Continuous audit development and audit survival: Evidence from tax auditors in Thailand

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Abstract

Continuous audit development is one of the importance elements to achieve audit service and existent in present and future audit profession. The purpose of this study is to investigate the influence of continuous audit development on audit survival by utilizing best audit practice, audit report quality and audit effectiveness as the mediating variable. Continuous audit development consists of audit learning competency, audit innovation capability, audit technology orientation. The study used a mailed survey of questionnaireof 164 tax auditors in Thailand. To test research hypothesis, data was analyzed using ordinary least square (OLS) regression analysis. Theresults showed that audit learning competency and audit innovation capability have a positive influence on mediating variable and audit survival. Besides, the results showed that there is positive relationship between mediating variable and audit survival. The findings help tax auditors, regulators, and researchers better understanding about the major developments for tax auditors, especially how the role of continuous audit development is related to survive in the auditing profession in Thailand context.

1. Introduction

Auditors have become important professionals for directly and indirectly promoting the growth of the economies in the countries. The performance of the external auditing plays a major role according to support the organization to achieve its goals. Moreover, the responsibility of auditor is to inform the quality information including timeliness, accuracy, creditability, completeness and relevance for stakeholders to protect them from financial fraud and information superiority. Nowadays, the increasing changes in the world economy, which is the liberalization of trade, investment, capital movements and especially, migration of skilled labor. Various countries in the world are forming economic communities such as European Union (EU) and Asean Economic Community (AEC). As a result auditing professions need to improve their professional standard for higher quality services to competitive with auditors from other country in the regional and global forum. Furthermore, the increasing complexity of the business causes the auditor to use innovative and flexible solutions.

Due to these changing environment, continuous improvement becomes more and more critical, which is the foundation for auditor to sustain existent in audit profession. Deming explained that continuous improvement is a concept that enhance success and minimize failures (Juergensen, 2000). The International Education Standards for Professional Accountant (IESs) that has been developed by the International Federation of Accountants (IFAC) consists of eight international education standard. IESs focus on learning competency by developing the skills, and providing lifelong learning to ensure high quality performance of professional accountants. Continuous audit development can help auditors to deliver maximum value to their customers in the most efficient way (IFAC, 2010). In addition, continuous improvement also means a process of continuous incremental innovation (Bessant et al., 1994). This is consistent with significant advancement in information technology, fast growing economic activities, and rapidly changing market that have generated numerous opportunities for continuous improvement innovations. Audit learning competency may not be enough to improve audit work. Hence, continuous audit development would include innovation ability and technology orientation rather than focusing on learning competency only.

Prior research indicates that learning is the effective means in the quest to achieve sustainable development in performance (Jiang and Li, 2008; Maurer and Weiss, 2010) and these ensure that the audit report is correct as to gain confidence from customers (Reed et al., 2009). Meanwhile, Stanley and Marsden (2012), and Bonk and Smith (1998) have shown that audit creativity development can enhance best practice to solve problems that occurred during verifying of audit work in each situation. Similarly, audit innovation is essential for continuous success and survival in profession (Martins and Terblanche, 2003). Moreover, Curtis and Payne (2008) point out that technology can greatly improve the efficiency and effectiveness of an audit.

Consistent with Vera et al (2006), he indicated that technology bring the reputation of the auditor by increasing audit quality and efficiency via audit automation that simplifies the process of auditing and strengthening the capacity of knowledge-sharing capabilities. Most prior research focuses only on audit learning competency. There is few research that combines the emphasis on innovation and technology to continue audit development. This is interesting to develop the continuous audit development model that consist of three dimension including audit learning competency, audit innovation capability, and audit technology orientation affect to audit survival.

Accordingly, the relationships among continuous audit development which consist of audit learning competency, audit innovation capability, and audit technology orientation are hypothesized to be positively associated with best audit practice, audit report quality, audit effectiveness, and audit survival. The key research questions in this study are as follows: (1) How does each dimension of continuous audit development have an effect on best audit practice, audit report quality, audit technology orientation, and audit survival?, (2) How does best audit practice have an effect on audit report quality and audit effectiveness?, (3) How do best audit practice, audit report quality, and audit effectiveness have an effect on audit survival? To clearly verify the aforementioned relationships, tax auditors (TAs) in Thailand are the sample population of the study. Hence, the objective of this study is to empirically investigate the relationships between continuous audit development dimensions and audit survival by utilizing best audit practice, audit report quality and audit effectiveness as the mediating variable.

The remaining parts of this study are structured as follows. Firstly, the researcher provides the relevant literatures and hypotheses development of all constructs. Secondly, the researcher explains the methodology including data collection procedure and measurement, measure validation, and statistical technique. Thirdly, the researcher discusses the results of this study. Fourthly, the researcher explains the contributions and directions for future research. Finally, the researcher concludes this research.

