdfunding investment decisions. Based on previous studies, this research put forth the third and fourth hypotheses as follows:

H₃: Perceived behavioral control has a positive effect on investment intentions.

H₄: Perceived behavioral control has a positive effect on crowdfunding investment decisions.

The Effect of Investment Decisions on Crowdfunding Investment Decisions

How strongly a person desires to try to do a particular behavior can be shown by intention. The intention is a disposition for behavior until the right opportunity arises (Ajzen, 2005). Intentions are also developed from the results of activities that will cause the same activity to be repeated. In addition, the intention is assumed to be a motivating factor influencing behavior, i.e., about someone wanting to try and how much effort has been exerted to perform the behavior. Investment intention, in this regard, is someone's interest which, if there are supporting factors, will be realized by investing (Syarfi & Asandimitra, 2020). Thus, investment intention is a behavioral disposition that will be realized as an action if there is the right time and opportunity.

Mainly, investment decisions are investors' decisions to allocate funds in the form of investments that will generate profits in the future (Halim, 2015). Investors can find interesting opportunities on one of the many platforms, collect and analyze information relevant to the investment, and finally decide whether and how much to invest. Thus, crowdfunding investment decisions are investors' decisions to allocate funds in the form of crowdfunding investments that will generate profits in the future.

Willingness to support a venture reflects an intention to capitalize on investment decisions on a crowdfunding platform. Greater intention can improve investment decisions, and investments can be made. Therefore, investment support in crowdfunding is a behavioral intention that positively influences crowdfunding investment decisions. Research by Shneor and Munim (2019) and Wasiuzzaman et al. (2021) portrayed that

intention positively affected crowdfunding investment decisions. The greater a person’s intention in making investment decisions, the greater the investment decisions in crowdfunding. Based on previous research, this study formulated the fifth hypothesis as follows:

H₅: Investment intention has a positive effect on crowdfunding investment decisions.

Mediation of Investment Intentions on the Effect of Perceived Behavioral Control on Crowdfunding Investment Decisions

Behavioral control, perceived as a non-intentional dimension, is conceptualized as an individual’s belief in or the ability to do certain behaviors and is considered a factor in forming behavioral intentions and actual behavior (Song et al., 2012). Perceived behavioral control positively affects the intention to invest in crowdfunding (Pérez & Egea, 2019). Meanwhile, intention is defined as an essential factor in explaining the formation of a person’s decision (Song et al., 2012). The intention is also assumed to motivate a person’s willingness to try to perform a behavior.

Peiris et al. (2021) study found that intention could mediate between financial literacy and individual saving behavior. Contextually, the research could explain the relationship between perceived behavioral control and investment decisions using intention as a behavioral proxy measurement because intention can be a better mediator and become the most crucial factor in explaining decision formation. Based on previous research, this research derived the sixth hypothesis as follows:

H₆: Perceived behavioral control influences crowdfunding investment decisions through investment intentions as a mediating variable.

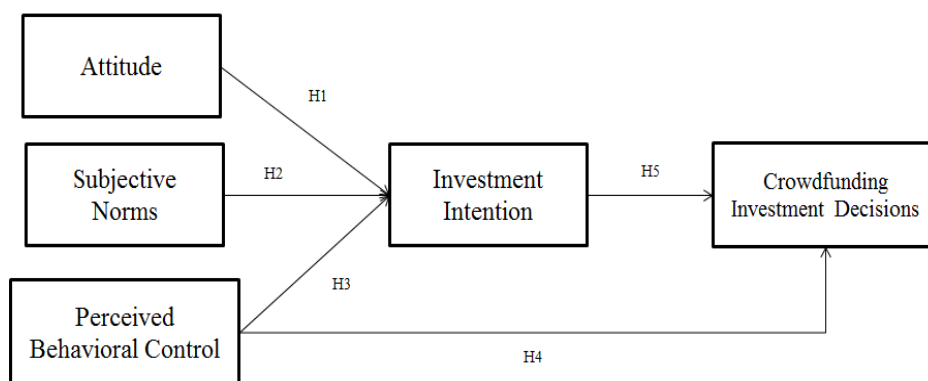


Figure 1 Research Model
Source: Adopted from Ajzen (1991)

Research Methods

The population used in this study included investors on the crowdfunding platform in Indonesia. According to Hair et al. (2017), the minimum requirement for a sample is five times the number of research indicators. This research had 17 indicators, so the sample had 85 respondents. In anticipating data that could not be processed because it was incomplete, the research sample added about 15% of the minimum total. The total research sample used was 100 respondents. Then, the sampling method employed purposive sampling. The sample criteria in this study were investors on the crowdfunding platform that had obtained permission from the Financial Services Authority (OJK), including Bizhare, CrowdDana, Danasaham, Santara, and LandX. The data collection method was done using a questionnaire via Google Forms. This study used a Likert scale with a level of agreement consisting of five points, ranging from 1 (STS) to 5 (SS) (Sugiyono, 2013). Afterward, the analysis method utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) with Smart-PLS as an analytical tool.

