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The Role of Personality Traits in UTAUT Model under Online Stocking

Hsing-I Wang
Overseas Chinese Institute of Technology, and National Cheng-Chi University, Taiwan,
E-Mail: hsing@ocit.edu.tw

Heng-Li Yang
National Cheng-Chi University, Taipei, Taiwan,
E-Mail: yanh@nccu.edu.tw

ABSTRACT

The introduction of a new science and technology will fully reflect its value and its potential to create value only when individuals are willing to accept and adopt it in their daily works. The theory of acceptance and use of new technology has been widely discussed for decades and is still attracting scholars to work toward developing a comprehensive model. The reasons are because of various latent variables that might affect the model, and moreover, the way how the variables interfere the model has not reached an agreement. This research combines the theory of personality traits with the unified theory of acceptance and use of technology. The purposes are to examine the roles that personality traits play in UTAUT model under the context of online stocking.

Keywords: Personality Traits, Big-Five Model, UTAUT Model, Online Stocking

INTRODUCTION

The introduction of a new science and technology will fully reflect its value and its potential to create value only when individuals are willing to accept and adopt it in their daily works. After the Technology Acceptance Model (TAM) was presented, the model was either refined or modified. In addition, several other similar models and theories were established to explain why an individual would adapt himself to a new technology, and in turn, what actions an organization should take to facilitate the use of that technology. Literature surveys indicated that in the efforts of understanding the drivers of acceptance, researcher sometimes needed to choose a favored model from many competing models as well as appropriate variables across models. Venkatesh et al. (2003) then proposed the Unified Theory of Acceptance and Use of Technology (UTAUT) that include eight different models in order to get an integrated view of user acceptance. Nevertheless, it is our belief that some important constructs are still missing in the context of online stocking. Among those constructs that could be added to predict the intention, this research focuses on personality traits. Ajzen had taken the relationships between personality traits, behavior and attitude into consideration while he was developing the Theory of Reasoned Action (TRA) theory in 1988, and proposed that personality traits must have some indirect

influence on a person's behavior (Ajzen, 1988). Other literature surveys have also identified the close relationships between human behavior and personality traits. Nevertheless, personality traits have never been explicitly examined in TAM or any other related mode. This research aims at clarifying the affects that personality traits may convey.

Online stocking was chosen to be the area to study with due to the following reasons. (1) The rise of the internet has lifted the great waves in the industry. For investors, the demands of faster, more convenient, more elastic investment channel, and the immediate accurate information are magnified as well. However, the populations of using online stocking have not increased to an edge as expected. The reasons of hindering the acceptance of using the new technology are worth being delved. (2) Issues of online stocking are similar to online shopping. It is suggested in this paper that research results on online consuming can be borrowed to study online stocking. (3) Although all transactions are also on the Internet, online stocking has more risks comparing to online shopping. It is noticed that nearly no researches that have addressed personality traits versus intentions under consciousness of risk.

There are two objectives in this research. First, we hope to examine the role personality traits in UTAUT model: would they be external variables or moderators? Second, it is expected that valuable insights would be obtained from this research, and in turn, to provide financial companies appropriate suggestions to make marketing strategies. The Big Five Factors is adopted in this research to explain different types of personalities. The Big Five Factors had been applied to various domains after it was formed (McCrae and John, 1992). Research subjects include the relationship of personality traits and job satisfaction, personality traits and the possibility of suffering a certain kind of disease, personality traits and exercise training program, etc. This research focuses on personality traits and the acceptance and use of a new technology in financial area. In the following sections, this paper first introduces the concept of the Big Five Factors and the UTAUT model. Two research models will present after introducing the methodology. The results of data analysis are interpreted and discussed. Conclusions are then given in the last section.