2. Literature Review and Hypotheses Development

To examine the relationships between continuous audit development and audit survival, the novel components of continuous audit development include: audit learning competency, audit innovation capability, audit technology orientation. The conceptual, linkage, and research model presents the relationship of the mentioned above, as shown in Figure 1

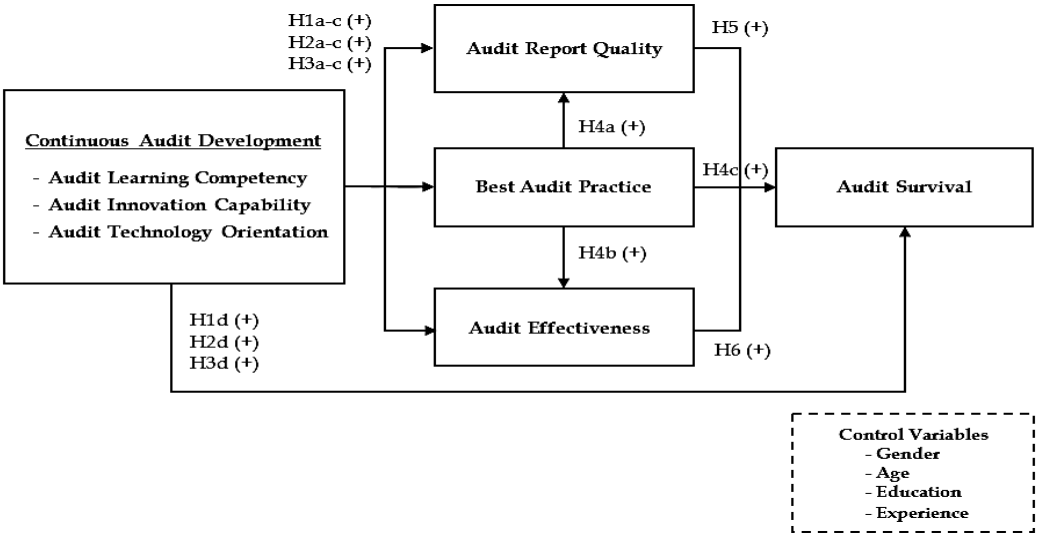

Figure 1: Conceptual Model of Continuous Audit Development and Audit Survival

2.1 Continuous Audit Development

Continuous Audit Development has been studied from many perspectives. In this paper, Continuous Audit Development is an ongoing effort to improve products, services, or processes of auditors which is focused on learning competency, audit innovation, and audit technology to deliver maximum value to customers in the most efficient way. These efforts can seek incremental improvement over time or breakthrough improvement all at once. Karen J. et al. (2007) defined continuous development as an infinite

gradations which are focused on increasing the efficiency and effectiveness of an organization to achieve its policy and objectives. For audit profession, auditors with greater continuous learning have the potentiality to advance their skills and empowerment in their careers (Maurer and Weiss, 2010). Thus, continuous professional development by lifelong learning as one element can help auditors to deliver maximum value to their customers in the most efficient way (IFAC, 2010). Yet, others view continuous improvement as either as a totally new method of enhancing innovativeness and accomplishing competitive excellence in today's business sector(W. Edwards Deming, 2002; Oakland, 1999; Coffin, 1999; Gallagher et al., 1997). In recent years, significant advancement in information technology, fast growing economic activities, and rapidly changing market have generated numerous opportunities for continuous improvement innovations. Therefore, continuous incremental innovation and technology are key elements to strong competitions in modern audit service. Also, the three components of continuous audit development that the author defines in this study are audit learning competency, audit innovation capability, and audit technology orientation as shown in Figure 1.

Audit Learning Competency

Prior research defined competency as the ability to perform tasks including the knowledge and skills in which an individual is required to perform the work in accordance with the auditing standards described (Holmes, 2005; Palmer et al., 2004; Uachanachit and Ussahawanitchakit, 2012). In this study, audit learning competency refers to Audit learning competency which is regarded as an ability to pursue new knowledge and skills through education and training in accordance with the auditing standards described to continuous development audit programs. The International Education Standards for Professional Accountant (IESs) that has been developed be the International Federation of Accountants (IFAC) consists of eight international education standards. IESs ensure high quality performance by developing the skills, and providing continuous improvement and lifelong learning of professional accountants. Learning is one of the commitments of professional accounting values, ethics, and attitudes that the accounting profession practices, which can be noted in IES4 (IAESB, 2010; IFAC, 2003). Learning is the effective means in the quest to achieve sustainable development in performance (Jiang and Li, 2008) and these ensure that the audit report is correct as to gain confidence from customers (Reed et al., 2009). Furthermore, the auditor's learning has an impact on audit efficiency and effectiveness that lead to lower costs and affect auditor's ability to compete in audit service. Thus, the hypothesis is proposed as follows:

Hypothesis 1: The higher the audit learning competency is, the more likely that tax auditors will gain greater (a) best audit practice, (b) audit report quality, (c) audit effectiveness, and (d) audit survival.