Table 2 Operationalization of Variables

Variable	Indicators	Source
Attitude	1. Investing in crowdfunding is a wise decision. 2. Investing in crowdfunding is a good decision. 3. Investing in crowdfunding is a positive decision. 4. Investing in crowdfunding is a worthwhile decision.	Modification from Shneor & Munim (2019)
Subjective Norms	1. Support from other crowdfunding investors 2. Influence from parents, siblings, relatives, and friends 3. Opinions of others in crowdfunding investing	Modification from Shneor & Munim (2019)
Perceived Behavioral Control	1. Investment involvement in crowdfunding is an absolute individual decision. 2. Capital support, mastery of technology, and knowledge of crowdfunding	Modification from Shneor & Munim (2019)
Investment Intention	1. Efficiency and effectiveness in crowdfunding investment products 2. Investment in crowdfunding can increase capital for MSMEs. 3. Active contribution to crowdfunding investment	Modification from Shneor & Munim (2019)
Crowdfunding Investment Decisions	1. Investment portfolio 2. Budgeting of funds for investment 3. Accumulating the returns earned 4. Minimizing risks 5. Investment period	Modification from Putri & Hamidi (2019)

Results and Discussion

Respondent Characteristics

The characteristics of the respondents describe the identity of the research sample. The overall data were obtained from the distribution of questionnaires through the Google Form set at 100 respondents. The collected investor respondents on the crowdfunding

platform consisted of 68 males and 32 females. The 17–34-year-old category had the highest frequency, with 72 people. Then, the respondents aged 35-49 were as many as 21 people, and those aged > 50 were seven individuals. In addition, the Diploma or Bachelor’s Degree education level category revealed the highest frequency with 72 people, while the high school education level or equivalent and Master’s Degree or Doctorate Degree had the same frequency with 14 people. Furthermore, the highest number of work categories were private employees, with 49 people, followed by students, with 16 people, professionals, with 13 people, civil servants, with five people, and other jobs, including entrepreneurs, pensioners, and traders, with 17 people.

Table 3 Characteristics of Respondents

Characteristics of Respondents	Category	Total
Gender	Male	68
	Female	32
Age	17-34 Year	72
	35-49 Year	21
	> 50 Year	7
Education Level	Senior High School	14
	Diploma/S1	72
	S2/S3	14
Work	Student	16
	Private Employe	49
	Civil Servant	5
	Professional	13
	Other	17

PLS Outer Model Test

This test proved that the respondents could understand the questions on each latent variable in this study. Hair et al. (2017) stated that convergent validity could be accepted if the factor loading value is > 0.6. In this research, the overall factor loading showed a value > 0.6. This test was then continued by testing the construct's reliability and validity.

Table 4 Variable Measurement

Variable	Items	Source	Factor Loading
Attitude	1) Investing in crowdfunding is a wise decision.	Modification from Shneor & Munim (2019)	0.814
	2) Investing in crowdfunding is the right investment.		0.881
	3) A good decision when I invest in crowdfunding		0.776
	4) I have a positive outlook on investing in crowdfunding.		0.648
	5) Investing in crowdfunding is profitable for me.		0.727
	6) Investing in crowdfunding provides short-term benefits for me.		0.615
	7) Investing in crowdfunding provides long-term benefits for me.		0.626

Table 4 Variable Measurement (cont')

Variable	Items	Source	Factor Loading
Subjective Norms	1) The success of other investors encouraged me to join crowdfunding.	Modification from Shneor & Munim (2019)	0.835
	2) Knowing the number of close people who invest in crowdfunding is vital to me.		0.739
	3) Important people in my life (parents, siblings, relatives, and friends) can influence me to invest in crowdfunding.		0.728
	4) I invest in crowdfunding to make business pioneers in MSMEs.		0.822
Perceived Behavioral Control	1) The decision to invest in crowdfunding is entirely my own.	Modification from Shneor & Munim (2019)	0.632
	2) I have complete control over the investments made in crowdfunding.		0.788
	3) I invest in crowdfunding due to it is easy to learn.		0.882
	4) Invest in crowdfunding with the knowledge I have		0.718
	5) I invest in crowdfunding with capital support.		0.765
Investment Intention	1) Investing in crowdfunding is a more efficient investment product.	Modification from Shneor & Munim (2019)	0.852
	2) I will contribute in the near future.		0.841
	3) I will often contribute to crowdfunding.		0.877
	4) I will encourage people who are important to me to invest in crowdfunding.		0.849
Crowdfunding Investment Decisions	1) I invest in several investment products.	Modification from Putri & Hamidi (2019)	0.656
	2) I include crowdfunding investment in the preparation of the investment portfolio.		0.710
	3) I will budget the funds invested in crowdfunding.		0.778
	4) Choose MSMEs according to the budget that I have planned		0.656
	5) I accumulate the returns I get when investing in crowdfunding.		0.623
	6) Returns obtained from crowdfunding investments are in accordance with my plan.		0.785
	7) I manage risks in investments so that the impact can be minimized.		0.677
	8) I minimize the risks that arise when investing in crowdfunding.		0.759
	9) I set a timeframe for investing in crowdfunding with short-term investments.		0.660
	10) I set a timeframe for investing in crowdfunding with long-term investments.		0.779