LITERATRUE SURVEYS

The Big Five Factors

Personality determines the unique thinking and behaving patterns of an individual (Allport, 1961). Traits, however, are the degree of this emerged uniqueness when an individual is observed from different angles or dimensions. Most psychologists also agree that human behaviors relate to personal factors as well as the context (Allport, 1961, Endler & Magnusson, 1976). Eysenc (1991) proposed that personality traits contain five principles, namely replicability, comprehensiveness, external correlates, source traits and multiple levels. The five principles were then recognized as Five Factor Model (FFM) or Big Five Factors. FFM categorized personality traits into Extraversion (E), Conscientiousness (C), Agreeableness (A), Neuroticism (N) and Openness (O). High Extraversion persons are mostly positive, optimistic, are willing to take risks, like to be around crowds, have more social activities, and tend to look for amazement. Conscientious persons are more authoritative, meticulous, responsible, and tough. Persons, who are more agreeable, are cordial, enthusiastic, will sympathize with or help others. High Nervousness persons are relatively unstable, easily to be frightened, rash, depressive and angry, etc. Theoretically, the person of the nervousness type is apt to exercise a certain

behavior under the social pressure. The style of openness refers to the abilities to accept various experiences, cultures, always express one's curiosity and has much more imagination.

While TRA theory was under developing, Ajzen thought that the personality traits should only be the external parameters. Together with other external variables, they would change a person's faith and motive, and then influence the attitude and subjective norm (Ajzen, 1988). TRA explained the personal behavior that is always volitional, however, from time to time and under some certain circumstances, behaviors are considered more involuntary. Therefore, Ajzen proposed TBP model and added the new construct of perceived behavioral control (Ajzen, 1991). Perceived behavioral control was further divided into internal and external control. Internal control refers to an individual's self-perception to the resources that he owns. These perceptions could be heavily influenced by one's personality. Courneya et al. (1999) also added personality traits in TPB model and tried to prove that personality traits would affect behavior intentions through attitude, subjective norm and perceived behavioral control. However, their research model failed to explain the effects of personality traits on intentions completely. Moreover, Rhodes et al. (2002) considered personality as moderators in their research.

Online Stocking

Online stocking has been recognized as an important mean to conduct investment under the trend of globalization economy. Online stocking is simple and convenient, its transaction is fast, its cost is relatively low, and it can offer other value-added financial information services. For investors, online stocking offers favorable discount of the service charge; has much more privacy and security; provides much more flexibilities to manage the time, etc. The dealers in securities have tried to offer multiple favorable services to potential customers. However, by the end of 2002, the population of online stocking was only 15 % of the total security investors in Taiwan (Find, 2002). Jeng (2002) found that investors perceived online stocking as one of the activities on the Internet. Online activities are considered boring, lacking of interactions with people, less trust and more risks. For those who are active on consuming online are mostly aggressive, adventuresome, enjoying competition and are always fascinated by newish (Swinyard & Smith, 2003). In contrast, people who are more conservative or conscientious, tend to be more prudent before they take actions. Still, the situation might be able to be changed if businesses would offer a new design or a new way of doing business (Jahng et al., 2002).

UTAUT

Basically, investments take a lot of risks. Whether investors are willing to adopt online stocking depends on the degrees of their acceptances of the new technology. TAM model believes that usefulness and easy to use are the two determinants for an individual to accept a new technology. Longitudinal researches observed the same subjects from various dimensions and developed several different models. Venkatesh and Davis (2000) believed that factors such as personal image and the relevance of jobs would affect the perceived usefulness; they proposed a revised model TAM2 to include a new construct named social influence. Thompson, Higgins and Howell (1991) added two more variables including the long-term effects of new technology and facilitating conditions while exploring users' behaviors on using PC. The main purposes of these researches were trying to assist companies to understand how consumers and employees would react to the introduction of a new technology. Nevertheless, previous researches were

mostly limited to some certain dimensions or constructs. As a result, companies were not able to get an entire view of the reasons why customers or employees resisted the acceptance of a new technology. Venkatesh et al. (2003) therefore examined eight prominent models and proposed the integrated one. UTAUT consisted of four constructs that were extracted from the eight models and would definitely affect the intention of behavior. The four constructs are performance expectancy, efforts expectancy, social influence, and facilitation conditions.