Audit Innovation Capability

Audit innovation capability is defined as the ability to seek and create new audit technique and different methods to achieve audit goals and audit service. This relate with new concepts of work, or calling attention to new practices about work processes (Wong and Cheung, 2008). Accounting professionals are often asked to discern the true nature of a situation and then determine the principles and techniques needed to solve problems or make judgments. Thus, accounting profession should display effective problem-solving and decision-making skills, good insight, judgment, innovation and creative thinking (AICPA, 2005). Consistent with the research of Stanley and Marsden (2012), and Bonk and Smith (1998), they have shown that when auditors have audit creativity development, it can enhance their best practice to solve problems that occurred during verifying of audit work in each situation. Due to differentiation in each customer, continuous improvement innovation in audit practice is the way to complete performance auditing as intended (Hsu and Sakai, 2009; Kaciuba, 2012) The accountability of the auditor may improve performance for the required knowledge or problem-solving ability and is helpful to introduce decision aids to increase excellent operations that lead to sustainability (Tangpinyoputtikhun and Thammavinyu, 2011). Also, audit creativity development plays a crucial role in innovation, and innovation is essential for continuous success and survival (Martins and Terblanche, 2003). Thus, the hypothesis is proposed as follows:

Hypothesis 2: The higher the audit innovation capability is, the more likely that tax auditors will gain greater (a) best audit practice, (b) audit report quality, (c) audit effectiveness, and (d) audit survival.

Audit Technology Orientation

Audit technology orientation refers to the emphasis on using modern technology continuously such as computer, software programs, and information technology to give an auditor the ability to perform more extensive calculations with greater mobility, ease, speed, accuracy, quickly accumulate data, generate reports and quickly and clearly communicate the results (Wallace, 2002). Currently, technology can greatly improve the

efficiency and effectiveness of an audit (Curtis and Payne, 2008). Auditors widely use technology in their operations containing analytical procedures, audit reporting, electronic documents, Internet search tools, and sampling to enhance audit effectiveness and efficiency (Janvrin et al., 2008).

Consistent with AICPA (2001), it reported that technology use could reduce audit hours for the task, the ability to test all transaction better than sampling, and testing transactions much more reliability. Beside technology use could reduce the time and improve the quality of audit judgments by providing decision tools (Manson et al., 1998). It also enhances information and knowledge-sharing capabilities, and providing reliable financial statements to customers. (Lennox 1999a, 1999b; Palmrose 1988; Vera et al., 2006). Previous research has documented that there are differences in the use of technology between large audit firms as big 4 and small audit firms. Big 4 firms provide greater quality audits and greater reliable financial statements to clients than small audit firms (Lennox 1999a, 1999b; Palmrose 1988). Due to small audit firms, they will more likely to unable to contend with bigger in light of technology investment (Public Oversight Board [POB] 2000; General Accounting Office [GAO] 2003). However, audit firms and auditors who have used IT applications have also an increasing number of clients (International Accounting Bulletin 2005). Thus, the hypothesis is proposed as follows:

Hypothesis 3: The higher the audit technology orientation is, the more likely that tax auditors will gain greater (a) best audit practice, (b) audit report quality, (c) audit effectiveness, and (d) audit survival.

2.2 Best Audit Practice

Best audit practice is the mediating effect of relationship between continuous audit development and audit survival. It refers to the auditors who have knowledge in the operation of the norms in auditing, adopting of innovative use to audit planning, complete of risk assessment, integration of audit evidence (Garcia-Benau and Zorio, 2004; Messier et al., 2005; Cianci and Bierstaker, 2009; Wangcharoendate, and Ussahawanitchakit, 2010; McKnight and Wright, 2011). Norman et al. (2008) point out that auditors, with best audit practice, always monitor the work to comply with the legal requirements and the auditing standards that affect the increase of effectiveness of a performance audit. Higher sufficient evidence from the best audit practice lead to determine the quality of audit report. It represents a specific test and is suitable for the evaluation of the evidence in the audit report (Messier et al., 2005; Francis, 2011). Consistent with Garcia-Benau and Zorio (2004) documents of best audit practice gives client confidence and reliabilitye in tax auditors' opinions which contained in the audit report. In addition, best audit practice brings to audit efficiency. It can help gather sufficient audit evidence about the facts in the report and recommendations to help prevent and reduce the risk of business operations for clients (DeZoort et al., 2012). Furthermore, implementation of best technology can increase the convenience and sudden time of search, extensively integrative audit evidence from various sources, and always recognizes that the effective implementation of technology provides clear, accurate, and reliable information useful for inside and outside users (Chan and Vasarhelyi, 2011). Therefore, best audit practice is an insurance to protect client from fraud risk. As a result. It enables the auditor to be sustainable in the profession (Bröcheler et al., 2004; Francis, 2011). These can be seen that auditors with more of best audit practices are likely to provide audit report quality, and audit effectiveness and audit survival. The related hypotheses are postulated as follows:

Hypothesis 4: The higher best audit practice is, the more likely that tax auditors will gain greater (a) audit report quality, (b) audit effectiveness, and (c) audit survival.

