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FACTORS AFFECTING THE VOLUNTARY SOCIAL INSURANCE PARTICIPATION INTENTION: THE CASE OF SMALL TRADERS IN HO CHI MINH CITY

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Abstract. This study aims to evaluate the factors affecting voluntary social insurance participation of small traders. The proposed research model was based on merging Theory of Planned behavior (TPB) and Technology acceptance model (TAM) to examine how to form the participating voluntary social insurance intentions. The research sample was taken from 322 people who are small traders in Ho Chi Minh City. The results of data analysis (CB-SEM technique) show that attitude is an important factor affecting intention. Other factors in TAM and TPB also significantly influence voluntary social insurance participation intention. In the conclusion of this study, implications for voluntary social insurance policies were presented.

Keywords: Ho Chi Minh City, intention, insurance, SEM, TAM, TPB

1 Introduction

Social insurance is a fundamental social security policy in Vietnam. In the social security system, social insurance increasingly has a crucial role in government policies on human protection and development and social justice [1].

According to statistics from Nhan Dan newspaper, by the end of 2020, the total number of people participating in voluntary social insurance in Viet Nam had only reached about 1,013,000 people. It is much less than 35 million people who worked in the informal sector [2]. Thus, although voluntary social insurance has an important role, the number of participating people is low compared to the potential. Thus, finding the cause of this issue is a target of prime importance.

Many prior studies researched the factors that influence purchasing insurance intention. For instance, based on The Theory of Planned behavior, Mamun et al. found the effect of perceived usefulness, attitude, subjective norms, and perceived behavioral control on purchasing health insurance [3]. Alfiero et al. suggested that attitude, awareness, subjective norms, risk perception, and trust have a significant positive influence on consumers' intentions to purchase black box technology auto insurance [4]. Liu et al. indicated that insurance purchasing intention was strongly influenced by attitudes and subjective norms, perceived behavioral control [5]. Most

of the previously proposed research models are based on TPB. However, little study has proposed the model by integrating Theory of planned behavior (TPB) and Technology acceptance model (TAM) to discover the factors that impact purchasing insurance intention.

In the context of Vietnam, the social insurance system is increasingly ensuring publicity and transparency, and the application of information technology in the construction and development of the social insurance system is of great interest to the government. People are facilitated to access, register, and enjoy social insurance benefits. In addition, in the study of Dung and Sinh [6], the authors use both the TPB and TAM to determine the influencing factors that impact voluntary social insurance participation intention. The study results showed that the core variables in TPB and TAM had a positive and statistically significant impact on the intention to participate in voluntary social insurance.

On the other hand, participating in voluntary insurance is also interesting to researchers, however, no research investigates the effect of factors on participating voluntarily in social insurance in Ho Chi Minh city based on the theory of TPB and TAM integration.

Therefore, the purpose of this study investigates the factors affecting the intention to participate in voluntary social insurance of small traders in Ho Chi Minh City to gain a better understanding of participating in voluntary social insurance intention. We chose these research subjects who are small traders in Ho Chi Minh City because there are many small traders here, but no research has been conducted on this subject to investigate. In addition, the small traders have stable income but rarely participate in voluntary social insurance. The proposed model is an integrated framework that uses the technology acceptance model (TAM) [7] and the Theory of planned behavior (TPB) [8].

2 Theoretical framework and research hypotheses

2.1 The Theory of planned behavior (TPB)

TPB is known as an extended version of The Theory of Reasoned Action proposed by Ajzen to predict behavioral intentions without completely placing individual control. Ajzen argued that an individual has the ability to particular behavior if he or she believes that action will lead to specific and valuable results [8]. The central factor in TPB is an individual's intention. Intentions are assumed to capture the motivational factors that influence an individual's behavior. Behavioral intention is a fundamental factor in predicting an individual's actual behavior. Behavioral intentions are expressions of the degree to which a person is effortless and willing to try a behavior and is influenced by attitudes, subjective norms, and perceived behavioral control.