The relationships between personality traits and some of the four constructs have been separately discussed in the previous researches. For instance, researches concerning personality traits on performances found that the two variables are positively related (Connolly & Viswesvaran, 2000, DeNeve & Cooper, 1998, Judge et al., 2002). Gellatly (1996) examined the impact of a single trait "Conscientiousness" on job performance and found that performance expectancy was the intermediary between personality trait and job performance. The research findings suggested that conscientious persons believe that they can perform superior in their jobs and in turn, they set higher expectancy and work harder to achieve that target. The intermediary relationship did not, however, emerge from Barrick and Mount's (1991) research. The research assumed that high nervousness persons were easily to be eliminated from their positions and hence were not able to give enough time to observe the impacts of their characteristics on job performances. Moreover, the applications of FFM to medical researches also proved that once personality traits were classified appropriately, they could be used to predict human behaviors (Courneya et al., 2002. Hough, 1992).These facts add more values to this research to explore the role of personality traits in UTAUT.

The Combination of Personality Traits and UTAUT

Moderators have got great attentions in MIS field. And as the interests on moderated relationship increased, researchers also found that: context matters in MIS researches (Barrick & Mount, 1991). Previous researches have shown the latent relationship between personality traits and the acceptance of new technology, only that it has been never included explicitly in the model. How the personality traits would affect the intention to accept a new technology has not reached final conclusions. As indicated before in this paper that human behaviors relate to personal factors and the context, this research focuses mainly on the context of online stocking, exploring the role that personality traits play on UTAUT model: indirect or intervening.

METHOD AND DATA ANALYSES

Research Model and Hypotheses

Based on the findings of literature surveys, this research has the following observations. (1)Since personality traits may dominate a person's behavior, the effects of personality traits on the intention of behavior will be considered in this research context. (2)Some researches indicated that personality traits influenced the intention of behavior through the intervening variables such as performance expectancy, social influences and facilitating conditions. In contrast, some other empirical studies also identified the moderating effects of personality traits on the intention of behavior. In other words, personality traits may enhance or weaken an individual's willingness or attitude toward behavior. However, some researches were still not able to validate any relationship between the constructs. Moreover, effort expectancy was never discussed in the previous researches. (3) Online stocking is full of uncertain risks. Learning how

personality traits affect the behavior may benefit both investors and financial businesses. Performance expectancy, effort expectancy, social influence and facilitating condition are considered important constructs under the context of online stocking in this research. Due to the effects of personality traits on the intention of behavior are still pending, this paper proposes two research models in Figures 1 and 2.