2.3 Audit Report Quality

Audit report quality is the mediating effect of relationship between continuous audit development and audit survival. It is defined as an auditor preparing the audit report with the corresponding objective, presentation of audit reports on time, and a fairly honest and without bias correspondence with the realities of the business operation of clients, with transparency and clearness (Velayutham, 2003; Martin, 2007; DeZoort et al., 2008; Habib and Bhuiyan, 2011). The audit report is a formal opinion issued by an auditor as a result of an evaluation performed on an auditee. Audit report is subsequently presented to various users such as individuals, group of persons, companies, government agencies, or even the general public, among others as an assurance service in order for the user to make decisions based on the results of the audit. To express an opinion on the accuracy of the financial statements of the client, the audit report must conform to generally accepted accounting principles (DeFond and Francis, 2005). Audit report quality is the final result of the audit process and a communication to a tax auditor's client about their work (Geiger and Raghunandan, 2002). The auditing standards provide the essentialguidance and information required to meet the compliance needs of audit and increase the accuracy of auditor's reports that implement audit quality and lead to audit survival

(Gullkvist and Jokipii, 2013). Audit report directly relates to audit survival. Kaplan and Williams (2013) point out that the going concern report has a negative relationship with auditor litigation, especially auditors who have a reputation. In other words, auditors need to maintain their reputation for survival in the profession by expressing quality report. Consistent with Uachanachit et al., (2012) and Pongsatitpat et al., (2013), they find that audit survival is directly related to the perceived and actual levels of quality reflected by the auditor's report. Therefore, to express an opinion on the accuracy and transparency of the client's financial statements, at the appropriate level of risk monitoring, is essential to increase the survival checked. The related hypotheses are postulated as follows:

Hypothesis 5: The higher audit report quality is, the more likely that tax auditors will gain greater audit survival.

2.4 Audit Effectiveness

Audit Effectiveness is the mediating effect of relationship between continuous audit development and audit survival. Audit effectiveness refers to the achievement of objectives of audit by assembling sufficient and appropriate audit evidence in order to get an opinion on the financial statements in accordance with audit standards. Stakeholders are demanding for the Audit effectiveness (Palmrose, 2006). Auditors operate their knowledge to increase professionalism development through upward reliability of audit effectiveness, increasing excellence operation, and sustainability that lead to survive the professional audit (Tangpinyoputtikhun and Thammavinyu, 2011). In addition, the auditor's learning has an impact on audit efficiency and audit effectiveness by reducing audit cost and also strengthening the auditor's client knowledge that supports audit survival (Wu, 2006). Besides, dynamic audit competency has a positive influence on audit effectiveness and audit survival. Therefore, auditors with higher audit effectiveness tend to obtain greater audit survival. The related hypotheses are postulated as follows:

Hypothesis 6: The higher audit effectiveness is, the more likely that tax auditors will gain greater audit survival.

3. Research Methods

3.1 Sample Selection and Data Collection Procedure

The sample for the study consists of 164 tax auditors. The details of tax auditor's shows2, 988 TAs from online database of tax auditors in Thailand, the Revenue Department, Ministry of Finance (www.rd.go.th on June 25, 2015). In the sample selection of this research, the 400 TAs were systematically selected by using random sampling procedure following Krejcie and Morgan (1970). A questionnaire mailed survey was used to collect data. The 167 responses were received as the survey and 3 who received questionnaire were incomplete. 42 mailed of the mailed survey questionnaire were undeliverable because there are unclear locations and had move to unknown locations. Removing the undeliverable from the initial 400 mailed, the valid mailing were 358 surveys. Thus, 164 responses were completed and usable with an effective response rate of approximately 45.81%. As with Aaker, Kumar and Day (2001), the response rate of appropriate follow-up procedure for a mail survey, it should greater than 20% is considered acceptable.

Finally, to test non-response bias and to detect possible problems with non-response errors, a non-response bias test is conducted by comparing early and late responses of the demographic data. The assessment and investigation of non-response bias was centered on the comparison of the first wave and second wave data as recommended by Armstrong and Overton (1977). The results were not significantly different between early and late responses. Therefore, the received questionnaires had no non-response bias.

3.2 Measurements

To measure each construct, all variables were obtained from the survey and measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). As result, all constructs in the conceptual model were developed for measuring from the definition of each construct. Also, the variable of the dependent variables, independent variables and control variables of this study are described as follows:

Independent Variables

Continuous audit development is defined as an ongoing effort to improve products, services, or processes of auditors to deliver maximum value to customers in the most efficient way and can remain sustainable existence in auditing profession. These efforts can seek incremental improvement over time or breakthrough improvement all at once. This variable includes five dimensions: audit learning competency, audit innovation capability, and audit technology orientation.

*Audit learning competency(COM)*is defined as an ability to pursue new knowledge and skills through education and development audit programs in accordance with the auditing standards described (Holmes, 2005; Palmer et al., 2004; Uachanachit and Ussahawanitchakit, 2012). This construct is developed as a new scale from the definition and literature including five item scales.

Audit innovation capability (INO) is defined as the ability to seek and create new audit technique and different method to achieve audit goals and audit service (Wong and Cheung, 2008; Martins and Terblanche, 2003). This relates with new ideas, being suspicious of work, or pointing out new practices about work processes. This construct is developed as a new scale from the definition and literature including five item scales.

