Factors Affecting Decisions of Investment Channel of Millennials in Vietnam

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Abstract
The research group conducts this study to advise investors to make informed decisions and recommend attracting investment for investment channels. The Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh (2003) was utilized and refined in this study to provide a more well-rounded explanation concerning variables influencing Millennials' investment channel decisions in Vietnam. Applied simple random sampling method, the surveys were conducted in two ways: offline approach at households and online through social media and distributed 575 questionnaires with 415 deemed qualified including people in the age group from 25 to 40. The results show a clear correlation between almost all independent and dependent variables (Factors affect Decision and Decision to invest). In which, 4 out of 5 independent factors are significant and positively impact the dependent variable.
Keywords: UTAUT; investment channel; Millennials; investment decision

1. INTRODUCTION

In recent years, the trend of investing in fundamental and financial investment has become more prominent, with the number of new investors continuously increasing. According to Bloomberg, primarily since the Covid-19 pandemic, a wave of individual investors has emerged globally. Along with the popularity of online investment applications, many people are looking for investment opportunities with the desire to make up their income during a time of social distancing. Not only was the trend at that time, up to now, but the investment wave has also remained strong, especially in Asian countries.

With the development and perfection of the financial market over the past 20 years, Vietnam is witnessing an exciting explosion of investment channels. According to the Vietnam Securities Depository Center, as of February 28, 2022, the number of domestic trading accounts was 4,676,099 accounts, of which individual investors accounted for 99.7%, an increase of nearly 1.8 million accounts compared to the previous year in the same period. Besides, the volume of registered securities by the end of 2021 also increased by 14.18% compared to the previous year (SSC, 2022). Real estate has also recorded an intense excitement in the market in the last few years, along with these investment channels. Although real estate prices in 2021 have increased, this market's expectation is still high because it is correlated with inflation and the quality of infrastructure (Fiingroup Invest Summit: Vietnam Investment Outlook, 2022). Besides, in recent months, gold has been a long-term investment channel and attracts investors to employ the funds for a period to enhance their wealth due to the exciting fluctuations in the market. In addition, although it is still a relatively new investment channel in Vietnam, commodities also show remarkable potential when crude oil or agricultural products are prevalent in the world market. Commodities will remain an essential economic component (Mercer, 2020).

However, it is difficult for individual investors to perform well in volatile financial markets due to factors like fluctuations in the international business environment (Cho, 2019). Vietnam's investment market has not been fully exploited yet. However, it has also witnessed a strong development compared to other Asian countries with the precise role of individual investors, leaving much room for development. Price movements seem unpredictable over different periods, and understanding individual investors' behavior and behavioral factors influencing their

investment decisions are minimal (Hieu et al., 2020). Hence it becomes imperative to analyze individual investors' decisions to choose investment channels. However, this topic still has many gaps to exploit when few studies in the world and Vietnam are going into the decision-making of investment channels. Although related studies are valuable, there is very little information on this topic in the current context when the world economy and Vietnam have undergone many changes since the Covid-19 pandemic. Specifically, this study focuses on the decisions of Millennial generation, accounting for 47% of the population and the majority of investors in Vietnam.

For these reasons, our work aims to examine factors that affect the decision of investment channel of Millennials in Vietnam. Then, our goal is to provide advice for investors to make informed decisions and make recommendations to attract investment for investment channels.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK
2.1. Unified Theory of Acceptance and Use of Technology (UTAUT)
Unified Theory of Acceptance and Use of Technology, which was first introduced by Venkatesh et al. (2003), is a theoretical model combining eight theories: TRA (Theory of Reasoned Behavior), TAM (Technology Acceptance Model), MM (Motivation Model), TRP (Theory of Planned Behavior), C-TAM-TPB (Combined TAM and TPB Model), MPCU (Model of PC Utilization), IDT (Innovation Diffusion Theory) and SCT (Social Cognitive Theory). To be specific, the UTAUT theory is used to explain user perception and acceptable behavior. In UTAUT, Venkatesh has four core determinants of intention and usage: performance expectancy, effort expectancy, facilitating conditions, and social influence. Although Venkatesh et al. proposed age, gender, experience, and voluntariness of use as moderators, quite a few researchers have replaced them with other variables or not applied them in their research (Sun. W et al., 2019). In general, UTAUT provides 70% explanatory power for users' acceptance of technology and 50% for user behavior, which is about 20 - 30% higher than TAM (Venkatesh et al., 2012).