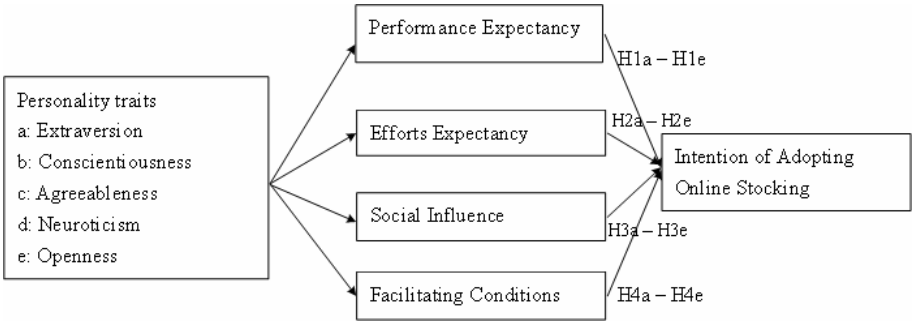

Figure 1 Research model 1

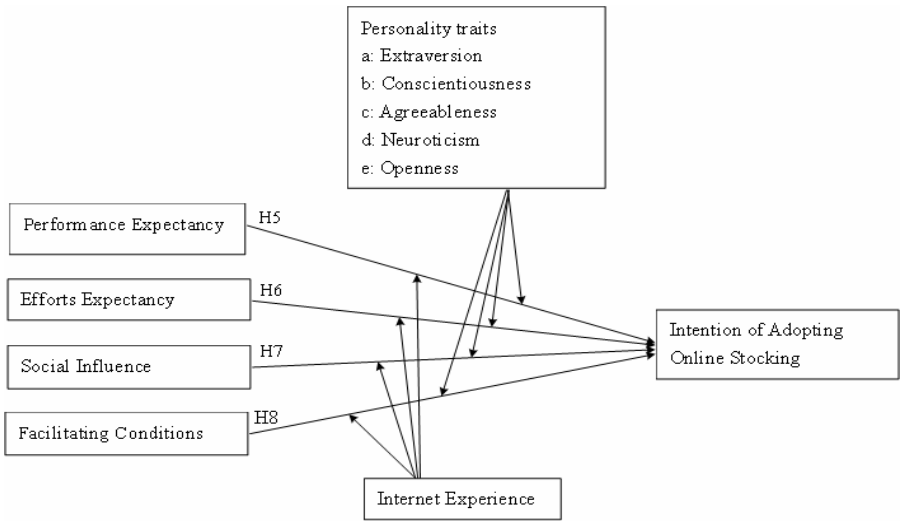

Figure 2 Research model 2

Model 1 is hypothesized that personality traits will affect the intention of adopting online stocking indirectly through performance expectancy, effort expectancy, social influence as well as facilitating conditions. Model 2, however, is hypothesized that personality traits and the internet experience will moderate the effects of performance expectancy, effort expectancy, social influence, facilitating conditions on the intention of adopting online stocking. Detail descriptions of hypotheses are given in table 1. In order to focus on investigating the effects of personality traits, UTAUT model has been simplified by removing all moderators but

experience. Experience is also renamed as internet experience to fit the context of this research. Moreover, this research focuses only on behavior intentions. The actual behavior requires a certain period of time to observe and is thus not included in the models.

Table 1 List of hypotheses

Hypotheses	Description
H1a-H1e	Extraversion, Conscientiousness, Agreeableness, Neuroticism and Openness will influence the intention of adopting online stocking through performance expectancy, respectively.
H2a-H2e	Extraversion, Conscientiousness, Agreeableness, Neuroticism and Openness will influence the intention of adopting online stocking through effort expectancy, respectively.
H3a-H3e	Extraversion, Conscientiousness, Agreeableness, Neuroticism and Openness will influence the intention of adopting online stocking through social influence, respectively.
H4a-H4e	Extraversion, Conscientiousness, Agreeableness, Neuroticism and Openness will influence the intention of adopting online stocking through facilitating conditions , respectively.
H5	The influence of performance expectancy on the intention of adopting online stocking will be moderated by personality traits and internet experience.
H6	The influence of effort expectancy on the intention of adopting online stocking will be moderated by personality traits and internet experience.
H7	The influence of social influence on the intention of adopting online stocking will be moderated by personality traits and internet experience.
H8	The influence of facilitating conditions on the intention of adopting online stocking will be moderated by personality traits and internet experience.

Measurement and Instrument for Data

The definition of each personality trait is adopted directly from Costa & McCare (1992, 1995); the familiarity with the Internet was defined by Novak & Hoffman (Novak and Hoffman, 1997). All the other variables in model 1 and model 2 remain the same as indicated in the UTAUT model. Details are given as follows.

- Performance expectancy (PE) is defined as the degree to which an individual believes that using new technology would help on improving his or her working performance. It is measured by the perceptions of using online stocking system in terms of the benefits, speed, usefulness and productivity.
- Effort expectancy (EE) is the degree of ease associated with the use of the system and is measured by the perceptions of ease of using or understanding the operations of the online stocking system.
- Social influence (SI) refers to the degree to which an individual perceives that important others believe he or she should use the technology and is measured by the perception that other persons of importance or influence think that he or she should use the online stocking system.

- Facilitating condition (FC) refers to the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system and is measured by the perception of having required resources or facilities knowledge to use the online stocking system or having someone to get helps.
- Intention of adopting online stocking (INTEN) is the possibilities of using online stocking system. Measurements include the intension, plan or estimate of using the online stocking system in the future.
- Extraversion (E) is positive, optimistic, excited, is willing to take risks, and likes to be around crowds. It is measured by the degrees of positive affect, gregariousness, activity and assertiveness.
- Conscientiousness (C) refers to authoritative, meticulous, responsible, and tough. Measurements include the degrees of order, dutifulness, achievement-striving, self-discipline.
- Agreeableness (A) refers to cordial, enthusiastic, will sympathize with or help others and is measured by the degrees of trust, straightforwardness, altruism, compliance, and tender-mindedness.
- Neuroticism (N) is unstable, easily to be frightened, rash, depressive and angry. It is measured by the degrees of anxiety, angry, depression and vulnerability.
- Openness (O) is easy to accept various experiences, cultures, always express curiosity and have much more imagination. Measurements include the degrees of fantasy, feelings, ideas, values, aesthetics and action.
- Internet experience (W) refers to the continuously and frequently use Internet for specific tasks and is measured by the time spending on and the frequency of using the Internet.