*Audit technology orientation(TEC)*refers to the emphasis on using modern technology continuously such as computer, software programs, and information technology to give auditors the ability to perform greater efficiency and effectiveness on the audit process and output (Wallace, 2002; Curtis and Payne, 2008). This construct is developed as a new scale from the definition and literature including five item scales.

Consequent variables

Best audit practice(PRAC) refers to the auditors who have knowledge in the operation of the norms in auditing, adopt innovative use to audit planning, complete of risk assessment and integrate audit evidence (Garcia-Benau and Zorio, 2004; Messier et al., 2005; Norman et al., 2008; DeZoort et al., 2012). This construct is developed as a new scale including six item scales.

Audit report quality(RPQ) is defined as an auditor preparing the audit report with the corresponding objective, presentation of audit reports on time, and a fairly honest and without bias correspondence with the realities of the business operation of clients, with transparency and clearness (Velayutham, 2003; Martin, 2007; DeZoort et al., 2008; Habib and Bhuiyan, 2011). This construct is developed as a new scale including four item scales.

Audit effectiveness (EFT) refers to the achievement of objectives of audit by assembling sufficient and appropriate audit evidence in order to get an opinion on the financial statements in accordance with audit standards. This construct is developed as a new scale including four item scales.

Audit survival (ASR) is a dependent variable of the study. It refers to existence of the professional auditor both in the present and in the future, and retaining existing clients and increasing new client that have been entrusted to an ongoing audit expression of survival for continuous professional development in the long term. (Bröcheler et al., 2004; Uachanachit et al., 2012; Pongsatitpat et al., 2013). Audit survival is measured by using five-items scale related to continued old clients, creating new clients, concerning client acceptation in fairy performance accordance with auditing standard. This construct is adopted from Mano et al. (2003), Mayhew (2001), Lim and Tan (2004), Uachanachit et al. (2012).

Control Variables

Gender has an impact on task (Zaman et al., 1997). Male accountants tend to resort to reasoning to solve the problem more than female accountants. Gender is likely to affect the competency of accounting process. In this study, gender is represented by a dummy variable including 0 (male) and 1 (female).

Age has an effect on the practices and performance of an audit (Firth, 2002). In this research, age is represented by a dummy variable including 0 (less than 40 years old) and 1 (more than 40 years old).

Education has an impact on audit effectiveness. Albrecht et al. (1988), Ratliff (1996) found that the greater the professional qualifications of auditors defined by the length of their professional training and educational level, it is positively related with the effectiveness of audit work. In this research, education is represented by a dummy variable including 0 (bachelor degrees) and 1 (higher than bachelor degrees)

Audit experience is measured by using number of years in auditing. That may be expected to influence audit judgment and performance. Auditor experience influences the accurate judgment in control risk evaluation (Chung and Monroe, 2000). In this research, audit experience is represented by a dummy variable including 0 (below 5 years) and 1 (higher than 5 years)

3.3 Methods

To test reliability and validity, the study used Cronbach's alpha to test the reliability of the measurement. Coefficient alpha indicates the degree of internal consistency among items in questionnaires that should be greater than 0.70 (Nunnally and Berstein, 1994). Convergent validity was tested by the factor loading, each construct should be greater than the 0.40 cut-off and all factors are statistically significant (Nunnally and Berstein, 1994).

Table 1: Result of Measure Validation

Items	Factor Loadings	Cronbach'sAlpha
Audit Learning Competency (COM)	0.80-0.91	0.88
Audit Innovation Capability (INO)	0.77-0.91	0.90
Audit Technology Orientation (TEC)	0.75-0.89	0.88
Audit Report Quality (RPQ)	0.82-0.89	0.93
Best Audit Practice (PRAC)	0.83-0.89	0.89
Audit Effectiveness (EFT)	0.68-0.91	0.82
Audit Survival (ASR)	0.80-0.84	0.88

Table 1shows that factor loading of each item was loaded on one factor. Factor loading scores of all variables were 0.68 – 0.91, which is greater than the 0.4 cut-off and statistically significant. Furthermore, Cronbach's alpha coefficient for all variables were shown between 0.82 – 0.93, which is greater than .7. Therefore, all constructs of validity and reliability of measurement can be applied to further analysis.

3.4 Statistical Techniques

All dependent and independent variables in this study are the metric scale. Therefore, OLS regression is the appropriate technique to test and evaluate all hypotheses (Hair et al., 2010). The assumptions in the study were to transform into seven equations. The equation model is presented in the following.

