Information Technology Continuance in the External Audit Profession: Evidence from Vietnam

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Abstract. This study presents a research model that combines rational action, represented by perceived usefulness, subjective norm, continuance intention and empirical response to shape external auditor's continuance behavior using a particular technology. By collecting primary data through surveys on continuance behavior using information technology at independent auditing firms, we have demonstrated that this relationship is cross-functional, complementary and interdependent. Hence, this article implies that future studies need to examine the difference when approaching the theory of behavior using information technology in the first and subsequent time on many aspects, including: objective and subjective reasons of the individual and facilitating conditions of the organization.

Keywords: information technology · continuance · auditor · TAM · disconfirmation · satisfaction

1 Introduction

In the field of auditing, since the 1970s, auditors have been able to gradually use computer equipment, software and databases to examine electronic accounting data (Cash Jr, J. I., et al., 1977). Information technology (IT) trends are rapidly evolving and continue to significantly affect the financial statement audit process, creating a challenge for audit firms to change from traditional manual audit to IT application-based audit (Cash Jr, J. I., et al., 1977; Gray, G. L., et al., 2014). Furthermore, the traditional auditing practice provided by auditors has not kept pace with the evolving economy in real time (Chan, D.Y. & Vasarhelyi, M. A., 2011). Traditional audit can be described as an audit performed periodically using manual procedures, time consuming for sampling, testing of controls, testing of details and providing periodic reports (Chan, D.Y. & Vasarhelyi, M. A., 2011). Therefore, it is no longer feasible for auditors to only use traditional methods to audit real-time financial information continuously (Sutton, S. G., 2000). In other words, the trend of technology adoption becomes necessary (Baxter, R.J. & Berente, N., 2010) and it is hardly surprising when the technological revolution emerges (Weller, T., 2008). Most of the intellectual waves originated in Europe, especially the United States, and despite their initial differences, they gradually spread and merged across countries (Hirschheim, R. &

Klein, H., 2012). In auditing, the term Computer Assisted Audit Techniques (CAATs) has gradually become popular, which is understood as the computer programs and data that auditors use as part of the audit process (Coderre, D.G., 2005; Mahzan, N. & Lymer, A., 2008). The conceptual premise of CAATs mainly covers electronic work papers and spreadsheet applications (Braun, R.L. & Davis, H.E., 2003). SIt then expands its scope to include a range of audit support technologies such as generalized audit software (GAS), audit reporting software, network security evaluation software,…(Mahzan, N., & Lymer, A., 2008). Furthermore, CAATs provide a vast opportunity for the audit practitioner to take advantage of new technology features to collect large amounts of audit-relevant data, in real-time, to automate processes, and ultimately achieve a comprehensive, timely and accurate guarantee. Thus, technological features are meaningful in completing tasks on behalf of users (Harrison, M.J, & Datta P., 2007) and are also important criteria for users to accept the use. Used (Griffith, T.L., 1999). As a result, a technology feature can change a user's behavior with the technology (Griffith, T.L., 1999; Harrison, M.J, & Datta P., 2007), e.g. a believer using a system specifically when it helps them improve their job performance with little effort, which, according to Davis, F.D., et al. (1989) named respectively perceived usefulness, perceived ease of use.