Table 2 shows the sources of questionnaires and their reliabilities and validities. All questions were translated into Chinese and were proofread by an English teacher. Two professors (with major in Finance and MIS, respectively) were invited to pretest the questionnaires. All questions were measured by 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). To financial consulting companies or security businesses, any information concerning their clients would be extremely confidential. Therefore, it is impossible to get a list of investors to conduct a systematic sampling. In addition, the questionnaire respondents should have some investment experiences. So, without any filtering, online survey, e-mail questionnaires or interviewing people on street are deemed to be inappropriate. Consequently, through cooperation, the agents in eight major security companies were invited to help distribute the questionnaires to their clients.

Table 2 Sources of questionnaires

Variables	Source of questionnaire	Reliability	Validity
UTAUT Constructs	Ventkatesh et al. (2003)	>0.7	Acceptable convergent and discriminant validity (Ventkatesh et al., 2003).
Extraversion	NEO-PI (form S) Costa & McCare (1992)	0.86	Acceptable convergent and discriminant validity (Barrick and Mount, 1991, Costa and McCrae, 1995, Eysenck, 1991, Narayanan, Menon and Levine, 1995)
Openness		0.81	
Agreeableness		0.73	
Conscientiousness		0.77	
Neuroticism		0.68	
Internet experience	GUV's WWW user surveys (1998)	0.58	NA

Data Analysis

700 questionnaires were distributed to investors who were not necessarily exercising online stocking. Of the 240 returned questionnaires, 44 were invalid. So, effective response rate is 28%. The invalid questionnaires include: incomplete answers, answers that were obviously conflict or answers that were the same to all the questions. Reliabilities and discriminant validities were reanalyzed with the returned data. Reliability of internet experience is 0.815. All internal consistency reliabilities except "Openness" and "Agreeableness" are greater than 0.7. The discriminant validity was calculated by examining all the Chi-square values of each pair of constructs (Anderson and Gerbing, 1988). Among the 45 pairs of comparisons, "Extraversion" vs. "Intention", "Openness" vs. "Intention" and "Agreeableness" vs. "Intention" showed insignificant χ^2 values.

Table 3 Demographic of respondents

sex		age				# of years on security investment				Has online investment experience	
M	F	-20	20-29	40-49	50+	-1	1-5	5-10	10+	yes	no
98	98	60	94	31	11	46	74	47	29	76	120

From Table 3, we noticed that 60 respondents were younger than 20. A lot of students had begun to invest on stocks or securities while they were taking financial courses in colleges. The majority respondents had 1 to 10 years experiences on stocks investment, and about 38% (76 responses) had already been buying stocks online. In the questionnaire, we further asked whether the online-experienced person would retain his/her behavior, 73 replied yes. On the contrary, only 2 persons who had no online experiences would try to adopt new means to engage in

investment.

Table 4 Results of indirect effects

	Dependent variable	Independent variable	Adjusted R^2	β coefficient
Step 1	Intention of adopting online stocking	Extraversion	.083	.216(**)
		Conscientiousness		0.73
		Agreeableness		-.014
		Neuroticism		.008
		Openness		.164(*)
Step 2	Performance Expectancy	Extraversion	.216	.351(**)
		Conscientiousness		.040
		Agreeableness		.060
		Neuroticism		.027
		Openness		.123
	Efforts Expectancy	Extraversion	.186	.269(**)
		Conscientiousness		.042
		Agreeableness		-.054
		Neuroticism		-.133(*)
		Openness		.239(**)
	Social Influence	Extraversion	.044	.209(*)
		Conscientiousness		.032
		Agreeableness		.115
		Neuroticism		.137
		Openness		-.177(*)
	Facilitating Condition	Extraversion	.140	.220(*)
		Conscientiousness		.163
		Agreeableness		-.107
		Neuroticism		.001
		Openness		.183(*)
Step 3	Intention of adopting online stocking	Extraversion	.357	-.005
		Performance Expectancy		.605(**)
		Extraversion	.330	.036
		Efforts Expectancy		.567(**)
		Extraversion	.145	.187(**)
		Social Influence		.324(**)
		Extraversion	.399	.076
		Facilitating Condition		.614(**)
		Openness	.341	.113
		Efforts Expectancy		.549(**)
		Openness	.205	.309(**)
		Social Influence		.384(**)
		Openness	.415	.148(**)
		Facilitating Condition		.605(**)