Equation 1: PRAC $= \beta_0 + \beta_1 COM + \beta_2 INO + \beta_3 TEC + \beta_4 GEN + \beta_5 AGE + \beta_6 EDU + \beta_7 EXP + \varepsilon_1$

Equation 2: RPQ $= \beta_8 + \beta_9 COM + \beta_{10} INO + \beta_{11} TEC + \beta_{12} GEN + \beta_{13} AGE + \beta_{14} EDU + \beta_{15} EXP + \varepsilon_2$

Equation 3: EFT $= \beta_{16} + \beta_{17} COM + \beta_{18} INO + \beta_{19} TEC + \beta_{20} GEN + \beta_{21} AGE + \beta_{22} EDU + \beta_{23} EXP + \varepsilon_3$

Equation 4: RPQ $= \beta_{24} + \beta_{25} PRAC + \beta_{26} GEN + \beta_{27} AGE + \beta_{28} EDU + \beta_{29} EXP + \varepsilon_4$

Equation 5: EFT $= \beta_{30} + \beta_{31} PRAC + \beta_{32} GEN + \beta_{33} AGE + \beta_{34} EDU + \beta_{35} EXP + \varepsilon_5$

Equation 6: ASR $= \beta_{36} + \beta_{37} PRAC + \beta_{38} RPQ + \beta_{39} EFT + \beta_{40} GEN + \beta_{41} AGE + \beta_{42} EDU + \beta_{43} EXP + \varepsilon_6$

Equation 7: ASR $= \beta_{44} + \beta_{45} COM + \beta_{46} INO + \beta_{47} TEC + \beta_{48} GEN + \beta_{49} AGE + \beta_{50} EDU + \beta_{51} EXP + \varepsilon_7$

4. Results and Discussion

In Table 2, the descriptive statistics and correlation matrix for all variables are presented. As a result, the potential problems are related with multicollinearity, all correlation coefficients of independent variables are smaller than 0.80, and all variance inflation factors (VIFs) values range from 1.217 to 2.996 well below the cut-off 10 as recommended by Hair et al. (2010), meaning the independent variables are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study.

Table 2: Descriptive Statistics and Correlation Matrix

Variables	COM	INO	TEC	PRAC	RPQ	EFT	ASR	GEN	AGE	EDU	EXP
Mean	4.48	4.31	4.21	4.42	4.39	4.31	4.24	4.48	4.31	4.21	4.42
S.D.	0.41	0.48	0.47	0.45	0.44	0.46	0.53	0.41	0.48	0.47	0.45
COM	1										
INO	.758***	1									
TEC	.482***	.568***	1								
PRAC	.583***	.609***	.377***	1							
RPQ	.526***	.580***	.512***	.695***	1						
EFT	.633***	.597***	.385***	.778***	.711***	1					
ASR	.471***	.478***	.333***	.667***	.647***	.709***	1				
GEN	-.002	-.013	.017	-.015	.029	.037	.156**	1			
AGE	-.035	.081	.059	.133	.095	.131	.051	-.299***	1		
EDU	-.010	.036	-.025	-.117	-.018	-.026	.085	.142	-.206**	1	
TIME	-.083	-.034	-.102	.037	.089	.074	.235**	-.001	.191*	.193*	1

***p<.01, **p<.05, *p<.10

The results of the OLS regression analysis of the relationships among continuous audit competency, accounting practice efficiency, and job success are presented in Table 3.

Table 3 presents the results of OLS regression analysis of the relationships between the three dimensions of continuous audit competency, best audit practice, audit report quality, audit effectiveness, and audit survival. Continuous audit competency include audit learning competency, audit innovation capability, audit technology orientation.

IndependentVariables	Dependent Variables						
	Model1	Model2	Model3	Model4	Model5	Model6	Model7
	PRAC	RPQ	EFT	RPQ	EFT	ASR	ASR
Audit Learning Competency (COM)	.300**	.194**	.456***				.288**
	(.094)	(.095)	(.092)				(.100)
Audit Innovation Capability (INO)	.372***	.285**	.226**				.212**
	(.100)	(.101)	(.098)				(.107)
Audit Technology Orientation (TEC)	.021	.267***	.038				.096
	(.074)	(.075)	(.072)				(.079)
Best Audit Practice (PRAC)				.698***	.778***	.264**	
				(.058)	(.050)	(.085)	
Audit Report Quality (RPQ)						.201**	
						(.075)	
Audit Effectiveness (EFT)						.349***	
						(.086)	
Gender(GEN)	.066	.097	.168	.074	.113	.249	.343**
	(.129)	(.131)	(.126)	(.122)	(.106)	(.107)	(.138)
Age (AGE)	.157	.082	.247	.029	.105	-.063	.082
	(.135)	(.136)	(.131)	(.126)	(.109)	(.110)	(.143)
Education (EDU)	-.263**	-.091	-.072	.103	.125	.141	.031
	(.127)	(.129)	(.124)	(.120)	(.105)	(.105)	(.136)
Audit experience (EXP)	.198	.325**	.242	.115	.053	.394***	.601***
	(.144)	(.146)	(.140)	(.135)	(.118)	(.118)	(.154)
Adjusted R^2	.413	.397	.443	.475	.602	.600	.332

***p<.01, **p<.05, *p<.10, a beta coefficients with standard errors in parenthesis.

Table3: Results of Regression Analysis

For the continuous audit competency dimensions, the results show that audit learning competency (COM) has a significant positive influence on best audit practice (β1 = .300, p<0.05), audit report quality (β9 = .194, p<0.05), audit effectiveness (β17 = .456, p<0.01), and audit survival (β45 = .288, p<0.05). Hence, audit learning competency becomes a key determinant of driving and explaining best audit practice, audit report quality, audit effectiveness, and audit survival. This is consistent with IAESB (2010), IFAC (2003), and Jiang and Li (2008) who document that providing continuous improvement and lifelong learning will lead to high quality and sustainable performance. Also, this result consistent with Reed et al. (2009) who point out that learning is to ensure that the audit report is correct as to gain confidence from customers. **Therefore, Hypotheses 1a, 1b, 1c and 1d are supported**