Attitude towards the behavior refers to the degree to which a person has positive or negative reviews or ratings towards the behavior in question. It is defined by the total number of accessible behavioral beliefs that associate behavior with different outcomes and other attributes

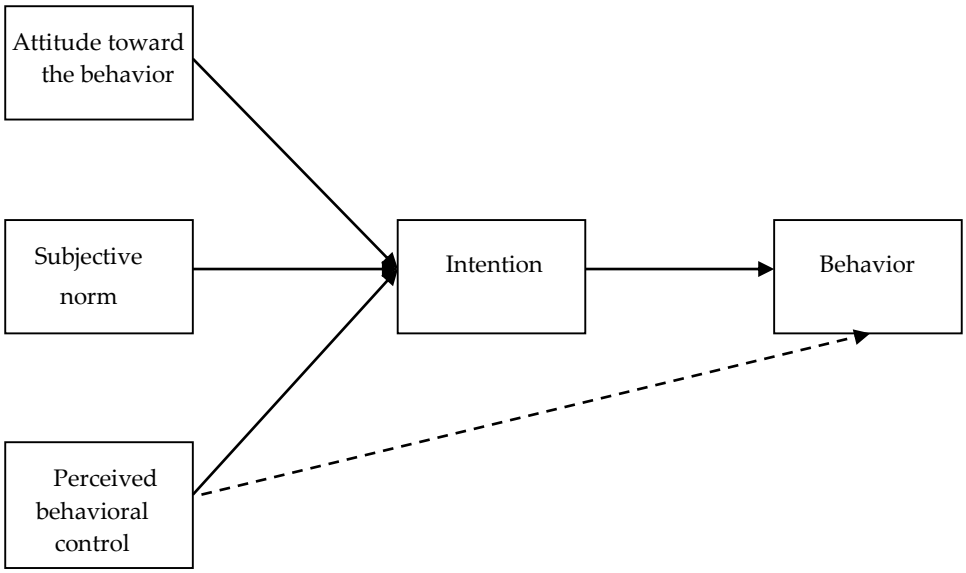

Figure 1. Theory of planned behavior [8]

[8]. Subjective norm refers to perceived social pressure to perform or not to perform a behavior. Subjective norm is defined by the sum of accessible normative beliefs regarding the expectations of significant references. Perceived behavioral control is defined as an individual's perception of how easy or difficult to perform a behavior [8].

2.2 Technology acceptance model (TAM)

TAM was proposed by Davis. Since this theory was introduced, it has been more and more popular in many studies [7]. TAM has been successfully applied by researchers to predict a variety of consumers' intentions and behavior [10].

In the TAM, Davis [11] defined the concept of *perceived usefulness* as the degree to which an individual believes that using a particular system will improve his or her job performance; *Perceived ease of use* is the degree to which an individual believes that using a particular system will require no physical or mental effort. Both Perceived usefulness and Perceived ease of use were found to have a direct influence on behavioral intention.

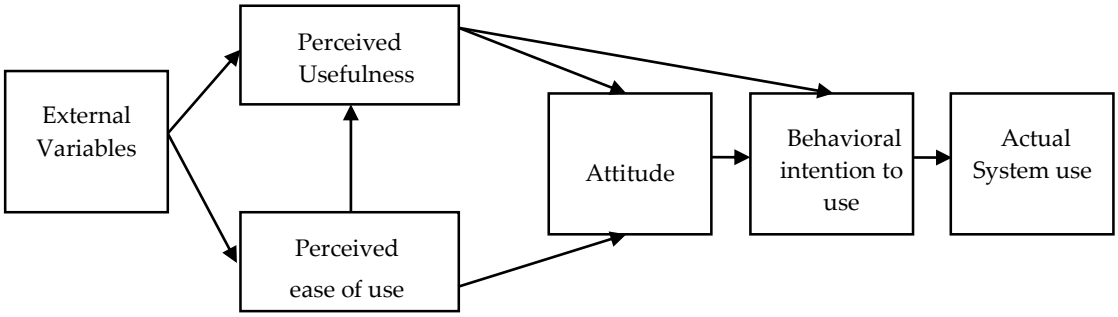

Figure 2. Technology acceptance model

2.3 Research model and hypotheses

The proposed research model is based on the integration of TPB [8] and TAM [7] because of several reasons. Firstly, in the context that Vietnam is strongly implementing e-Government, people are more and more familiar with e-services of government agencies as well as social insurance agencies [12]. Secondly, several related studies showed that extending the TPB model had better predicting insurance participation intention. For example the study of Dung and Sinh [6], the proposed research model showed that the combination of TPB and TAM models has an explanatory power better than the original TPB.

