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An Empirical Analysis of Stock Market Investment Intention among University Students

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Abstract
Stock market investment intention is an important behavioral intention for individuals to achieve their financial goals. Therefore, the main aim for this study is to determine stock market investment intentions among university students. Data were collected from 453 final year students from the Faculty of Business and Management of a public university in Malaysia. The study found a significant positive correlation between three predictor variables which are, risk attitude, product knowledge and financial self-efficacy. However, only two predictors namely, risk attitude and product knowledge have a significant effect on the university students' intention to invest in a stock market. The study also captured that product knowledge is the strongest determinant. The findings provide valuable insights to researchers and related organisations.
Keywords: Stock Investment Intention, University Students, Risk Attitude, Product Knowledge, Financial Self-Efficacy

Introduction
The Malaysian stock market is expected to continue its growth in the future. As a fully-integrated exchange, Bursa Malaysia provides a platform for the investing public and at the same time provides investment opportunities for those who intend to become involved in stock trading. Despite the turbulent year of Covid-19 pandemic in 2020, a total of RM2.01 billion was raised through new listings on Bursa Malaysia which saw an increase of 2% from listings in 2019 (Poo, 2021).

The survival of publicly listed companies depends on their stocks being traded. Investors are the most important element for the development of any stock exchange. Thus, it is important to attract new investors to participate in a stock market and at the same time, existing investors increase their trading activities. There are two kinds of investors in the stock market, namely, institutional investors and retail investors. Although both types have dynamic behaviour, there are significant differences in their trading strategies as well as behavioral patterns (Koesrindartoto et al., 2020; Lai et al., 2013). Institutional investors are constrained by market regulation and hence, are unlikely to be active in the market. Lack of active trading significantly decreases the overall liquidity of the stock market (Ng et al., 2011). For that reason, in order for a stock market to be healthy, there should be balanced participation from institutional and retail investors.

The study of what influences an individual's intention to participate in the stock markets remains highly relevant as it is an important behavioral intention for individuals financial goals and as an essential contribution for the growth of a stock market. Many studies have addressed this issue globally (Dayaratne & Vijethunga, 2015; Njuguna et al., 2016; Raut et al., 2018; Shehata et al., 2021). However, most previous research only focused on active investors. University students studying investment and finance are deemed to be future potential investors in the stock market. Therefore, it is noteworthy to acknowledge the factors influencing their stock market investment intention.

The aim of this study is to investigate the effect of independent variables namely, risk attitude, product knowledge and financial self-efficacy on the dependent variable which is university students' intention to invest in the stock market. The study provides useful references for related organisations to understand the factors that influence the intention of university students to be stock market investors.

Literature Review

Intention to Invest

Intention is the measure of strength of an individual's desire to adopt particular behavior. According to Ajzen (1991), intention indicates how much effort individuals are willing to put forth in order to perform the specific behaviour. The greater the intention, the higher the possibility that the behavior will be adopted (Ajzen, 2020). Thus, intention to invest can be defined as an individual's future behavior about their investment. Many previous studies have used intention in predicting the investors' behavior as a dependent variable of a behavioral intention model for instance, Adam and Shauki (2014) studied investors' intention to involve in socially responsible investment, Awn and Azam (2020) investigated investors' intention to invest in Islamic sukuk and Ramayah et al. (2009) using the theory of reasoned action analysed the investors' intention to use online stock trading. In addition, a growing body of literature has examined individuals' intention to participate in stock markets (e.g., Aktar & Das, 2019; Nugraha & Rahadi, 2021; Sadiq & Khan, 2018; Sondari & Sudarsono, 2015).

Risk Attitude

Risk taking is a behavior of an individual commits himself/herself to an act with an unknown outcome. Individuals with a higher willingness to take risks are more likely to invest in risky financial assets such as common stocks. Assessing an individual's risk taking behavior can be a factor in predicting investment decisions (Bruhin et al., 2007). Several studies on behavioral finance have included risk taking behavior as a factor to determine financial decision making. Mahastanti and Hariady (2014) reported that the intention of female lecturers of an Indonesian university to make investment decisions is significantly influenced by risk preferences. Pak and Mahmood (2015) also suggest that risk taking behavior is a factor that can affect the investment decision of potential investors in Kazakhstan. According to De Bortoli et al (2019), investors who have greater risk tolerance are more likely to make high risk investment decisions. In addition, Vuk et al (2017) point out that financial risk taking behavior has a direct positive impact on intention to invest.

