



**International Journal of Business Innovation and Research**

ISSN online: 1751-0260 - ISSN print: 1751-0252

<https://www.inderscience.com/ijbir>

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**DOI:** [10.1504/IJBIR.2021.10047005](https://doi.org/10.1504/IJBIR.2021.10047005)

**Article History:**

Received:

Accepted:

Published online:

05 April 2023

# The effect among innovative accountant competency, business management efficiency, financial reporting quality, and firm growth

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**Abstract:** This study aims to examine the effect of innovative accountants' competency on firm growth through the mediating effect of business management efficiency and financial reporting quality, and to examine the effect of innovative accountants' competency on the firm image through the mediating effect of financial reporting quality. A total of 441 accounting directors were chosen as the sample, and the data were collected. The results of the structural equation model (SEM) of the analysis model's fit index of innovative accountant competency are indicated by the index examining the absolute quality of fit measure. Additionally, the results of ordinary least squares (OLS) regression analysis show that innovative accountant competency indirectly impacts firm growth. Business management efficiency and financial reporting quality are mediators of innovative accountant competency-firm growth. Additionally, innovative accountant competency indirectly impacts the firm image. Financial reporting quality is also the mediator of innovative accountant competency-firm image relationships in this study.

**Keywords:** innovative accountants' competency; business management efficiency; BME; financial reporting quality; FRQ; firm growth; firm image.

**Reference** to this paper should be made as follows: Ditkaew, K. (2023) 'The effect among innovative accountant competency, business management efficiency, financial reporting quality, and firm growth', *Int. J. Business Innovation and Research*, Vol. 30, No. 4, pp.580–607.

**Biographical notes:** Kanthana Ditkaew earned her PhD in Accounting (2010) from the Mahasarakham University, Thailand. She is an Associate Professor in Accounting at the Rajamangala University of Technology Lanna Tak, Thailand. She also published quite a number of SCOPUS indexed journals in the field of accounting and business administration in addition to presenting several papers at local and international conferences. Her research interests include accounting, managerial accounting, accounting information system and international business (ORCID <http://orcid.org/0000-0003-1723-0657>).

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## 1 Introduction

A digital economy is one in which commercial organisations rely on information technology for economic activity, resulting in changes in the information, communication, and technology used. It was discovered that data access and storage were

straightforward for business organisations that employ technology such as mobile phones to support operations using an online e-payment system. In comparison to the past, it may be done in vast quantities. The following are examples of how the digital economy influences the accounting profession: cloud computing data automation and e-payment (FAP, 2016). Additionally, the accounting profession is influenced by digital disruption and e-commerce trends, which transform the way firms function. Consequently, in the accounting innovation era, accountants must build knowledge and knowledge management to be employed in the organisation's development. The present evolution of accounting has resulted in more complicated transactions, necessitating the use of an enterprise resource planning system (ERP) to integrate the functions of all departments within a business until artificial intelligence (AI) technology is used to assist in the analysis of massive amounts of data in a short length of time. Blockchain technology will be applied to accounting work in the future, allowing accounting transactions to be recorded simultaneously between the two trading partners without any third party because a separate account database can be shared. Accountants have become aware that AI would supplant their work due to the aforementioned technological advances. New enterprises and jobs are created as a result of technological advancements. Future workers will require new abilities, particularly technological and digital skills, to work with robotics and automation, increasing pressure on accountants to learn new skills. This follows the World Economic Forum's (2018) *The Future of Jobs Report 2018*, which polls entrepreneurs worldwide about the importance of skill development. According to the workforce, 54% will need to reskill or upskill by 2022. Skills included analytical and innovative thinking, creativity, originality, and human abilities such as understanding others' minds and feelings (Chantapong and Pornpattanaphaisankul, 2021).