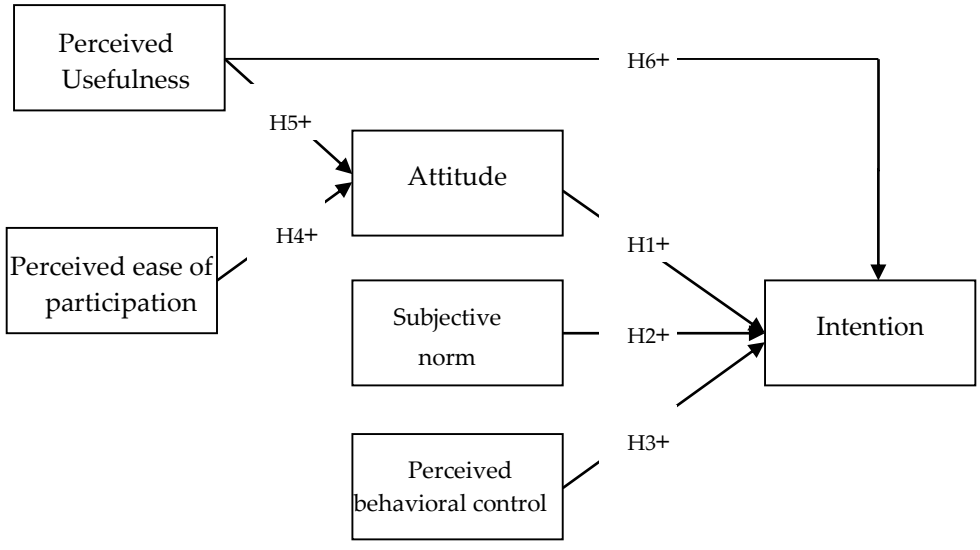

Figure 3. Conceptual model of the study

Voluntary social insurance

According to The Social Insurance Law of Vietnam [13], social insurance is a kind of policy that the government organizes. It has a flexible closing rate, suitable for participants' income. Participants in voluntary social insurance are supported by the government with social insurance premiums and enjoy prescribed benefits such as sickness, retirement, and death. Vietnamese citizens aged 15 years or older who are not subject to compulsory social insurance have the right to participate subject to voluntary social insurance contributions. The monthly payment is equal to 22% of the monthly income of the participant [14].

Participating in voluntary social insurance intention (BI)

Ajzen suggested that intention is one of the central factors in predicting an individual's behavior. In order words, the intention is an individual readiness for cognitive action, which is the most direct antecedent of corresponding behavior [8]. Thus, in this paper, participating in voluntary social insurance intention is known as the individual's intention to perform given participation in voluntary social insurance behavior.

Attitude toward participating in voluntary social insurance (AT)

Attitude is defined as the extent to which an individual makes a positive and negative evaluation towards performing the behavior [8]. In the present study, attitude is known as the extent to which a person makes a positive and negative evaluation of participating in voluntary social insurance. Ajzen suggested that attitude is one of the crucial psychological factors that can predict behavior intention. Ajzen [8] and David [7] indicated that attitude toward behavior has a relevant effect on behavior intention. Additionally, several prior studies showed that attitude impacts significantly purchasing insurance intention [15, 3]. Thus, we posit the following hypotheses:

H1: Attitude has a significant positive impact on voluntary social insurance participation intention.