Product Knowledge

Coakes (2004) described knowledge as the condition of knowing something with familiarity obtained through experience or education. Accordingly, Robb and Sharpe (2009) defined financial knowledge as an individual's understanding of key concepts in finance. Product knowledge in the context of this study refers to the ability to understand the concept of stock investment. In determining what contributes to an individual's intention to invest or not his/her portions of income in a stock market, it is worth examining an individual's knowledge of stock markets. Many previous studies have reported a positive relationship between knowledge and investment intention (e.g., Asandimitra & Kautsar, 2019; Elfahmi et al., 2020; Osman et al., 2019; Shehata et al., 2021; Yousof et al., 2019). In addition, Jureviciene and Jermakova (2012) argue that lack of financial knowledge has been shown as the biggest problem causing individuals not to participate in investment activities. Their findings were supported by Campbell et al. (2011) and Sabri (2016) who reported that individuals who are less literate about stock market investment are not willing to trade and take on the investment risk. Meanwhile, Rooij et al. (2011) suggested from their results that financially literate individuals are willing to invest in risky assets.

Financial Self-Efficacy

Behavioral finance studies reveal that individuals' investment decisions sometimes are influenced by their psychological factors (Bakar & Ng, 2016). This study included one psychological factor which is financial self-efficacy as one of the predictors. Self-efficacy is individuals' belief in their ability to organise and act for the accomplishment of results (Bandura, 1997). Consequently, Forbes and Kara (2010) defined financial self-efficacy as an individuals' belief in their ability to achieve financial goals. Most individuals would only involve themselves in activities in which they deem themselves competent and thus increase their confidence level. On the other hand, people are less likely to participate in activities in which they deem themselves incompetent and insecure. Therefore, it is believed that financial self-efficacy will also have an influence on the intention of university students to invest in a stock market. Previous studies by Asandimitra and Kautsar (2019) and Farrell et al. (2016) have reported that financial self-efficacy is a significant factor in determining the financial behavior of an individual. Conversely, Sondari and Sudarsono (2015) found that self-efficacy was not significant in determining individuals' intention to invest in the Indonesian stock market.

Conceptual Framework and Hypotheses

All the above studies provide a solid base and ideas regarding financial behaviour of young graduates. Figure 1 displays the proposed research framework which consists of a dependent variable (university students' intention to invest in the stock market) and three independent variables (risk attitude, product knowledge and financial self-efficacy).

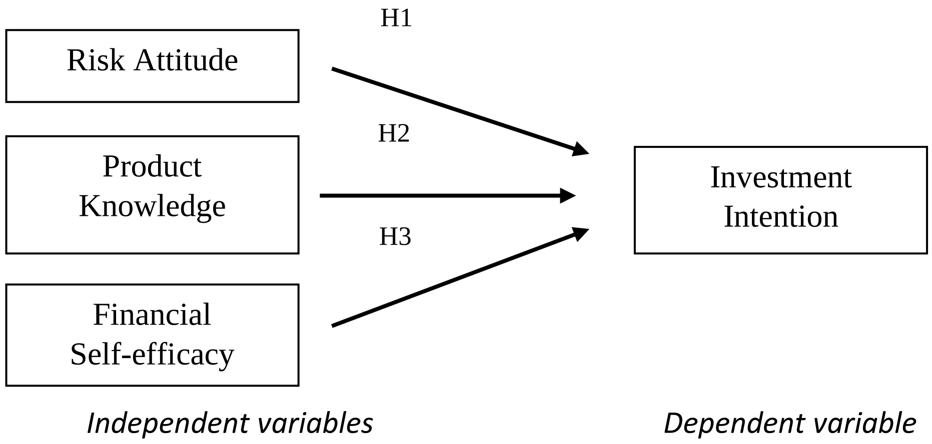

Figure 1 Research Framework

Based on the framework, research hypotheses have been developed as follows:
H1: There is a significant relationship between risk attitude and investment intention.
H2: There is a significant relationship between product knowledge and investment intention.
H3: There is a significant relationship between financial self-efficacy and investment intention.

Methodology

Research Design

The method of this study was a qualitative and cross-sectional approach. Data collection was done via online survey questionnaire design. The study units were final year students majoring in investment and finance from one of the Malaysia public universities in October 2020 - February 2021 academic semester. They are regarded as prospective retail investors in Bursa Malaysia.