However, the investment and acceptance of CAATs among audit firms is still controversial (Mahzan, N., & Verankutty, F., 2011). Moreover, the percentage of auditors using technology in the audit process is low, not really effective (Ahmi, A. & Kent, S., 2013; Curtis, M.B., & E.A. Payne., 2008) and the digital transformation journey is not the same in each audit firm (Austin, A. A., et al., 2021). Indeed, the acceptance of technology by external auditors is influenced by the perceptions of the auditing profession and their firms about the use of advanced analytics (Eilifsen, A., et al., 2020) in digital transformation expectations from customers (Austin, A. A., et al., 2021). Many factors hinder the adoption of technology by auditors, which can be the tension in balancing audit fees, the lack of professional regulations and concerns about audit quality (Austin, A. A., et al., 2021). In the long-term development strategy, the application of technology in auditing is also seen from the perspective of maintaining continuance behavior. To date, not many theories about the theory of IT continuance, instead, many theories about the first technology adoption have been established and put into practice (Ortiz de Guinea & Markus, M.L, 2009), such as: Innovation Diffusion Theory (IDT - Robert G. F., 1983), Technology Acceptance Model (TAM - Davis, F. D., et al., 1989), Theory of Planned Behavior (TPB - Ajzen, I., 1991), Unified theory of acceptance and use of technology (UTAUT - Venkatesh, V., et al., 2003). Continued use of IT is a causal behavior, based on expectations of the usefulness of IT and the results of an expectation confirmation assessment such as the Expectation-Confirmation Model (ECM - Bhattacherjee, A., 2001) but still not except for the possibility of the existence of automatic repetitive behavioral sequences according to the user's experience (Limayem, M. & Hirt,.S.G., 2003). Since then, it creates a debate in theory, because, without purposeful actions of individuals using technology that is accepted by the organizational environment to facilitate the application, is it considered IT continuance? We do not deny the strong foundation of ECM in the study of this issue, however, we believe in examining the theoretical flow by integrating into a comprehensive theoretical system of IT continuance. This is a research gap that needs to be filled.

In the period of 2019–2020, businesses are really facing the Covid-19 outbreak and in particular, increasing uncertainty about future prospects. This affects the preparation of the entity's financial statements as well as the professional work of the auditors. At the same time, audit is considered as one of the essential services of the country that should be maintained (State Securities Commission of Vietnam, 2020) because the opinion of external auditors increases assurance and reliability of the entity's financial information (VACPA, 2020a). From there, VACPA (2020a) commented on the situations that encountered obstacles in the audit process, and at the same time, proposed guiding questions when auditing in the IT environment, focusing on (i) the ability to access to component auditor data in collecting and evaluating audit evidence, (ii) the specificity of the cloud-based portal, and (iii) the ability to use technology in member auditor's video call and/or screen sharing software. VACPA (2020b) emphasizes the need for auditors to understand the role of third parties, such as technology providers, as part of business continuity. In the context of the country's response to the Covid-19 pandemic, VACPA (2020b) guides auditors to (i) specifically evaluate technology recovery plans, (ii) provide training to improve the level of medical examination and treatment. Exploring technology application, (iii) identifying the situation of digital technology investment. From 2021 to now, the country has entered a new normal, considering the auditor's continuity in using technology from both the perspective of objective and subjective causes. Urgently needed research in practice.

This study examines the influencing factors from the synthesis of theoretical perspectives on IT continuance, including: rational action and involuntary reactions based on experience, and finally empirical testing. Theoretical models are proposed through the survey of independent auditing firms. In terms of management, understanding IT continuance is a key aspect in building the direction of independent audit activities, and first of all, creating favorable conditions for the use of technology. Since then, the article not only has a theoretical contribution in providing information on analyzing and synthesizing different paths that can shape IT continuance behavior, but also has practical value through functions. Management implications for independent auditing firms in the context of digital transformation of the audit profession. The sections that follow this introduction are respectively: theory and hypothesis development, research methods, experimental results, discussion of limitations and future research directions.

2 Literature Review and Hypothesis Development

The Theory of Planned Behavior (TPB) proposed by Ajzen, I. (1991) develops from the Theory of Reasoned Action (TRA) in the previous work of Fishbein, M. & Ajzen, I. (1975), assuming that a behavior behavior is predictable by behavioral intention to perform the behavior and behavioral propensity is defined as the degree of effort attempted to perform the behavior (Ajzen, I., 1991). To date, many experimental studies have applied UTAUT by Venkatesh, V., et al., (2003). Although these studies have explained the scientific value and reliability of this background theory in determining the factors affecting the adoption and use of technology, they cannot be generalized to explain for the intentions and conduct of the external auditors for a variety of reasons. For example, previous empirical studies have involved established software in the organization, and