Subjective norm (SN)

According to Ajzen, subjective norm (SN) refers to the perceived social pressure to the individual behavior. Ajzen suggested that the SN has an important role in the prediction of behavioral intention [8]. Several previous studies found that SN has a significant and positive impact on purchasing insurance intention [3, 4, 15]. Therefore, we propose the following hypotheses:

H2: Subjective norm has a significant positive impact on voluntary social insurance participation intention.

Perceived behavior control (PBC)

PBC is defined as "the perceived ease or difficulty of performing the behavior" [8]. Ajzen indicated the individual's intention to perform a behavior would be lower due to a lack of access to necessary resources and opportunities for instance cost, time, and others, even if he/she has positive attitudes and social support [8]. Moreover, some studies within the TPB framework have supported the causal relationship between perceived behavior control and purchasing insurance intention [3, 15]. Thus, the following hypotheses are proposed:

H3: Perceived behavior control has a significant positive impact on voluntary social insurance participation intention.

Perceived ease of participation (PEoP)

In TAM, perceived ease of use is a crucial factor that refers to "the degree to which a person believes that using a particular system would be free of effort" [7]. In this study, perceived ease of participation is defined as the degree to which a person believes that he or she participates in voluntary social insurance would be free of effort.

Several related studies have shown that perceived ease of use positively affected customer attitudes [16–18]. Therefore, we propose the following hypotheses:

H4: Perceived ease of participation has a significant positive impact on voluntary social insurance participation attitude.

Perceived usefulness (PU)

Perceived usefulness refers to "the degree to which the individual believes that using a technology would enhance his or her job performance" [7]. In the framework of this study, perceived usefulness refers to a person who believes that participating in voluntary social insurance would enhance the quality of life. Numerous related studies found that perceived usefulness has a significant impact on attitude [16, 17] and behavioral intention [19, 20]. Based on the above review, we proposes the following hypotheses:

H5: Perceived usefulness has a significant positive impact on voluntary social insurance participation attitude.

H6: Perceived usefulness has a significant positive impact on voluntary social insurance participation intention.

3 Materials and research methods

Data collection

To empirically examine the research hypotheses, a survey was conducted on small traders in Ho Chi Minh City, Vietnam. Due to not having a database of working informal sector workers, a convenience sample was used to collect data. We chose Ho Chi Minh City for this study target because this place has many small traders.

The design of the questionnaire includes 28 items based on prior studies. Measurement items for intention (5 items), attitude (5 items), subjective norm (5 items), perceived behavioral control (5 items), and perceived usefulness (5 items) were adapted from [3]. Measure items for Perceived ease of participation (3 items) were adapted from [21] and [7]. All of the items were modified to fit the context of the present study and rated on a five-point Likert scale using strongly disagree to 5 strongly agree. Two focus group interviews was deployed to have useful information for instrument development. Before a formal investigation, a pilot test with 30 participants had been conducted to improve the meanings before the survey was applied.

Data collection was conducted between May to August 2022 through the survey method. The respondents were small traders at different sites in Vietnam's Ho Chi Minh City. All the individual information of responders will be kept private. Respondents had awarded a small gift (approximate value of $0.5) after they completed the questions.

The samples were collected from different groups of respondents who differ in age, gender, education level, income, and marital status to get the representation of the whole small traders. People in the range of 15–60 years was selected data, as according to the rule of Social Insurance Law, people from 15 to 60 years have the right to participate in voluntary social insurance.

In total, we have 430 respondents who are small traders in Ho Chi Minh City. There are 322 valid questionnaires, with a rate of 74.8 percent. Of the respondents, 56.5 percent are male, and 43.5 percent are female. In terms of age groups, 41 percent of people range from 15 to 25 age bracket, 36.6 percent belong to 26–45 years, and 22.4 percent belong to the age bracket of 46–60. In terms of education, 35.4 percent is high school diploma, 55.0 percent is Bachelor's degree, 6.5 percent is Master's degree, and 3.1 percent other. In terms of income, 27.0 percent is under 10 million VND, 46.3 percent is from 10- under 15 million VND, and 26.7 percent is higher than 15 million VND. In terms of marital status, 44.4 percent of respondents are single, and 55.6 percent are married. In terms of voluntary social insurance participation, 37 percent of VSP participants, and 63 percent of non-VSP participants (Table 1).