Accounting information presented by accountants in the period of accounting innovation must be current, relevant to corporate operations, and beneficial to management's decision-making and planning for efficient operations. Continual expansions of the company and, as a result, its activities, continue to be successful (Boonruang et al., 2019). Including the presentation of efficient, thorough, accurate, and timely financial reports in decision-making helps develop confidence for users and investors of financial reports, resulting in better investment decisions for the organisation (Houcine, 2017). On this day of disruptive technology, accountants must be creative thinkers who can reskill and upskill and have collaboration and partner abilities to give executives and owners a thorough grasp of the firm. They must also be able to use analytical tools and robotic process automation to improve accounting efficiency at a level that promotes value, reduces costs, and improves efficiency in work processes until innovation can be developed to support the work of financial planning executives in managing the organisation for profit and survival. According to the literature review, academics in accounting and business administration have studied innovation and accounting innovation more. For example, Sanchez et al. (2013), Tektüfekçi (2021), Saenubon (2019), Kardan et al. (2016), and Spence and Seargeant (2015) found that accounting innovation aids firms in becoming more efficient and better equipped to innovate and develop sustainably. However, the performance of effective innovation management must be accomplished by people or employees. Consequently, the focus points of this study are the effect of innovative accountants' competency on firm growth (FG) through the mediating effect of business management efficiency (BME) and financial reporting quality (FRQ), and to examine the effect of innovative accountants' competency on the firm image (FI) through the mediating effect of FRQ.

## 2 Literature review and development of hypotheses

### 2.1 Theory of knowledge-based view of the firm

Barney (1991) proposed that the concept of competitive advantage source:

- 1 value
- 2 rarity
- 3 imitability
- 4 non-substitutable are the fundamental characteristics of strategic resources that must be available.

In 1996, Kogut and Zander proposed a novel concept; knowledge is an important organisational resource. Knowledge results from a combination of study, investigation, experience, practical abilities, understanding skills, and information gained through experience (Rehman et al., 2015). Consequently, human resources can be viewed as valuable assets that can provide value to a firm. Investing in human resources is traditionally considered an expense that should be utilised sparingly and regulated to save money. However, it is now recognised that investing in human resource provides important assets for the firm. To innovation, competitiveness, and sustainability of the organisation, and from RBV, the RBV theory was later applied to create the knowledge-based theory of the firm or knowledge-based view (KBV), which considers organisational knowledge as a vital resource (Clarke and Rollo, 2001). The KBV indicated that organisational knowledge is a crucial matter that helps the organisation establish competitive advantages and enable good operational performance as aimed. Such knowledge is in each individual and can be transferred through organisational policies and culture, performance, document reports, and communication among employees. Consequently, there is the strategic management of organisational knowledge with the main objective to apply knowledge and skills about organisational resources to produce goods and services that yield competitive advantages from the capability to invent new products and processes and effectively improve the number of products that exist [Grant, (1996), pp.109–113, pp.114–118; Theriou and Aggelidis, (2009), pp.177–181; Rebolledo and Nollet, 2011]. According to the KBV theory, when an organisation has an accountant who can be innovative, the knowledge and adaptability of the accountant influences the efficiency of business management and offers innovative quality financial reports to them. The information from financial reports is used by users, and it is tied to the organisation's growth and excellent reputation.

### 2.2 Development of hypotheses

*Innovation* is the making and creation of new things and transforming ideas, production, or processes in a novel manner (Bock, 2015). Any business that makes a difference or innovates will obtain a competitive advantage. Particularly, companies listed on Thailand's Stock Exchange are extremely competitive and face digital challenges. Disruption has an impact on how a company runs. Another industry that this has impacted is the accounting profession. Consequently, in the accounting innovation era, accountants must build knowledge and knowledge management to be employed in the

organisation's development. The 'accounting innovation' era is a period of change and advancement in the efficiency of accounting technology innovation. It is a technological innovation in information and communication involving the application of technology to the development of accounting procedures. It creates applications for use on a cloud-based system that allows accountants to work from anywhere.