the extent of the scale revolves around the question of whether people use it (Venkatesh, V., et al., 2003). In contrast, auditors often have mandatory tasks when using technology (e.g. CAATs), especially because it depends on the unique characteristics of the technology used by the client. As argued before, this article considers that the individual auditor's decision on technology preferences can affect audit costs because of the limited amount of audit fees. The creation of a long-term budget for the cost of using technology in a technology setting has a great impact on the strategic decision of the audit firm and thus it strongly influences the continuing behavior auditor. Finally, the auditor should consider the legal implications of using technology in a failure situation because of the distinct characteristics of goals, processes, and principles of practice. From the theoretical review, it shows that there are many opinions as well as empirical evidence on the factors affecting the intention to use technology of each individual, but they are the same in the recognition of many behavioral theories. Such as TPB, UTAUT that intention is really the determinant of IT usage behavior. In the context of research on IT continuance in the field of auditing, we pose the first research hypothesis:

H1: External auditors' intention to continue using IT positively affects their IT continuance behavior.

TAM (Davis, F. D., et al., 1989) explains user acceptance of IT, and this model is significantly cited in many empirical studies (Lee, Y., et al., 2003). The perception of the usefulness of technology makes users have a positive attitude in maintaining the behavior of using this platform in the future (Wu, H.L., 2009). Clearly, the perception of the usefulness of technology is one of the key concepts of TAM. It is understood as the degree to which users believe that using a certain system will improve their job performance (Davis, F. D., et al., 1989). An individual's perception will influence an individual's attitude, which in turn affects the individual's behavior (McShane, S.L. & Von Glinow, M.A., 2003). Attitudes sometimes promote, sometimes hinder behavioral intentions. From intention to individual behavior is also influenced by other factors such as motivation, perception and perception of action (McShane, S.L. & Von Glinow, M.A., 2003). It is undeniable that the prominent premise in the study of intention to accept technology is dominated by both factors, perceived usefulness, perceived ease of use. However, in the long run, as a particular technology is continued to be used by the user, the perceived ease of use is no longer as important as first acceptance (Bhattacherjee, A., 2001). In other words, the number of times used by auditors plays an important role in the research perspective on the application of technology in auditing. Specifically, while the requirement for a new level of technological learning is a barrier for first-time users, this requirement is no longer a prominent factor for users accustomed to a particular technology. On the other hand, perceived usefulness becomes increasingly important as the auditor's use of a technology increases. Simply put, auditors do not intend to continue using technology unless it brings certain benefits in their later work. From there, we recommend:

H2: Perceived usefulness of external auditors' IT positively affects their intention to continue using IT.

Furthermore, an individual may be influenced by other individuals (Fishbein, M. & Ajzen, I., 1975) and he/she always has a subjective perception of support from the organization when he/she has beliefs about organizational recognition regarding his/her

contributions (Eisenberger, R., et al., 1997; Rhoades, L., & Eisenberger, R., 2002). In other words, the organization's positive or negative attitude towards the individual is perceived through the organization's support at work (Herda, D. N., & J. J. Lavelle., 2012; Herda, D. N., 2012) or through the perception of the supervisor's level of evaluation in the organization (Rhoades, L., & Eisenberger, R., 2002). Therefore, auditors feel the need to use and tend to accept the use of technology when other social factors such as directors of the audit firm are willing to help and facilitate the audit firm. The use of supporting accounting and the auditors themselves are always strongly supported by the audit firm's directors (Curtis, M.B., & E.A. Payne., 2014). Subjective Norm in the TPB theory (Ajzen, I., 1991) and the TAM model (Davis, F. D., et al., 1989) suggest that an individual's behavioral intentions may be influenced by the degree to which they perceive found that job-critical people trust their technology use behavior (Fishbein, M. & Ajzen, I., 1975). In the context of the continued use of IT by external auditors, normative sources of information from colleagues and friends shape the intention of auditors to continue using technology in their independent audit work learn. Therefore, we hypothesize:

H3: Subjective norm of external auditors positively affects their intention to continue using IT.