Method proposed by Barron and Kenney (1986) was adopted in this paper to test the indirect effect. In the model, independent variables are personality traits; dependent variable is the intention of adopting online stocking. The mediators are PE, EE, SI and FC respectively. Step one in table 4 runs regression of "Personality traits" on "Intention". The result shows that "Extraversion" ($p<.01$) and "Openness" ($p<.05$) significantly affect the "Intention of online stocking". Step 2 processes the regression of independent variables on mediators. In table 4, "Extraversion" shows significant effect on PE, EE, SI and FC; "Openness" shows significant effect on EE, SI and FC.

We therefore chose "Extraversion" and "Openness" to proceed to the third step: testing the intervention effects. The effects of "Extraversion" on "Intention" declined after adding PE, EE, SI and FC as indicated in step 3 of table 4. The analyses support hypotheses H1a, H2a, H3a and H4a. The effects of "Openness" on "Intention" declined after adding EE and FC. The results support hypotheses H2e and H4e.

To test the moderating effects, this research first calculated Z value for each variable. $Z_x * Z_y$ would then represent the interaction effect of independent variable x and moderator y. Table 5 shows the results. Neither personality traits nor Internet experience moderates the effects of EE on the intention of adopting online stocking, H6 is rejected. The main effects of PE and FC will not be interpreted due to the presence of the interaction terms. PE*O will also be interpreted by PE*W*O. The summary of findings and the explanation of each hypothesis will be given in the discussion section.

Table 5 Results of moderating effects

Dependent variable: the intention of adopting online stocking	
Adjusted R^2: 0.593	
Variables in regression model	β coefficient
PE	.323(*)
PE*O	.211(*)
PE*W*O	-.608(**)
SI*W*A	.372 (**)
SI*W*C	-.336(*)
FC	.412(**)
FC*W*N	.305(*)

Note: Only significant effects are listed here.

DISCUSSION

This research investigates the influence of personality traits on UTAUT model in the online stocking domain. Table 6 and 7 provide the summary of findings. Table 4 revealed two intervening effects. The results suggested that among five different personality traits, the "Extraversion" trait affected "the intention of an investor" thru "Performance Expectancy", "Efforts Expectancy", "Social Influence" as well as "Facilitating Condition". "Openness",

however, affected "the intention of an investor" thru "Efforts Expectancy" as well as "Facilitating Condition". From the aforementioned definition, "Extraversion" is considered to be positive, optimistic and sociability. Individuals higher in "Extraversion" may expect more opportunities to leverage their performances; assistances or opinions from outside are essential to them and would be accepted easily. In contrast, individuals lower in Extraversion may expect fewer opportunities and may refuse assistances from others. "Openness" refers to be easy to accept various experiences and cultures. Individuals, who are more open, are more likely to perceive online stocking as an easy way to conduct investment. They also expect the required resources and facilities always available.

"Openness with Internet Experience" was found moderating the "Performance Expectancy - Intention" relationship and the effect is negative (-0.608). "Openness" individual tends to be easy to accept various experiences and cultures, they are always happy and always appreciate for newish. According to the definition, it was expected that "Openness with Internet Experience" might motivate the intention from Performance Expectancy. However, the result showed the opposite. Probably as long as an Open person is capable of using the Internet and understands the advantages of online stocking, he is more likely to utilize all resources to explore the new fantasy regardless of the benefits. Future research may explore deeply on this specific trait.