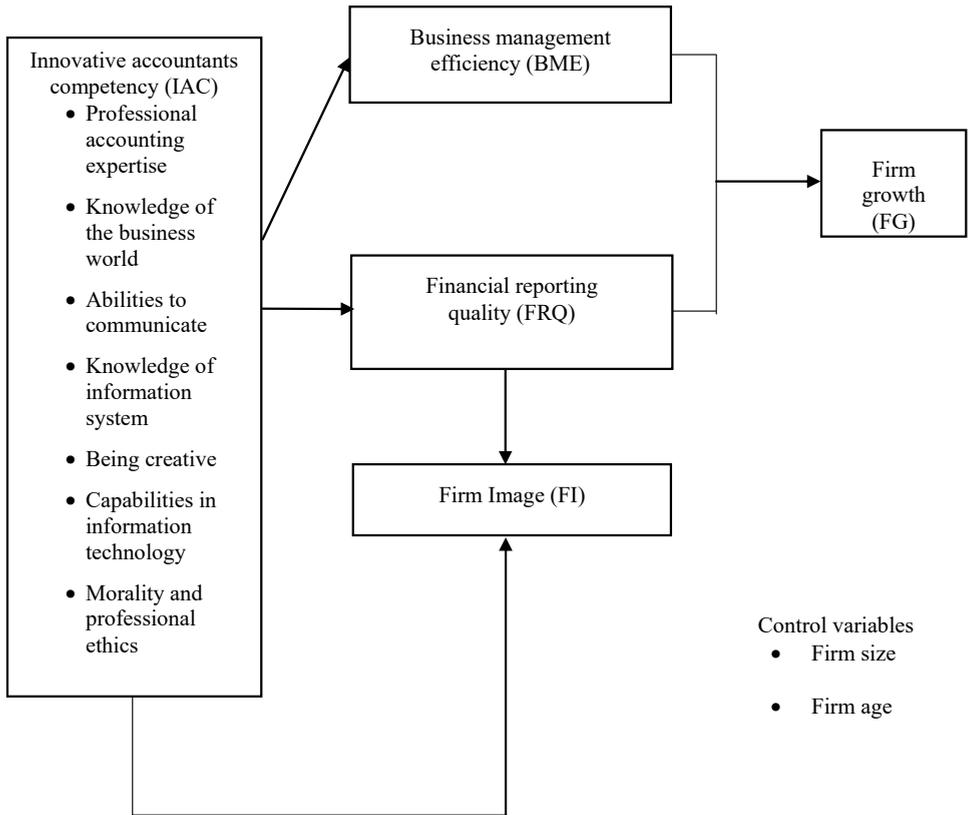
Additionally, it reads data from commercial documents and prepares it for entry into accounting systems using optical character recognition (OCR) technology. The format of accounting entries can be automatically recorded by learning to memorise transaction patterns. In the future, blockchain technology will also be used in accounting records that will be recorded automatically. It can be shown that the arising accounting innovations can provide job flexibility to satisfy the needs of accounting and financial management planning. Accounting innovation is dependent on the ability of the organisation's operator or accountant to learn new things. Therefore, the company's accountants have to adjust themselves to be innovative accountants who can gather information from finance, accounting, and financial information systems. Technology and understanding of various industries are applied together to create innovations that promote value, reduce costs, or increase efficiency in work processes as new knowledge (Chairat, 2021). This investigation states that using innovative accountants will improve non-financial and financial data quality by accounting innovation. *Non-financial information* is an accounting procedure established for business management in planning to operate and control to meet the entity's objectives while maximising the use of the entity's resources. It also aids in analysing circumstances such as costs and budgeting (Marius et al., 2012). According to Ditkaew and Jersittiprasert (2021), accounting information quality aids in planning, controlling, directing, decision-making, and cost management, offering businesses a long-term competitive advantage. Innovative accountants will develop novel ways to use data to shape management processes and increase added value. Additionally, Sari and Zenita (2014) stated that in an era of enterprise-focused efficiency and innovation, bringing accounting data to big data will enable executives to construct effective directions and plan to generate a competitive advantage.