Before accepting to use a technology, in practice, they often rely on Utilitarianism to consider and consider the possibility of controlling actions. It can be said that this is an ontology derived from philosophy, that when reducing suffering, people will have a good life, according to the point of view of the philosopher Epicurus of the time BC. According to another consensus view in the 1800s, John Stuart Mill introduced the concept of real behavior on both sides of good and bad to consider the promotion of pleasure or the hindrance of a negative state. From this root, in the field of economics, it gradually developed many fundamental theories to explain the perceived value of the behavior of people using technology. First, the utilitarian value of technology is one of the expectations that users continue to use technology in their work. However, many previous studies show that users' perceptions are influenced more by hedonic values than by pragmatic values. Not all behaviors that continue to use technology are geared toward fulfilling some functional or economic need but are also shaped by emotional concepts such as satisfaction (Ortiz de Guinea & Markus, M.L, 2009). This is the emotional response that industrial/organizational psychology researchers emphasize on the differences between individuals in understanding and defining their behavior within organizations. The key to understanding the structure of human cognitive ability is the fact that scores on almost any reliable measure requiring mental/retrieval process, or manipulation of information will be positively correlated with any measure. Any other reliable measure is also related to cognitive performance (Stanley C. Ross, 2021). In other words, the main premise of satisfaction to continue using IT is that the usefulness factor dominates in the user perception analysis, because users tend to trust their experience. (Bhattacherjee, A., 2001). While there is much empirical evidence that the factors influencing behavior need to be mediated through behavioral intention, there is no similar empirical evidence for the satisfaction factor. However, research by Ortiz de Guinea & Markus, M.L (2009) argues that satisfaction is a representative of emotion, it can directly promote usage behavior without mediated by intention. Lerner, Jennifer S., et al. (2015) note that, when emotions

become so intense that reason is out of control, it disrupts the normal sequence of work.. Thus, there exists satisfaction that can directly affect continued technology use behavior in addition to instances of persistent intention mediated. Based on these theoretical expectations, we assume two direct and intermediate effects relationships, specifically as follows:

H4: Satisfaction with IT used by external auditors positively affects their intention to continue using IT.

H5: Satisfaction with IT used by external auditors positively affects their continued use of IT behavior.

Performance expectations are the individual's belief that using IT will help achieve high efficiency in work performance, in which, the approach based on the point of view of Davis, F. D. et al. (1989) is Usefulness (Venkatesh, V., perceived et al., 2003). Namely, auditors believe that the technology used is useful for their operations and will be more satisfied with that technology (Will, M. & Allan, Y., 2011). At the same time, auditors will tend to accept the use of technology when they have expectations about the relative advantages of computer-aided techniques and technologies such as saving audit time (Curtis, M.B., & E.A. Payne., 2014), increased work efficiency (Debreceny, R., et al., 2005) and helped increase the quality of audit reports (Banker, R.D., et al., 2002). Furthermore, the incumbent auditor may lose a competitive advantage if the incumbent's expertise and ability to adapt to technological changes are inferior to one or more new entrants later in the audit process. (Paul K. Chaney, et al, 2003). Therefore, when auditors are externally motivated and believe that using the software can provide opportunities for career advancement (Curtis, M.B., & E.A. Payne., 2014), they increase their expectations of effective and acceptable use of technology in the audit process. In short, when the application of technology in auditing is not the first time, the next time they continue to use it, they will tend to confirm the level of initial expectations. ECM describes satisfaction as an emotion and arises when users compare their pre-use expectations from previous IT experiences (Bhattacherjee, A., 2001). This is an approach based on the "Expectancy disconfirmation theory" of Kathleen S. Miler, which creates a framework for examining the formation of customer expectations and then evaluating service quality through a comparison between service user expectations and actual service performance. This theory can be considered and applied in our research to assess the psychology of external auditors by comparing the difference between expectations and the actual satisfaction that the service can bring. If the external auditor's perceived performance exceeds initial expectations, the auditor will recognize positive nonconfirmation and satisfaction. If the performance perceived by the external auditor is not as expected, the expectation is not confirmed negatively and the user is not satisfied. From here, the authors hypothesize H6a & H6b as follows:

H6a: Disconfirmation of external auditors' IT expectations positively affects their satisfaction with previously used IT.