Table 6 Summary of significant findings on research model 1

Intervening variable	Independent variable	Explanation
Performance Expectancy	Extraversion	H1a: Effect of Extraversion on intention of adopting online stocking is strong only thru the intervention of performance expectancy.
Efforts Expectancy	Extraversion	H2a: Effect of Extraversion on intention of adopting online stocking is strong only thru the intervention of efforts expectancy.
	Openness	H2e: Effect of Openness on intention of adopting online stocking is strong only thru the intervention of efforts expectancy.
Social Influence	Extraversion	H3a: Effect of Extraversion on intention of adopting online stocking is strong only thru the intervention of social influence.
Facilitation Conditions	Extraversion	H4a: Effect of Extraversion on intention of adopting online stocking is strong only thru the intervention of facilitation conditions.
	Openness	H4e: Effect of Openness on intention of adopting online stocking is strong only thru the intervention of facilitation conditions.

Note: The dependent variable of each hypothesis is "Intention of adopting online stocking".

Table 7 Summary of significant findings on research model 2

Independent variable	Moderators	Explanation
Performance Expectancy	Extraversion, Conscientiousness, Agreeableness, Neuroticism, Internet experience	H5: Effect stronger for Openness with internet experience.
Social Influence	Extraversion, Conscientiousness, Agreeableness, Neuroticism, Internet experience	H7: Effect stronger for Agreeableness with internet experience, and Conscientiousness with internet experience.
Facilitation Conditions	Extraversion, Conscientiousness, Agreeableness, Neuroticism, Internet experience	H8: Effect stronger for Neuroticism with Internet Experience.

Note: The dependent variable of each hypothesis is "Intention of adopting online stocking".

"Agreeableness with Internet Experience" moderates the "Social Influence - Intention" relationship with positive effect (0.372). "Agreeableness" refers to an individual who is cordial and enthusiastic. "Agreeable" individuals also tend to sacrifices their own pleasures to please the others (Narayanan and Levine, 1995). The measurements of "Agreeableness" are measuring the degree of trust, straightforwardness, and tender-mindedness. Social influence is the degree an individual perceives the influence on him from other persons of importance. Therefore, the more Agreeableness will motivate more on the "Social Influence – intention" relationship.

"Conscientiousness with Internet Experience" was also found moderating the effect of "Social Influence" on "Intention" and the effect was negative (-0.336). Conscientious persons are more authoritative, responsible, tough and determinant, once they make a decision, they would more likely follow their intention. Therefore, they might not be influenced by others. The "Social Influence – Intention" relationship would be weakened by "Conscientiousness" trait.

Venkatesh et al. (2003) hypothesized that "Facilitating Condition" had direct effects on "Intention". The result of this research however suggested that, "Neuroticism with Internet Experience" significantly moderate the "Facilitating Condition - Intention" relationship with positive effect (0.372). "Neuroticism" generally tends to be more vulnerable, easy to get angry and worry. High neurotic individual appears to be more anxious for facilities, so he will feel secure in the attempt to a new technology.

CONCLUSIONS

This research explored the role of personality traits in the unified theory of acceptance and use of technology. From table 3, the variances explained in the intervention effect were quite low; however, the moderating model could explain 60% variances (see table 4). Data analyses suggested that personality traits play more important roles as moderators than as external variables. Based on the findings, security businesses could develop valuable marketing strategies to encourage investors to adopt new means of investment. For example, since performance expectancy may not motivate the intentions of "Openness", security businesses could offer more facility assistance, improve their knowledge of managing money, or expand services to provide newly financial merchandises, etc. The existence of virtual communities might bring

"Conscientiousness", "Neuroticism" and "Agreeableness" investors more fun and more confidence. They could get the technological supports from the community or be more motivated by social pressure. For "Agreeableness" investors, the binding of good relationships among agents and investors are more essential. "Neuroticism" individuals however, may need special or gentle attentions to ease their temper and to cultivate their intentions.

Moderators include age, sex and voluntariness of use in UTAUT model were excluded to simplify the research models of this research. Further study might reconsider these variables to supplement the model. Furthermore, previous work has identified that personality traits might be extremely distinctive among races and cultures (McCrae & John, 1992, Narayanan et. al., 1995), our empirical study results conducted in Taiwan might not be applied to general. Future similar researches may be conducted in other countries. In addition, the intention was asked, but the actual behavior was not yet observed in this study. It is worth further studying as well.

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