According to Hair et al. [23], the suitable size for samples is from 300 to 500 when using Structural Equation Modeling (SEM). Thus, 322 samples were satisfied for this study.

Table 1. Demographic characteristics of the sample

Measure	Item	N	Percentage (%)
Gender	Male	182	56.5
	Female	140	43.5
Age	15–25	132	41.0
	26–45	118	36.6
	46–60	72	22.4
Education	High school diploma	114	35.4
	Bachelor degree	177	55.0
	Master degree	21	6.5
	Other	10	3.1
Income	Under 10 million VND	87	27.0
	From 10- under 15 million VND	149	46.3
	Higher than 15 million VND	86	26.7
Marital status	Single	143	44.4
	Married	179	55.6
VSP	Yes	119	37.0
	No	203	63.0
	Total	322	100.0

Note: Voluntary social insurance participation (VSP)

Data analysis

In the current study, Cronbach's alpha reliability analysis and exploratory factor analysis (EFA) were performed to assess the collected data. Next, the structural equation modeling (SEM) with two-stage performed measurement and structural model. First, a confirmatory factor analysis (CFA) was conducted for each construct to evaluate convergent and discriminant validity. Second, we performed the path analysis to test the research hypotheses. This research aims to examine the causal paths in our proposed theoretical model, thus, Structural Equation Modeling was conducted is suitable for data analysis suggested by Hair et al. [23].

4 Results

4.1 Exploratory factor analysis

Before exploratory factor analysis was conducted, Cronbach's alpha was used to assess internal consistency among the items of each construct. The results showed that Cronbach's alpha value exceeded 0.6, which was above the recommended criterion of Hair [23].

Next step, exploratory factor analysis was applied in this research. The analysis results showed that KMO = 0.896 > 0.5, sig. Bartlett's test = 0.000 < 0.05. Thus, the variables in the proposed model were suitable for factor analysis.

The eigenvalues for the six factors ranged from 1.635 to 8.852, which were greater than 1.0. Moreover, the factor loading of each item was higher than 0.5. Total variance extracted equals 67.624%, which means that the six extracted factors explain 67.624% of the variation of the observed data.

Additionally, this study used Harman's single factor test to assess the common method bias. Because following Podsakoff et al. [22], method biases are an issue, which is one of the major sources of measurement error. The unrotated factor captured only 29.202 percent of the variance in the data. Hence, the common method bias is not a concern in this study.

4.2 Measurement model

Before analyzing the structural model, the confirmatory factor analysis was conducted. The measurement model was assessed by composite reliability (CR), average variance extracted (AVE), and Heterotrait-Monotrait ratio of correlations (HTMT) values by AMOS software.

To achieve convergent validity, Hair suggested that factor loadings should be higher than 0.5 [23]. From data in Table 2, we can see that standardized loadings for all items exceeded 0.5. Thus, all constructs met the threshold values recommended by Hair [23].

Table 2. Measurement model results

Measurement scale	Standardized factor loading	Cronbach's alpha
Participating in voluntary social insurance intention		0.937
BI_1, I have a plan to participate in voluntary social insurance	0.868	
BI_2 , I would like to participate in voluntary social insurance	0.882	
BI_3, I expect to participate in voluntary social insurance	0.904	
BI_4, I know the value of voluntary social insurance, and I want to participate	0.858	
BI_5 , I would like to know how a voluntary social insurance plan is better than a savings account or other safety property	0.815	
Attitude toward participating in voluntary social insurance		0.904
AT_1, Voluntary social insurance participation is a good choice	0.783	
AT_2, Voluntary social insurance participation is valuable	0.700	
AT_3, Voluntary social insurance participation is essential	0.912	
AT_4, Voluntary social insurance participation is a good idea	0.876	
AT_5, Voluntary social insurance participation should be compulsory	0.837	
Perceived behavior control		0.903
PBC_1, I have sufficient knowledge to participate in voluntary social insurance	0.749	
PBC_2, I can participate in insurance without any help from anyone	0.843	
PBC_3, I have many resourceful sources about social insurance	0.843	
PBC_4, I can participate in social insurance reasonably well on my own	0.857	
PBC_5, I can handle any difficulties associated with my participation decision	0.756	
Subjective Norms		0.864
SN_1, My family thinks I should participate in voluntary social insurance	0.666	
SN_2, People who influence my decision think that I should participate in voluntary social insurance	0.825	
SN_3, People whose opinions I value think that I should participate in voluntary social insurance	0.765	
SN_4, People who are close to me think that I should participate in voluntary social insurance	0.746	
SN_5, People will like it if I participate in voluntary social insurance	0.751	
Perceived Usefulness		0.941