H6b: Disconfirmation of IT expectations by external auditors positively affects their perceived usefulness of previously used IT.

Facilitating Conditions is the degree to which the individual believes that an organizational and technical infrastructure exists to support the use of the system (Venkatesh,

V., et al., 2003). This definition was summed up by Venkatesh, V., et al. (2003) presented by three structures of perceived behavioral control in TPB theory (Ajzen, I., 1991), TAM (Davis, F. D., 1989; Davis, F. D., et al., 1989); facilitating conditions in the MPCU model (Thompson, R.L., et al., 1991) and compatibility factors in the IDT model (Moore, G.C. & Benbasat, I., 1996). At the same time, the auditor's ability to continue using technology should be considered in terms of the use of information systems and placed from an interdisciplinary perspective, including computer science, information systems, IT and economics. Accordingly, an information system is understood as a system that combines hardware, software and a communication network, and this initial design is operated at each design level of the organization depending on human factors. The decision to continue using technology should be considered from internal and external factors of a particular enterprise with a certain level of resources and experience in terms of application in the organizational environment (Cyert, M.R., et al., 1956). This article explains individual user resources according to behavioral theory (TPB, TAM) and is considered on the auditor's perceived behavioral control about the resources and knowledge needed to use technology when auditing. At the same time, technology use behavior is seen in terms of the auditor's perception in controlling the ability to continue using the previous IT that they have used or change the choice of new technology. On the other hand, application conditions also reflect aspects of the IT application environment and the organization that are designed to remove barriers to IT use (Venkatesh, V., et al., 2003). Venkatesh, V. & Davis, F.D. (2000) found support for the impact of application conditioning on both intention and use behavior by effort expectations. According to Will, M. & Allan, Y. (2011) there are all problems related to the use of information systems such as hardware, software and technical support. In this study, application conditions are also considered in the technical support and in-depth user guides available if the auditor encounters system problems related to the use of new technology. At the same time, the auditor's decision to use technology always needs to be consistent with the audit firm's orientation. Based on these arguments, the research hypothesizes as follows.

H7: IT facilitating conditions positively influence external auditors' continued IT use behavior

H8: IT facilitating conditions negatively affect external auditors' intention to continue using IT behavior

The authors develop eight research hypotheses as above, showing the relationship between reasoned action, psychological flow response and individual behavior perceived by the auditor in support of the organization. From there, the authors propose that the research perspective on the continued use of technology by auditors should be viewed in the relationship between having an interdisciplinary theory instead of building a traditional mechanism for a There is a particular theory that researchers often call "theory of background" for research. Therefore, our research model shown in Fig. 1 is an attempt to connect relevant concepts from diverse theoretical perspectives.
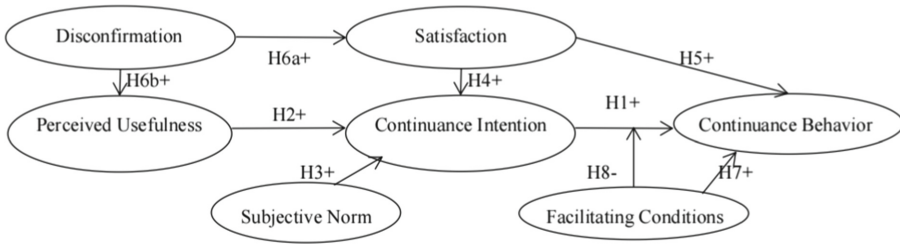
Fig. 1. Research model