The second dimension of continuous audit competency, audit innovation capability (INO) has a significant positive influence on best audit practice (β2 = .372, p<0.01), audit report quality (β10 = .285, p<0.05), audit effectiveness (β18 = .226, p<0.05), and audit survival (β46 = .212, p<0.05). Hence, audit innovation capability becomes a key determinant of driving and explaining best audit practice, audit report quality, audit effectiveness, and audit survival. This is consistent with AICPA (2005), Wong and Cheung (2008), Stanley and Marsden (2012), Bonk and Smith (1998), Hsu and Sakai (2009), Kaciuba (2012) find that audit creativity development can be enhance the best practice to solve problems or make judgments that occurred during verifying of audit work in each situation. In the same way, Tangpinyoputtikhun and Thammavinyu (2011), reveal that audit creativity development plays a crucial role in innovation, and innovation is essential for continuous success and survival. **Therefore, Hypotheses 2a, 2b, 2c and 2d are supported**

The last dimension of continuous audit competency, audit technology orientation (TEC) has a significant positive influence on audit report quality (β11 = .267, p<0.01). Consistent with Wallace (2002) who documents that the continuous evolution of hardware and software gives auditor the ability to perform more extensive calculations with greater mobility, ease, speed, accuracy, quickly accumulate data, generate reports and quickly and clearly communicate the results. **Thus, Hypothesis 3b is supported**. The findings surprisingly indicate that audit technology orientation has no significantly related to best audit practice (β3 = .021, p>0.05), audit effectiveness (β19 = .038, p>0.05), and audit survival (β47 = .096, p>0.05). **Therefore, Hypotheses 3a, 3c and 3d are not supported**. The cause may be due to the costs and benefits of their operation, the nature of their current clients with less complex IT or lower confidence in their technological abilities. Wallace (2002) documents that using of technology in auditing could be costly with high technology investments. Some applications are not

easy to implement, and necessary to training classes. As with Janvrin et al. (2008) indicate that auditors recognize numerous applications as important, but use them infrequently. Auditors will be used only to clients with complex IT and they perceived importance vary by audit firm size. In addition, implementing high technology clients are associated with increases in audit fees (Masli et al., 2010). The other side, Braun and Davis (2003) point out that auditors trended to perceive the advantages of computer assisted audit tools and techniques; however, they demonstrated less confidence in their abilities in using the application. In Thailand, tax auditors' clients are only partnership enterprises that are less complex IT and lower audit fee. Using technology may not worth in this situation. So, the audit technology orientation was not association to best audit practice, audit effectiveness, and audit survival.

In Addition, the relationships among best audit practice on audit report quality, and audit effectiveness show that best audit practice has a significant positive influence on audit report quality ($\beta 25 = .698$, $p<0.01$), and audit effectiveness ($\beta 31 = 778$, $p<0.01$). Hence, best audit practice becomes a key determinant of driving and explaining audit report quality and audit effectiveness. Consistent with Norman et al. (2008), Messier et al. (2005), Francis (2011), Garcia-Benau and Zorio (2004), and DeZoort et al. (2012) find that best audit practice, always monitor the work to comply with the legal requirements and the auditing standards that affect the increase of effectiveness of a performance audit. It can help gather sufficient audit evidence about the facts in the report and recommendations to help prevent and reduce the risk of business operations for clients. **Therefore, Hypotheses 4a and 4b are supported.**

The relationships among best audit practice, audit report quality, and audit effectiveness on audit survival reveal in table 3. The results found that best audit practice, audit report quality, and audit effectiveness have a significant positive effects on audit survival ($\beta 37 = .264$, $p<0.05$; $\beta 38 = .201$, $p<0.05$; $\beta 39 = .349$, $p<0.01$). Hence, best audit practice, audit report quality, and audit effectiveness become a key determinant of driving and explaining audit survival. Consistent with Bröcheler et al. (2004), Francis (2011), they document that best audit practice as an insurance to protect client from fraud risk. While, auditors need to maintain their reputation and litigation avoidant by expressing quality report (Kaplan and Williams, 2013; Uachanachit et al., 2012; Pongsatitpat et al., 2013). Moreover, auditors always operate their knowledge to increase professionalism development through upward reliability of audit effectiveness, increasing excellence operation, and sustainability (Tangpinyoputtikhun and Thammavinyu, 2011). Of all finding results, they enable the auditor to be sustainable in the profession. **Therefore, Hypotheses 4c, 5 and 6 are supported.**