Population and Sample

The target population of this study was students from the Faculty of Business and Management of a public university in Malaysia. The sampling frame for this research was the final year students (both from diploma and bachelor degree programs) in the academic semester of October 2020 – February 2021. The purposive sampling method is viewed as the most proper technique for this investigation as it includes the choice of respondents who are in the best situation to give the necessary data (Sekaran & Bougie, 2010). Sample size adequacy for multiple regression analysis was applied based on Green's (1991) method as $N > 50 + 8p$ where p is the number of predictors. Hence, in this study, $N = 50 + 8(3)$, thus 74 participants, therefore a sample size of more than 74 would be adequate.

Data Collection and Research Instruments

Data was collected in January 2021 and a total of 453 responses were accepted and analysed. Online questionnaire via Google form was selected as the instrument for this study since all classes were conducted online due to Covid-19 pandemic. Furthermore, the final semester students from bachelor programs were not on campus as they were doing their practical training. The online questionnaire link was distributed via classes whatsapp or telegram group by the respective lecturers.

The instruments utilised in this study were based on previous relevant studies with acceptable reliabilities (Cronbach's Alpha). The questionnaire consisted of two sections. Section A of the survey focused on obtaining general information concerning the demographic characteristics of respondents. Section B focused to seek information on (i) intention to invest (ii) risk attitude (iii) product knowledge (iv) and financial self-efficacy. All items in Section B were structured based on a six-point Likert scale ranging from 1 'strongly disagree' to 6 'strongly agree'.

Data Analysis Procedures
The collected data was analysed using SPSS statistics. Descriptive statistics analysis were applied to describe the demographic information. The reliability test was then conducted where Cronbach Alpha coefficient was determined in order to check the reliability of the variables used. For the data validity, this study adopted all the items in the questionnaire which have already been deemed valid in the previous study. Correlation analysis was also performed in order to assess the link among factors under consideration. Finally, multiple regression analysis was performed to find the effect of the selected factors on the university students' intention to invest in the stock market.

Ethical Considerations
Ethics approval was obtained from the university's research ethics committee prior to the study. Participants were made aware that the survey was voluntary and the responses will be treated with full confidentiality. They were not given any credit or other incentives for their participation.

Data Analysis and Results
Profile of Respondents
Table 1 displays the characteristics of the 453 respondents that participated in the survey. As shown in Table 1, the majority of those who responded were female (70%) and 30% were male. The majority of the respondents were students with age ranging from 20-21 years old (68%), 22.5% with age ranging from 22-23 years old, while the remainder (9.5%) with age 24 years old and above. Over half (58.7%) of the respondents were from a diploma program.

Table 1
Summary of Respondents' Profile

Respondents' characteristics	Frequency	Percentage
Gender:		
Male	136	30.0
Female	317	70.0
Age:		
20 – 21	308	68.0
22 – 23	102	22.5
24 and above	43	9.5
Level of program registered:		
Diploma	266	58.7
Bachelor Degree	187	41.3

Correlation Analysis

Table 2 indicates high mean ratings on all clusters of variables. The reliability of the questionnaire as the research instrument was assessed by using Cronbach's alpha coefficient. Cronbach's alpha scores were 0.891 for investment intention (four items), 0.856 for risk taking attitude (five items), 0.843 for product knowledge (four items) and 0.875 for financial self-efficacy (five items). Given these Cronbach's alpha scores, we conclude that the measures used are highly reliable.

In order to investigate the linear relationship between the variables, the study used Pearson's correlation coefficient. As shown in Table 2, investment intention was significantly correlated with risk attitude (r=0.615), product knowledge (r=0.660) and financial self-efficacy (r=0.556). The correlation analysis showed all variables have a positive substantial relationship with other variables.

Table 2
Analysis of Descriptive Statistics, Correlation and Reliability

Variables	N	Mean (SD)	1	2	3	Cronbach Alpha	Item
Intention	453	4.7075 (.87381)	0.615**	0.660**	0.556**	0.891	4
Risk attitude (1)	453	4.1828 (.88656)	1	0.495**	0.663**	0.856	5
Product knowledge (2)	453	4.3602 (.85392)		1	0.528**	0.843	4
Financial self-efficacy (3)	453	4.1430 (.86813)			1	0.875	5

*** correlation is significant at the 0.01 level (2-tailed)*

Multiple Regression Analysis

In the current study, multiple regression analysis was performed in order to evaluate the relationship between the independent variables to justify the dependent variable. Table 3 presents the outcomes of multiple regression analysis performed with investment intention as dependent variable and risk attitude, product knowledge and financial self-efficacy as independent variables.