Furthermore, the company's innovative accountants, who can apply technology and analytic tools to risk management, will give investors trust in the company's investment selections (Cupic, 2015). This is because the risk is what keeps the company from obtaining its anticipated competitive advantage. Organisations that employ technology as a corporate strategy will have a better chance of surviving in the future. and activities that can meet targets with efficiency and at full capacity per the set objectives.

While creative accountants ensure that financial reporting is of high quality, the quality of financial reporting that is beneficial in making economic decisions, according to Guney (2014) and Houcine (2017), must be prompt and complete in all sectors that are both quantitatively and qualitatively useful to decision-making. To expedite their work and respond to the company's planning, management, accounting, and financial reporting, these inventive accountants must create a responsive and responsive system. In addition to being better presented to outsiders, it can be viewed at any moment, resulting in more efficient investor decision-making, competitive advantage, and corporate growth. This corresponds to the job of accounting information systems, which display accurate and timely data. The accuracy of the data and the accountant's professionalism impact the quality of financial reporting and decision-making (Sittipatna and Ouon, 2018; Tontiset, 2018). Furthermore, accurate accounting information is important in comparing each organisation's financial statements to make an informed choice on whether to expand the

company (Chen et al., 2018). From the above, it leads to the following research Hypotheses H1–H4:

**Figure 1** Conceptual model



**Hypothesis 1** Innovative accountants’ competency,  
 a professional accounting expertise  
 b knowledge of the business world  
 c abilities to communicate  
 d knowledge of information systems  
 e being creative  
 f capabilities in information technology  
 g morality and professional ethics’ positive effect on BME.

**Hypothesis 2** Innovative accountants’ competency,  
 a professional accounting expertise  
 b knowledge of the business world  
 c abilities to communicate

- d knowledge of information systems
- e being creative
- f capabilities in information technology
- g morality and professional ethics' positive effect on FRQ.

Hypothesis 3a BME has a positive effect on FG.

Hypothesis 3b Business management mediates the relationship between innovative accountant competency and FG.

Hypothesis 4a FRQ has a positive effect on FG.

Hypothesis 4b FRQ mediates the relationship between innovative accountant competency and FG.

From the abovementioned innovative accountants' accounting innovation process, this study also examines whether accountants can develop new ideas that turn into economically relevant information for users. It is a vision that corporate executives support and pay attention to. Accountants are wired to learn and seek knowledge to keep up with change constantly. There was no direct investigation on the association between innovator accountants and corporate image in the literature review. Only one study is available to a qualified accountant. In addition to having knowledge and experience in various sciences not immediately relevant to the account, being a worker with a broad vision, expertise, and abilities on par with other accountants will bring value (Uttayarath, 2014). Keller's corporate image management in terms of value and corporate credibility is defined by this behavioral expression of self-improvement (Keller, 1998; Kotler, 2000). Consequently, this study focuses on the elements influencing corporate image in the disruptive technology era, whether the organisation has innovative accountants, and whether this impacts the corporate image. Additionally, according to the literature review, many studies have been conducted to identify elements that affect the organisational image, including studies on FRQ and broader studies on influencing factors, both direct and indirect influences to discover a means to improve the organisation's image (Anzib, 2015; Kiabel and Oyadonghan, 2015; Feleaga et al., 2016; Ali et al., 2019). FRQ refers to how financial data are communicated to internal and external parties to make economic decisions, financial situations, or changes in the financial position of firm performance reporting (FAP, 2021). Financial statements also examine the type of accounting data useful to financial statement readers. This provides financial statement preparers with guidelines and standards to follow when making decisions. An accounting system that benefit for all consumers of information, will aid financial statement users in understanding the benefits and limitations of accounting information. Furthermore, according to Kiabel and Oyadonghan (2015), the quality of an organisation's financial reports is a significant aspect in planning and decision-making by good executives, which can help a company project a positive image. From the above, it leads to the following research Hypotheses H5–H6:

Hypothesis 5 Innovative accountants' competency,

- a professional accounting expertise
- b knowledge of the business world

- c abilities to communicate
- d knowledge of information systems
- e being creative
- f capabilities in information technology
- g morality and professional ethics' positive effect on FI.