Therefore, UTAUT is increasingly used in many studies of user behavior. In particular, behavior in the field of investment is no exception. For example, Tai & Ku (2013) said that UTAUT offers the most comprehensive model currently available to researchers in this space, and it serves as a robust basis for identifying the determinants of stock investors' intention to use mobile stock trading. Bongju Cho et al. (2019) used UTAUT to analyze factors affecting financial investors' acceptance of Robo advisors. In his research, "trust" and "perceived risk" were added to UTAUT, and age and gender were control variables. His study contributes to the vitalization of the Robo advisory market and the popularization of investment advisory services. Besides, in the study of cryptocurrency investment, Swati Gupta et al. (2020) also applied UTAUT to explain the main intentions behind this phenomenon, despite its volatile nature and no regulatory framework.

2.2. Investment Channel Choice Decision
In recent years, investing became very popular and received millions of new individual investors every year, especially the Millennial generation with stable financial resources to participate in working-age. With various investment channels, it is wise to clarify investment objectives and clearly understand investment channels to choose where to gain profit. To be successful in owning the market, investors must face more difficulties and risks to make solid and rational decisions (Nguyen & Nguyen, 2020). Although there have been some studies on investment behavior, choosing an investment channel is a complex issue, with many internal and external factors affecting Millennials' buying decisions.

Investment channel choice is to use money at one point in time with the expectation of economic profit at future times. Therefore, today's investment channel decisions make follow-on investments possible in this channel in the future.

3. HYPOTHESIS DEVELOPMENT AND RESEARCH MODEL
3.1. Hypothesis Development
Performance expectancy
Venkatesh et al. (2003) defined *performance expectancy* as "the degree to which an individual believes that using the system will help users to attain gains in job performance." Performance expectancy is stated to be developed through the aggregation of five performance-related constructs: perceived usefulness, extrinsic motivation, job-fit, relative advantage, and outcome expectations (Tai & Ku, 2013). Performance expectancy is proved to have a positive impact on behavioral intention. Arias-Oliva et al. (2019) have considered performance expectancy as one of the factors positively impacting the behavior intention of an individual to use digital currency. Meanwhile, Novendra (2017) indicated a practical impact of expectation on performance while carrying on particular transactions in cryptocurrency. Thus, the above research posits the following hypothesis:

H1: "Performance expectancy" of investment channels has a positive impact on decisions to choose investment channel

Effort expectancy

Venkatesh et al. (2003) described effort expectancy as the level of the extent to the emotion of individuals while learning to use a particular information system. Previous studies have primarily found that effort expectancy significantly impacts behavior intention to different activities. Arias-Oliva et al. (2019) concluded that effort expectancy positively impacted the intention of using plastic money. Tai & Ku (2013) stated that stock investors find it comfortable to learn to use mobile stock trading and not require significant effort, and effort expectancy plays a vital role in increasing the number of stock investors. Therefore, the bellow hypothesis is illustrated:

H2: "Effort expectancy" of investment channels has a positive impact on decisions to choose investment channel

Social influence

The research team supposes an interaction between social influence and investment channel selection behavior. Venkatesh et al. (2003) define social influence as the degree to which individuals perceive that their peers expect them to use a particular information system. Social influence impacts individual behavior through three mechanisms: compliance, internalization, and identification (Venkatesh and Davis, 2000; Warshaw, 1980). Several researches pointed out the significant effects of social influence on individual intends. Chow et al. (2019) argue that people seek advice before using any product or service. Cialdini and Trost (1998) argue that influencing society is one way to bring positive change to an individual that can lead to economic development. From the above evidence, our research group formally hypothesize:

H3: "Social influence" of investment channel has a positive impact on decisions to choose investment channel

Perceived Risk

N., & Altmann, J. (2015) defined perceived *risk* as "the combined effect of determinants that can be considered a barrier to system implementation" and its use as a mediator. Financial risk is considered to be the most influential factor in financial decision-making, therefore Sun. W et al. (2019) define financial risk as to the consideration by institutional investors of how investment decisions bring about the perception of insecurity or the possibility of currency loss. Perceived risk is perceived as an adverse outcome related to the uncertainty caused by the use of specific technologies or services. Since these technologies mainly deal with financial assets, users need to provide sensitive personal information. Personal information can lead to cyber-attacks and performance risk, currency risk, social risk, time risk, privacy risk, security risk, technology risk, and institutional regulatory risk. Those risks are highlighted to have adverse effects on the investment decision. Therefore, the hypothesis is:

H4: "Perceived risk" of investment channels has harmed decisions to choose investment channels.