Table 3
Results of Multiple Regression

	Unstandardised Beta	Standardised Beta	*t* value	*p* value
Constant	0.973		5.968	0.000
Risk attitude	0.355	0.361	9.413	0.000*
Product Knowledge	0.436	0.426	9.809	0.000*
Financial Self-efficacy	0.083	0.083	1.859	0.064
F-value	82.424**			
R^2	0.549			
Adjusted R^2	0.546			

** p<0.01, *p<0.05

In view of the outcomes appearing in Table 3, the adjusted R square is 0.546. It shows that the independent variables were able to explain 54.6% variation in the university students' intention to invest in the stock market. While the remaining 45.4% is explained by other aspects not included in the model. In addition, the significant F-ratio (F = 82.424, p<0.001) suggests that the combination of independent variables significantly predicted the dependent variable.

Multiple regression analysis showed that only two predictors have a significant effect on the university students' intention to invest in a stock market. The variable risk attitude (β=0.361, P<0.05) was seen to be significantly positive with university students' intention to invest in the stock market, thus H1 is supported. Therefore, this suggests that risk taking behavior is an important factor in predicting the university students' intention to invest in the Malaysian stock market. Our finding supports previous findings in the literature (Shehata et al., 202; and Vuk et al., 2017). The results also reveal that product knowledge (β=0.426, P<0.05) has a significant positive relationship with university students' investment intention. This finding is in line with study done by (Elfahmi et al., 2020; Njuguna et al., 2016; Osman et al., 2019; Sadiq and Khan, 2018; Shehata et al., 2021; Yousof et al., 2019). Therefore, H2 is also supported. In addition, between the two significant factors, product knowledge is having the most impact (0.426) upon the university students' intention to invest in the Malaysian stock market.

The current study found that financial self-efficacy (β=0.083, P>0.05) has an insignificant relationship with university students' intention to invest in a stock market. Thus, H3 is not supported. This finding was in contradiction with Asandimitra and Kautsar (2019) and Farrell et al. (2016) who found that financial self-efficacy as a significant predictor variable to financial management behaviour. However, it was consistent with findings of Sondari and Sudarsono (2015).

Table 4
Multicollinearity Results

Variable	Tolerance	VIF
Risk attitude	0.684	1.463
Product knowledge	0.531	1.883
Financial self-efficacy	0.508	1.970

In addition, a multicollinearity test was conducted since correlation analysis results show some extent of correlation between independent variables. However, there was no multicollinearity problem among predictor variables as shown in Table 4. The value of all Variance Inflationary Factor (VIF) is less than 10 and the tolerance values are greater than 0.1 for all variables (Hair et al., 1998).

Conclusion
This study aims to empirically investigate the influence of three independent variables namely; risk attitude, product knowledge and financial self-efficacy on university students' intention to invest in the Malaysian stock market. The results reveal that all variables have a positive relationship with the dependent variable. However, only two independent variables are; risk attitude and product knowledge that contribute significantly in determining the university students investment intention in a stock market. Between the two significant factors, product knowledge is the strongest determinant.

As young prospective investors, university students are perceived to be competitive, willing to take on more financial risk and are possibly aware and understand that although investment in a stock market is risky it would give them high returns (Carducci and Wong, 1998). It is also fundamental to note that product knowledge is very useful in predicting the university students' intention to invest in the Malaysian stock market. Therefore, the study concluded that if individuals' knowledge about stock investment and their perception of investment risk can be enhanced and promoted by related organisations, they are likely to participate in stock market investment in the future.

While these findings add to a growing body of literature on individuals' investment intention, there are several limitations which can be improved for future research. First, the sample and scope of this study was very restricted thus we need to exercise caution when generalising our findings. Future study should include other universities in Malaysia as well to validate the proposed findings. Secondly, the data was collected from students who have formal financial education. Thus, future research could include students from other faculties or other groups of population who have no financial literacy exposure. Thirdly, there were only three variables used to assess the investment intention of university students. Therefore, future studies on the current topic should include additional variables like personality characteristics and extend the theory of planned behavior in order to make more inferences about individuals' intention to participate in stock market investment. Lastly, this study used cross-sectional data and future studies should conduct a longitudinal approach on this topic. Thus it would be interesting whether or not the new findings can identify changes over time and provide insight into causality.

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