3 Methodology

This study of ours was conducted experimentally using a survey questionnaire for audit practitioners in Vietnam. The current auditing industry has been heavily dependent on IT, and therefore, this overall is very suitable for studying IT. The range of IT we examined are the main ITs used by audit firms to handle audit work, including from planning, executing, and completing the audit. From there, the range of people involved in the audit process can expand to include audit firm administrators, certified auditors, and audit assistants. Although stakeholders such as clients (audited entities) are often expected to use technology to increase efficiency, its use is voluntary. Meanwhile, many auditing firms build their own technology processes and force members of the company to use them. Subjects at our study site received two surveys and were interviewed 1 month apart. Initially, at time t, we assessed their perception of different levels of interest in our study, and the second questionnaire at time t + 1 measures continuance behavior. Out of 300 questionnaires distributed to subjects in 2 batches, 247 matched questionnaires were returned with a response rate of 82.33%. The sample includes 102 men (41.30%) and 145 women (58.70%) with 190 subjects having worked at auditing firms for 1 year or more (76.92%). The tenure of the survey subjects is important because we are looking at the ongoing behavior of users who have used a certain technology over a period of time.

4 Results and Discussion

The epistemology of the above research model (Fig. 1) is mainly used to accept (reject) hypotheses, this article analyzes the multidimensional relationship between many variables in a model and Multivariate relationship between variables, from which, we choose Structural Equation Modeling (SEM) technique in multivariate analysis.

The first step is to use confirmatory factor analysis (CFA) to evaluate the reliability and validity of the scale, the results are shown in Table 1. The relevance of the overall CFA model has been tested. Tested using several measures of goodness of fit, namely: the normalized χ2 of the CFA model is less than the recommended value of 3.0, the RMSEA is less than 0.08 and the RMR is less than 0.05. Furthermore, the recommended indicators to evaluate good model fit are all less than or equal to 0.9, which is the group of Incremental Fit Indicies, including: NFI, NNFI, GFI and CFI. Therefore, the empirical data used in this hypothetical CFA model is appropriate. At the same time, Table 1 also shows the Convergent validity of the structures in our study, specifically: all loads in CFA have $p < 0.01$; (ii) Cronbach's α of each structure exceeds 0.80, ensuring the reliability of the structure; and (iii) Average Variance Extracted (AVE) of each structure > 0.5. The authors overcome the tendency to reject the model with many observations of Chi-square statistics in evaluating GOF through the RMSEA (Root Mean Square Error of Approximation) index. The smaller the RMSEA, the more suitable the model is, and in this paper, the RMSEA $= 0.05$ is less than the accepted critical point of 0.08 and determines the goodness of fit of the model to the population.

For discriminant validity, we compare the inter-factor correlations with the square root of the AVE for each factor in the CFA model. The least squares of 0.77 (for CI) is larger than the maximum inter-factor correlation of 0.54, ensuring the discriminant validity of our observational data. The next content is presented as Table 2.

This study tested the main effect from 7 hypotheses, including: H1, H2, H3, H4, H5, H7, and tested using SEM. For H8, we test the hypothesis separately using the regression model as shown in Table 3. Finally, Fig. 2 presents the results of all these two analyses, which include the normalized β coefficient associated with each of the initial hypotheses in Fig. 1. In particular, the auditor's continued technology use behavior [CB] is significantly predicted by behavioral intention [CI]] ($β = 0.21$, $P < 0.01$), satisfaction with using previous technology [ST] ($β = 0.19$, $P < 0.01$) and Facilitating Conditions [FC] ($β = 0.19$, $P < 0.01$), providing empirical evidence for the acceptance of hypotheses H1, H5 and H7, which supports the theoretical approach that the action is reasonable (representative variable is [CI]), empirical response (representative variable [ST]) and organizational support (representative variable [FC]) are important influences on Continuance Behavior [CB]. Consistent with the cross-effect of Facilitating Conditions [FC] conditioning on the relationship between [CI] and [CB]) is also significant with negative impact direction ($β = -0.29$, $P < 0.05$), accept hypothesis H8.