Then, a reliability test is done by looking at the value of Cronbach’s alpha. This value can reflect the reliability of all questions in the research model. The reliability test is accepted with a minimum value of 0.7, while the ideal value is between 0.8-0.9. The validity test is seen from the average variance extracted (AVE) value, with a minimum value of 0.5.

Table 5 Reliability and Validity Tests

Variable	Cronbach’s Alpha	Average Variance Extracted (AVE)
Attitude	0.852	0.537
Subjective Norms	0.795	0.612
Perceived Behavioral Control	0.822	0.579
Investment Intention	0.890	0.505
Crowdfunding Investment Decisions	0.877	0.731

Further, the R-square test describes the magnitude of the effect of endogenous variables on exogenous variables. The larger the value of the R-square, the better the results. In this study, attitude, subjective norms, perceived behavioral control, and intentions affected crowdfunding investment decisions by 70%. Besides, they were influenced by other factors outside the model. It also revealed that the variables of attitude, subjective norms, and perceived behavioral control affected investment intentions by 54.1%, in addition to being influenced by other factors outside the model.

Table 6 R-Square Test

Endogenous	R-Square
Crowdfunding Investment Decisions	0.700
Investment Intention	0.541

PLS Inner Model Test

Based on Table 4 showing the PLS test results with the endogenous variable of investment intention, the results uncovered that attitude had a positive effect on investment intention, with a p-value of less than a 1% significance level (H₁ was accepted). However, subjective norms did not affect investment intentions, with a p-value more significant than the 10% significance level (H₂ was rejected). Meanwhile, perceived behavioral control positively affected investment intentions, with a p-value of less than a 5% significance level (H₃ was accepted).

From the PLS test results with the endogenous variable of crowdfunding investment decisions, the results of behavioral control were perceived to have a positive effect on crowdfunding investment decisions with a p-value of less than a 1% significance level (H₄ was accepted). Moreover, investment intention positively affected crowdfunding investment decisions with a p-value of less than a 1% significance level (H₅ was accepted).

Table 7 Direct Effect Test

Variable	Original Sample [O]	T-Statistic [O/STDEV]	P-value	Result
Attitude → Investment intention	0.484	3.797	0.000***	H ₁ Accepted
Subjective norms → Investment intention	0.059	0.490	0.624	H ₂ Rejected
Perceived behavioral control → Investment intention	0.304	3.458	0.026**	H ₃ Accepted
Perceived behavioral control → Crowdfunding investment decisions	0.327	7.242	0.000***	H ₄ Accepted
Investment intention → Crowdfunding investment decisions	0.511	7.292	0.000***	H ₅ Accepted

Note: *, **, *** significant at alpha 10%, 5%, and 1%

Based on the PLS test results, the indirect effect in Table 5 shows that the perceived behavioral control of crowdfunding investment decisions mediated by investment intentions had a p-value of 0.027, where this value was smaller than the 5% significance level, indicating partial mediation. Consequently, it can be surmised that behavioral control had a perceived influence on crowdfunding investment decisions mediated by investment intention (H6 was accepted).

Table 8 Indirect Effect Test

Variable	Original Sample [O]	T-Statistic [O/STDEV]	P-value	Result	Mediation Type
perceived behavioral control → Investment intention → Crowdfunding investment decisions	0.141	2.217	0.027**	H ₆ Accepted	Partial Mediation

Note: *, **, *** significant at alpha 10%, 5%, and 1%

Attitude towards Investment Intention

The results showed that attitude had a positive effect on investment intention. Related to that, an investor's attitude is when one can evaluate behavior by having a good viewpoint, being profitable, helpful, valuable, and essential. This perspective is needed to generate investment intentions and gain profits for a crowdfunding investor. In line with the research carried out by San Martín et al. (2020), Nakjin and Lee (2020), and Shneor and Munim (2019), the attitude had a positive effect on investment intentions in crowdfunding. Therefore, the better an investor's attitude towards a crowdfunding investment, the higher the investor's intention to invest.