Facilitating Conditions

Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system (Venkatesh et al., 2003). Likewise, Wei et al. (2019) stated that facilitating conditions represent the conceptualized knowledge, resources, and opportunities to perform a specific behavior and refers to perceptions of the resources and support available to perform a behavior. An investment activity would be prevented by lacking financial data infrastructure, fast internet connectivity, information system, and software. Additionally, several studies specified the advantageous effects of the intention to invest in different channels, for instance, Bitcoin (Gunawan and Novendra, 2017) cryptocurrency (Chow et al., 2019). Therefore, the hypothesis is proposed:

H5: "Facilitating Conditions" of investment channels has a positive impact on decisions to choose investment channel

3.2. Research Model

In the original study, the research model used was developed according to the Unified Theory of Acceptance and Use of Technology (UTAUT) Model (Venkatesh et al., 2003) and the Theory of Reasoned Action (Fishbein and Ajzen, 1975). The final proposed conceptual framework consisted of five independent variables: Performance Expectancy, Effort Expectancy, Perceived Risk, Social Influence, and Facilitating Conditions. These hypotheses were used to examine the impact on a dependent variable, Intention to choose an investment channel. Similar to the original study, this article also includes control variables: income, demographics (Gender), and Investment objective. However, in this research model, a new variable, "experience," is created to examine and represent Vietnam's investor behavior. Five independent and defined variables are constructed to examine their effects on two dependent variables, Attitude towards Use and Intention to Use.
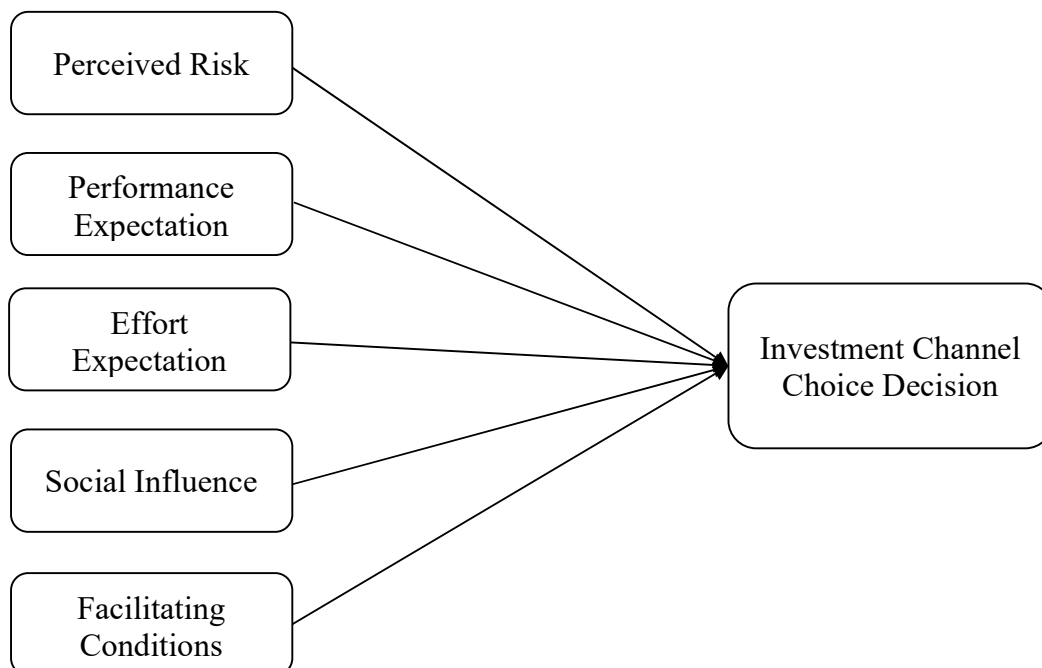
Figure 1: Expected research model

This study is a conceptual replication of the work of Venkatesh et al., 2003, in which the research group modified the phrasing of the original survey items and a newly found component to assess investors' decisions while choosing investment channels in Vietnam, as well as References from many questionnaires containing control variables of other research. To determine if the variables included in the original study are acceptable in the context of Vietnam, the research team used a quantitative survey approach, especially an in-depth interview in the form of a questionnaire with customers who have experience in investing activities. This study applied a five-point Likert scale ranging from "Strongly Disagree = 1" to "Strongly Agree = 5". This study was conducted in three different regions of Vietnam. Applied simple random sampling method, the surveys were conducted in two ways: offline approach at households and online through social media. The study group distributed 575 questionnaires, 415 deemed qualified and following the initial standards. Among 415 respondents, the female gender accounts for 65.9%, and the male holds 34.2%, which is equivalent to 316 women and 164 men, respectively. The following section presents all of the information on the regarded qualitative method.