5. Contributions and Directions for Future Research

5.1 Theoretical Contributions and Directions for Future Research

This study adds to the previous empirical evidence in the area of continuing professional development (CPD) research for audit profession. The finding provides contributions for tax auditors, regulators, and accounting researchers to concern about ability of tax auditors to survive in today's competitive environment. Innovation and technology are equally important as learning competency. Prior research focuses only on audit learning competency to improving audit professional. There is much few research that combines the audit learning competency with innovation capability and technology orientation in to continuous professional improvement. Under professional competition, the resource-advantage theory (R-A theory) explains that resource of auditing, including the audit method, audit knowledge, audit innovation, and audit technology can help auditors gain a competitive advantage. Thus, this research was conducted to prove the theory by developing new dimensions of continuous audit development that consist of audit learning competency, audit innovation capability, and audit technology orientation. Our finding suggests that audit learning competency and audit innovation capability could increase effectiveness, efficiency, and quality in the audit task and audit report. Finally, it can help auditors to have greater audit survival. Whereas audit technology orientation is not available, the result is importance to provide standard setters with information to assistance auditors to remain competitive and survival in their profession. Furthermore, they have raised concern about the barriers on the use of technology tax auditors. Future research could investigate factors affecting present and future technology tax auditor use.

5.2 Managerial Contributions

This study will definitely help auditors identify and justify key components of continuous audit development that may be more critical in auditing profession in order to achieve audit survival, and to succeed in the present and future auditing professions. The research shows that with increase in audit competency and audit innovation it may be valuable for audit task, audit report quality, and greater audit survival. These

finding suggest that tax auditors in Thailand can survive in their profession without the need of technology use. Because they focus on audit learning competency, audit innovation capability to support best audit practice, audit report quality, and audit effectiveness in order to achieve their effectiveness and create new opportunities in the auditing professions. The cause may be due to the costs and benefits of their operation, the nature of their current clients with less complex IT or lower confidence in their technological abilities. Consistent with Wallace (2002), Janvrin et al. (2008), Masli et al. (2010), and Braun and Davis (2003), they document that using of technology in auditing could be costly with high technology investments. Auditors will be used only to clients with complex IT and they perceived importance vary by audit firm size. In addition, implementing high technology clients associated with increases in audit fees.

In Thailand, tax auditors' clients are only partnership enterprises that are less complex IT andlower audit fee. Using technology may not be worthy in this situation. Future research could examine how auditor from different backgrounds impact technology use. In addition, because of the limitation, this research uses only tax auditors in Thailand sample. Future research should improve the sample such as CPAs, Internal auditors, Governmental auditors in Thailand and other countries to results in generalizability.

6. Conclusion

Continuous audit development is one of importance elements to achieve audit service and existence in present and future audit profession. Continuous audit development is defined asan ongoing effort to improve products, services, or processes of auditors to deliver maximum value to customers in the most efficient way possible and can remain sustainable existence in auditing profession. Previous research indicates that learning competency could lead to a sustainable improvement in performance. Some researchers argue that audit innovation and audit technology could increase audit quality and productivityand auditor's reputation. Therefore, this study has developed the dimension of continuous audit development in three elements: audit learning competency, audit innovation capability and audit technology. The purpose of this study is to investigate the influences of continuous audit development on audit survival by utilizing best audit practice, audit report quality and audit effectiveness as the mediating variable. According to this objective, the study used mailed survey of questionnaire analysis of 164 tax auditors in Thailand. Data were analyzed using ordinary least square (OLS) regression analysis.

The overall results are consistent with the hypotheses. One of the three dimensions namely audit, technology andorientation; however, failed to exhibit a significant relation on mediating variables and audit survival variable. Audit learning competency and audit innovation capability becomes a key determinant of driving and explaining best audit practice, audit report quality, audit effectiveness, and audit survival. Prior research points out that providing continuous improvement and creativity development can enhance the best practice to solve problems or make judgments that occurred during verifying of audit work in each situation (Wong and Cheung, 2008; Stanley and Marsden, 2012; Bonk and Smith, 1998; Hsu and Sakai, 2009; Kaciuba, 2012) and also lead to high report quality and sustainable performance (IAESB, 2010; IFAC, 2003; Jiang and Li, 2008). As a result, customers achieve greater certainty. (Reed et al., 2009), it becomes more famous, and increases the number of customers (Tangpinyoputtikhun and Thammavinyu, 2011). Consistent with the resource-advantage theory (R-A theory), it explains that resource of auditing, including the audit method, audit knowledge, and audit innovationcan help auditors gain a competitive advantage.

The lack of significant result suggests that audit technology orientation not associated with best audit practice, audit effectiveness, and audit survival. However, there is significant positive relationship with audit report quality. This surprisingly finding indicated that technology use was not necessary to tax auditor task and survival of their profession. In Thailand, tax auditors' clients are only partnership enterprises that are less complex IT and lower audit fee. Implementing high technology clients associated with increases in audit fees. Future research could examine how auditor from different background impact technology use. As its limitation, this research only focused onThai tax auditors. Future research should improve the sample such as CPAs, Internal auditors, Governmental auditors in Thailand and other countries to results can be generalized to practice. Furthermore, future research could examine how auditors from different backgrounds impact technology use by in-depth interview in order to verify the generalizability of the study and increase its reliability.

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