Subjective Norms on Investment Intention

The results demonstrated that subjective norms did not affect investment intentions. It might be caused by the fact that since gender differences between men and women have different characteristics, men feel more confident in their actions, and women always have a cautious attitude, which results in women being less confident when determining what actions to take (Srijanani & Vijaya, 2018). In addition, higher-educated investors have the ability and knowledge to analyze actions taken rationally (Aren & Hamamci, 2020). Hence, when investors have differences in gender and level of education, it will cause them to consider everything carefully and rationally in making investment intentions and not based on the opinions of friends, an analysis, or media but instead by using a fundamental analysis. Also, investors only use the opinions of other people and the media to strengthen their beliefs in the crowdfunding investment analysis that they have done. This study aligns with Chen et al. (2019), showing that subjective norms did not affect investment intentions.

Perceived Behavioral Control on Investment Intention

The results uncovered that perceived behavioral control positively affected investment intention. Related to that, perceived behavioral control based on investors' strong beliefs in themselves, capital support, and crowdfunding knowledge will increase and support investors' intentions to invest in crowdfunding. Further, investors with a higher education level and income (Ichwan & Kasri, 2019) and the knowledge and information obtained by investors tend to increase their investment intentions (Shneor & Munim, 2019). It corroborates with the research of La Barbera and Ajzen (2020) and Shneor and Munim (2019), which showed that perceived behavioral control positively affected investment intentions.

Perceived Behavioral Control on Crowdfunding Investment Decisions

The results showed that perceived behavioral control positively affected crowdfunding investment decisions. In this case, perceived behavioral control is based on an investor's belief regarding the supporting or inhibiting factors in making an investment decision. The perception of firm behavioral control of oneself with the support of capital, mastery of technology, and knowledge of crowdfunding will improve investment decisions in crowdfunding. With capital support, investors tend to consider making investment decisions (Lukkarinen, 2020), and investors who understand crowdfunding investments will consider investment decisions (Wald et al., 2019). It is consistent with research conducted by Kurniawan (2019) and Paul et al. (2016), which conveyed that perceived behavioral control positively affected investment decisions.

Investment Intention on Crowdfunding Investment Decision

The results exhibited that investment intention positively affected crowdfunding investment decisions. Here, investment intention is someone's interest, which, if there are supporting factors, will be realized with an investment decision. Similar research by

Shneor and Munim (2019) and Wasiuzzaman et al. (2021) revealed that intention positively affected crowdfunding investment decisions. In other words, the greater the intention of a person in making investment decisions, the greater the investment decisions in crowdfunding. Investment decisions are also influenced by higher returns and investors' willingness to accept risk in return for higher returns (Setiawan et al., 2020). Therefore, the risk received by investors will affect crowdfunding investment decisions (Mamonov & Malaga, 2018).

Mediation of Investment Intentions on the Effect of Perceived Behavioral Control on Crowdfunding Investment Decisions

The results unveiled that intention could mediate the effect of perceived behavioral control on crowdfunding investment decisions. In this case, partial mediation was the mediating role of an attitude that could influence crowdfunding investment decisions with or without initial investment intentions. Investors' perception of control in making investment decisions also tended to be based on investors with higher education and income levels (Ichwan & Kasri, 2019) and investors who understand crowdfunding investments (Wald et al., 2019). In addition, the motivation of investors with crowdfunding investment returns is higher than other investment returns (Cholakova & Clarysse, 2015) and for investors to accept risk in crowdfunding investment decisions (Mamonov & Malaga, 2018).

Conclusion

This study provided a theoretical overview in exploring the factors of attitude, subjective norms, perceived behavioral control, and forming investment intentions that can influence crowdfunding investment decisions based on TPB. Managerially, this research also can be taken into account in making crowdfunding investment decisions based on several considerations, i.e., attitude, control perceived behavior, and investment intentions of investors.

This study demonstrated that while attitude positively affected investment intentions, subjective norms did not. Perceived behavioral control positively affected investment intentions and crowdfunding investment decisions. Meanwhile, investment intention had a positive effect on crowdfunding investment decisions. Lastly, perceived behavioral control influenced crowdfunding investment decisions mediated by investment intentions.

The limitations of this study are that it had not yet obtained information from the crowdfunding platform users, so it is suggested that future research provide information on the crowdfunding platform users in that investors are participating. This research was also limited to investment decisions in TPB-based crowdfunding only, so further research is needed to observe other aspects besides psychological factors, such as testing the level of education, income, gender, and others, that may strengthen investment decisions on the crowdfunding platform. Additionally, this research did not consider the time lag

between the intention response and the decision to invest in crowdfunding so that future research can accommodate the formulation of questions in the questionnaire regarding the time lag between the questions "intention" and "investment decision."

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