[CI] was significantly predicted by Perceived usefulness [PU] ($β = 0.37$, $P < 0.01$), Subjective norm [SN] ($β = 0.14$, $P < 0.01$) and Satisfaction [ST] ($β = 0.18$, $P < 0.01$), supporting the hypotheses, H2, H3 and H4, respectively. At the same time, in the relationship between Disconfirmation of the external auditor's technological expectations for [ST] and [PU], the hypothesis H6a and H6b are accepted respectively ($β = 0.59$, $P < 0.01$, respectively), supporting evidence for a cross-effect between rational action and ECM.

Table 1. Standardized loadings and reliabilities

Construct	Indicators	Standardized loading		AVE	Cronbach's α
Continuance behavior [CB]	CB1	0.80	(t = 20.76)	0.77	0.90
	CB2	0.87	(t = 23.40)		
	CB3	0.96	(t = 28.10)		
Satisfaction [ST]	ST1	0.88	(t = 24.34)	0.77	0.91
	ST2	0.87	(t = 23.68)		
	ST3	0.89	(t = 24.69)		
	ST4	0.87	(t = 23.82)		
Continuance invention [CI]	CI1	0.83	(t = 20.12)	0.59	0.80
	CI2	0.80	(t = 19.25)		
	CI3	0.67	(t = 15.09)		
Facilitating Conditions [FC]	FC1	0.90	(t = 25.28)	0.78	0.90
	FC2	0.93	(t = 26.82)		
	FC3	0.81	(t = 21.38)		
	FC4	0.88	(t = 24.43)		
Disconfirmation [DC]	DC1	0.89	(t = 24.69)	0.77	0.91
	DC2	0.90	(t = 25.43)		
	DC3	0.87	(t = 23.61)		
	DC4	0.86	(t = 23.37)		
Perceived usefulness [PU]	PU1	0.86	(t = 23.12)	0.72	0.89
	PU2	0.88	(t = 24.06)		
	PU3	0.86	(t = 23.37)		
	PU4	0.80	(t = 20.76)		
Subjective norm [SN]	SN1	0.87	(t = 23.41)	0.74	0.88
	SN2	0.89	(t = 24.21)		
	SN3	0.82	(t = 21.09)		

Goodness-of-fit indices (N = 247): NNFI = 0.96; NFI = 0.93; CFI = 0.96; GFI = 0.89; RMR = 0.02; RMSEA = 0.05.

Table 2. Scale properties

Construct	Mean	SD	Inter-construct correlation						
			[CB]	[ST]	[CI]	[FC]	[DC]	[PU]	[SN]
[CB]	3.77	0.92	0.88						
[ST]	3.61	0.53	0.41	0.88					
[CI]	3.88	0.53	0.37	0.33	0.77				
[FC]	3.80	0.59	0.48	0.51	0.50	0.88			
[DC]	3.44	0.54	0.35	0.53	0.29	0.46	0.88		
[PU]	3.85	0.58	0.31	0.39	0.44	0.54	0.54	0.85	
[SN]	3.83	0.60	0.20	0.32	0.28	0.33	0.36	0.37	0.86

Table 3. The test results of moderating effects

Model¡i = 1,2	Dependent variable: continuance behavior	
	i = 1	i = 2
CI	0.62**(t = 4.23)	1.81**(t = 3.24)
Facilitating Conditions [FC]	0.84**(t = 6.33)	2.02**(t = 3.67)
FC * CI		− 0.30*(t = − 2.19)
*Significance: **P < 0.01, *P < 0.05.*		
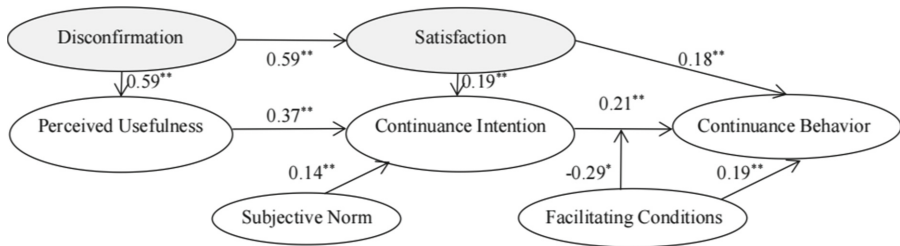
Fig. 2. Research results