Measurement scale	Standardized factor loading	Cronbach's alpha
PU_1, Voluntary social insurance participation enables me to ease my future expenses	0.787	
PU_2, Voluntary social insurance participation improves my life benefits	0.878	
PU_3, The voluntary insurance policy will improve my performance in handling my financial needs	0.931	
PU_4, The social insurance scheme will be useful in handling my financial needs when I retired	0.937	
PU_5, The social insurance will enhance my dependent's ability to cope with their financial needs when I retired	0.821	
Perceived ease of participation		0.771
PEoP_1, I believe it is easy to participate in the voluntary social insurance	0.769	
PEoP_2, Procedures for participating in social insurance are clearly	0.763	
PEoP_3, Voluntary social insurance participation has a low mental effort	0.648	

Note: all factor loadings are significant at $p < 0.001$

Table 3. Validity analysis

	CR	AVE	MSV	MaxR(H)	BI	PU	AT	PBC	SN	PEoP
BI	0.937	0.750	0.275	0.940	**0.866**					
PU	0.941	0.762	0.130	0.954	0.147*	**0.873**				
AT	0.914	0.680	0.275	0.929	0.524***	0.195**	**0.825**			
PBC	0.905	0.658	0.178	0.911	0.385***	0.276***	0.275***	**0.811**		
SN	0.866	0.566	0.209	0.873	0.458***	0.360***	0.357***	0.422***	**0.752**	
PEoP	0.772	0.531	0.151	0.781	0.322	0.246	0.316	0.275	0.388	**0.729**

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; Bold diagonals represent the square root of the AVE

According to Hair et al. [24], the composite reliability (CR) values should be greater than the threshold of 0,6. Table 3 shows that the construct reliability ranges from 0.772 to 0.941, exceeding the recommended by Hair et al. [24]. Moreover, the results indicate that all the AVE values of latent variables are higher than 0.5. Thus, all the latent variables are reliable and convergent. Data in Table 3 also shows that the square root of each construct's AVE (bold diagonals) exceeds the correlation between latent variables [25]. In addition, Table 4 shows that HTMT values are less than 0.85 according to recommendations by Henseler [26]. Thus the constructs met evidence of discriminant validity.

In addition, CFA results for the model's goodness-of-fit shows $\chi^2/df = 1.739 < 3$; Comparative fit index (CFI) = 0.961 > 0.9; Incremental fit index (IFI) = 0.962 > 0.9; Tucker- Lewis fit index (TLI) = 0.956 > 0.9; Root mean square error of approximation (RMSEA) = 0.048 < 0.6; PCLOSE = 0.690 > 0.05. The results indicate that the measurement model is suitable [27].

4.3 Structural model

SEM was used to test the research hypotheses. We found that the positive relationship between AT and BI is significant (β = 0.412***). This supported H1. It revealed that people with high attitudes toward voluntary social insurance had increased participation.

As shown in Table 5, it has a significant positive of SN upon BI (β= 0.280***). The effect of PBC on BI was 0.192**. The effect of PEoP on AT was 0.314***, and PU effect on AT was 0.121*. Hence, H2, H3, H4, and H5 were supported. However, H6 was not supported (p>0.05). Overall, the proposed model predicts 35.8 percent of individuals' intention to participate.