4. RESULTS AND ANALYSIS

Firstly, the authors use Cronbach's Alpha to test the reliability of 6 factors, including five independent factors and one dependent factor with 34 items in total. A factor is regarded as reliable if its Cronbach Alpha coefficient is not less than 0.6, and the Corrected Item - Total Correlation is not less than 0,3. As shown in Table 1, all factors meet the requirement mentioned and are put in a validity test by Exploratory factor analysis (EFA) in the next step. We used the method Principal Components and Varimax rotation in two separated EFA analyses. As our research sample size is 416, an item is retained if its loading factors are not less than 0,3 (Hair et al., 2014) and if it loads above 0.3 with more than 1 factor. In the analysis for five independent factors, five items were excluded because of their loading with more than one group. No item was removed in the analysis for the dependent factor. The result of Cronbach's Alpha and EFA analysis is described in Table 1.

Factors Code	Factor's Name	Cronbach's Alpha	Number of observed items (EFA)	
			Before	After
Independent variables				
PE	Performance Expectancy	0.852	6	5
EE	Effort Expectancy	0.803	5	4
SI	Social Influence	0.856	7	5
FC	Facilitating Conditions	0.828	5	4
PR	Perceived Risk	0.871	6	6
Dependent variables				
ID	Investment Decision	0.847	5	5

The authors then ran a regression model to test the hypothesis to analyze the impact of 5 independent factors on Investment Decision, the dependent factor. The result of the model is displayed in table 2. With the significance of 5%, it can be seen that 4 out of 5 independent factors are significant, except the factor Perceived Risk (PR), which has its Sig. Above 0.05. All of these four factors have a positive impact on the dependent variable. More particularly, Facilitating Conditions (FC) seems to have the most substantial impact with a Standardized coefficient of Beta at 0.499. Social Influence (SI) affects Investment Decision the least (B=0.116). Besides, the Adjusted R Square coefficient is 0,545, which means our regression model can explain 54,5 percent of the data set.

The regression model that our group achieved is shown as follow:

ID = 0.449 FC + 0.250 PE + 0.122 EE + 0.116 SI

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	B			Tolerance	VIF
1	(Constant)	0.272	0.178		1.530	0.127		
	PE	0.286	0.048	0.250	5.906	0.000	0.613	1.631
	EE	0.125	0.044	0.122	2.817	0.005	0.583	1.716
	SI	0.106	0.039	0.116	2.728	0.007	0.612	1.633
	PR	-0.050	0.033	-0.056	-1.543	0.124	0.613	1.189
	FC	0.469	0.042	0.449	11.040	0.000	0.663	1.509
Dependent variable: Investment Channel Choice Decision (ID)								

Research results show that expected efficiency, expected effort, social influence, favorable conditions have a positive impact, and it means that they will have an increased intention to choose a channel to invest in. When the expected efficiency, strong social influence, and social influence increase, this is similar to the study of Cho (2019), and at the same time, the more favorable conditions increase, the higher the intention to choose the channel for investment increases. Meanwhile, the risk perception is opposite of the above variables; that is, the higher the risk perception, the lower the intention to choose the investment channel, and vice versa, the lower the risk perception, the lower the intention to choose the investment channel. Investment increases is also found in the study of Bongju Cho (2019). Research results also show that intention has a positive impact on investment channel selection behavior.

5. DISCUSSION
Based on the UTAUT model, this study aims to determine the factors affecting the intention to choose investment

channels of Millennials in Vietnam and study the influence of 5 independent variables on expected efficiency, expected effort, social influence, favorable conditions, risk perception, and from intention to investment channel selection behavior. After conducting the test, the results show that these five independent variables affect the intention to choose investment channels; the two most influential variables are favorable conditions and expected efficiency. Thus, favorable conditions are a distinguishing factor affecting the intention to choose investment channels of the Millennials, and the expected efficiency has a substantial impact on the intention to choose investment channels. From that, it can be seen that if they have good favorable conditions and high expected efficiency, they will intend to choose an investment channel. With this result, the group hopes to bring new contributions to the research topic on investment channel selection behavior.

6. LIMITATIONS AND FUTHER RESEARCH DIRECTIONS

The limitation of this study is in the sample while using data from different provinces within the territory of Vietnam, including people in the age group of 25 to 40 years old, with diverse occupations and income to choose investment channels. However, the study sample may not meet the standards for representativeness and generality because it was chosen using the convenience sampling approach.

The following prerequisites are preferred for further study on this topic. Firstly, it is necessary to have further studies to continue developing and perfecting the scales of factors affecting choosing investment channels in Vietnam. Second, the scope of the study needs to be expanded due to the wide-range and complicated geography of Vietnam, such as studying different demographic groups and ethics groups, in future research. Third, the representativeness and generalizability of the new research's results may be represented through a more scientific sample selection method while selecting and analyzing the sample.

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