5 Conclusion

5.1 Research Implications

This article summarizes some of the findings that could be considered for development in future studies on the continuum of external auditors' technology use. First, the factors representing rational action in this research model are perceived usefulness, subjective norm, continuance intention, which are based on representative studies according to TAM (Davis, F. D., et al., 1989), UTAUT (Venkatesh, V., et al., 2003). This inheritance

has development, specifically, we do not include factors such as ease of use, behavioral control in our research model from the focus on technology acceptance behavior according to TAM, UTAUT based on the first use situation, until subsequent times, these factors tend to decrease in influence, and therefore, in our research opinion, these constructs no effect/negligible effect in behavioral study of continuous use of technology with more than 1 time. Importantly, emotional influences as a motivator that should be considered for individual technology user intentions are not considered in rational action theory (Ortiz de Guinea & Markus, M.L, 2009). Next, factors based on ECM (Bhattacherjee, A., 2001) include: disconfirmation, satisfaction. However, in this study, we consider satisfaction in the direct impact on continued use behavior and the indirect effect mediated by behavioral intention. From this, we imply that external auditors continue to use a particular technology when they are satisfied with it even without any positive future expectations. In other words, a person's emotions can govern their behavior, not necessarily influencing their reasoned intention to use. Finally, the individual we are considering for behavioral research is an external auditor, whose individual behavior should be considered in terms of the organization's application, which can have a direct impact individual behavior but can also be a modifier in the relationship between intention and behavior.

In summary, the final result implies that the researcher needs to consider the relationship between the intention to continue using behavior of the auditor in the cross-effect of the application condition, and this behavior is proposes to consider in a theoretical perspective a combination of rational action and empirical response. Research on individual behavior is studied a lot in practice, especially in the marketing industry when looking at the buying behavior of customers. However, we suggest that behavioral researchers continue to use in the field of auditing two central issues. (i) The behavior of continuously using a particular technology in the past is different in perspective from the behavior of using a technology in the first use. At the same time, the behavior of continuous use is not necessarily evaluated only in the theory of rational action, but should be seen in conjunction as experience in a specific time. (ii) The individual is an external auditor, from the intention to the use behavior is also governed by the application conditions of the organization.

5.2 Practical Implications

This study contributes some of the following governance implications that are consistent with the orientation of professional organizations and development strategies of auditing firms. First, we agree with the view that reasonable action feedback is the main motivation for auditors' continued use of technology, thereby, implication for professional organizations as well as managers. Audit firm management needs to raise auditors' awareness of the benefits of technology in the audit process through career training channels. Next, we note the interest in facilitating the adoption of technology by auditors, which not only has a direct effect on continued use behavior, but can also be a hindrance to the relationship. Relationship between the auditor's intentions and behaviour. Finally, periodically assess the auditor's satisfaction with the technology they have used. Because this study has proven that when auditors are not satisfied with the technology they have used before, they will reduce their continued behavior.

5.3   Research Limitations

Although this study has made theoretical and practical contributions, the results of this study need to be considered and applied in relation to its limitations. Firstly, our research data was collected based on convenient method, lack of coordination with representatives from professional auditing organizations such as VACPA, and audit firm administrators, especially In Vietnam, auditing firms are divided into two groups: big 4 and non-big 4. Therefore, our findings will increase reliability when applying implications for practice, however, the findings Theoretical discoveries clearly stated in implications for research should be noted for further development in the future. At the same time, Vietnam is a developing country, so when applying implications for research in developed countries, it is necessary to pay attention to the research context factors, namely cultural or physical differences regime. Finally, future research, in addition to considering the research limitations that we have just analyzed above, it is also necessary to continue developing this approach in expanding the synthesis of representative factors for two groups: (i) rational actions, (ii) personal feelings, (iii) application conditions, in addition to the factors that we propose in the research model.

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