Table 4. HTMT analysis

	BI	PU	AT	PBC	SN	PEoP
BI						
PU	0.145					
AT	0.519	0.199				
PBC	0.401	0.284	0.278			
SN	0.468	0.352	0.376	0.446		
PEoP	0.308	0.262	0.307	0.276	0.394	

Table 5. Hypotheses test results

Hypothetical path				Standardized β	S.E.	C.R.	P	Conclusion
H1	BI	<---	AT	0.412	0.070	7.398	***	Supported
H2	BI	<---	SN	0.280	0.089	4.384	***	Supported
H3	BI	<---	PBC	0.192	0.082	3.286	0.001	Supported
H4	AT	<---	PEoP	0.314	0.080	4.577	***	Supported
H5	AT	<---	PU	0.121	0.073	2.046	0.041	Supported
H6	BI	<---	PU	-0.084	0.084	-1.546	0.122	Unsupported
R^2_{AT} = 13,2%								
R^2_{BI} = 35,8%								

Note: * p < 0.05; ** p < 0.01; *** p < 0.001; attitude (AT); Subjective norms (SN); Participating in voluntary social insurance intention (BI); Perceived behavior control (PBC); Perceived ease of participation (PEoP); Perceived usefulness (PU).

5 Discussion and conclusion

This study investigated the factors affecting voluntary social insurance participation. The proposed study model was based on the TPB and TAM integration to examine how to form the participating voluntary social insurance intentions. The findings show that the proposed model is capable of explaining a relatively BI.

The findings of this research indicated that the positive relationship between AT and BI is significant. The results also showed that AT is a fundamental factor in predicting an individual's participation intention. Among the factors, AT is an important mediator between PEoP, PU, and BI. Therefore, maximum AT might increase the willingness of individual voluntary social insurance participation. These results are in line with the prior studies conducted in different regions with similar variables [5, 3, 15, 28].

The result of the study also indicated SN has a direct positive impact on BI ($\beta_{SN->BI} = 0.280^{***}$). This finding is supported by [3, 15]. Additionally, this study found that PBC has also a significant impact to BI ($\beta_{PBC->BI} = 0.192^{**}$). This finding is similar to prior researches [3, 15].

This study found that PU does not have a direct impact on BI ($p>0.05$), however, it has indirect influences on BI through AT ($\beta_{PU->AT} = 0.121^{*}$). Moreover, PeoP has a direct influence on BI ($\beta_{PeoP->BI} = 0.314^{***}$). Thus, both PU and PEoP are crucial factors in the prediction AT. In order words, this result confirms the role of perceived usefulness and perceived ease of use as two critical factors in voluntary social insurance participation attitude.

The study result indicates that PU has not a direct impact on BI ($p > 0.05$). This shows that participating in voluntary social insurance is useful, however, small traders also have not intended to participate. According to the Law on Social Insurance 2014 stipulating that from 2022, the number of years of payment will be increased by 5 years compared to the previous regulations, then the employee will be entitled to the maximum retirement regime. Besides, participating in voluntary social insurance, employees are only entitled to retirement and survivorship benefits, while other policies are not. Therefore, although the perception of voluntary social insurance is useful, there is no statistically significant impact on the voluntary social insurance participation intention of small traders.

The empirical results showed that PEoP, PU, AT, SN, and PBC have a significant effect on voluntary social insurance participation intention. Therefore, the findings will be useful in understanding the individual's behavioral intentions to participate in voluntary social insurance.

The findings implicate that to attract people to participate, the government should continue to promote reform of administrative procedures and increase communication about transmitting useful information about voluntary social insurance, enhancing the benefit of participants. The contribution of this study is the integration of fundamental factors of TBP with the TAM to

investigate predictors of social insurance participation intention. The results show that the proposed model has a good explanation in the context of Vietnam.

6 Limitations and future research

This study has several limitations. First, the results of this research may not apply to other sites, because collection data had been conducted only in Ho Chi Minh City. Second, this study focused only on small traders. Therefore, the results were not probably applied to other informal sector workers. Future studies should focus on clarifying other types of informal workers.

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