Hypothesis 6a FRQ positively affects the FI.

Hypothesis 6b FRQ mediates innovative accountant competency-FI relationships.

### 3 Research method

This study is quantitative using survey research methods. The sample used in this study was companies listed on the Stock Exchange of Thailand from 582 companies (The Stock of Exchange of Thailand, 2021). The sample was chosen for the study because it is a major corporation with much cash in hand, a competent management structure, and a financial reporting firm (Tontiset, 2018). Accounting directors are key informants because they are directly accountable for all accounting information, both financial and non-financial, that must be provided to senior management. The Human Research Ethics Committee at Rajamangala University of Technology Lanna (RMUTL-IRB 027/2021) approved the data collection for this study based on the criteria of the Declaration of Helsinki and The Declaration of Helsinki and International Conference on Harmonization in Good Clinical Practice (ICH-GCP). Regarding the questionnaire mailing, 441 responses were received. The effective response rate was approximately 75.77%. The response rate for a mail survey, with an appropriate follow-up procedure, if greater than 20%, is considered acceptable according to Aaker et al. (2001).

To construct and develop a tool, the researcher reviewed documents, textbooks, journals, and relevant research and then used questionnaires to create a tool that was used to collect data and was separated into six parts:

- Part 1 General information of respondents and general information about listed companies. The question type is a checklist.
- Part 2 Innovative accountants competency (IAC) means accountants have a wide variety of industry knowledge, including finance, accounting, financial information systems, and technology. This includes the capacity to use analytic tools and robotic process automation to boost accounting efficiency until new ideas can be developed. The features of innovative accountants were divided into 24-item questions, and the questionnaire was a Likert scale.
- Part 3 BME capability of business management, namely, reduce cost, increase productivity, and risk management developed from Silitonga and Setiawati (2018) and Ditkaew (2015) has eight items question, the questionnaire is a Likert scale.
- Part 4 FRQ is a qualitative component of how financial report information aids users in making economic decisions. The quality of financial reporting was assessed using 15 items across four domains in this study: quality, application, presentation, and

the function of the database system developed from Boonruang et al. (2019), Boonmuenwai et al. (2019); Tontiset (2018), Teru et al. (2017), Sittipatna and Ouon (2018) and Ditkaew and Jernsittiprasert (2021). The questionnaire is a Likert scale.

- Part 5 FG is a company that has improved performance compared to the previous year with 14 items developed from Teru et al. (2017), namely, the company's market share and revenue, operating net profit, and higher net profit-to-asset ratio; the questionnaire is a Likert scale.
- Part 6 FI is a business distinct from the rest of the company. In terms of a positive reputation from executives having a vision of providing excellent service, five items question developed from Salvioni (2003), Wu (2006), Teru et al., include the ability to respond effectively to interpersonal communication (2017); the questionnaire is a Likert scale.

The control variables are firm size (FS) and firm age (FA) because they affect the independent and dependent variables. FS indicates the scale of a firm, and firms of different sizes might be affected by government regulations. Furthermore, FA indicates that older organisations might be restricted by earlier investment in information, and such firms probably employ older and less-skilled employees, which affects FG (Pervan et al., 2017; Samosir, 2018).

The questionnaire was generated for the study to assess the tool's quality in two areas: content validity and reliability, as shown below.

- 1 Content validity: check language for consistency, accuracy, appropriateness, clarity, comprehensiveness, completeness, and appropriateness by employing item-objective congruence (IOC). This is an individual conformity index requiring that the IOC value must not be less than 0.5 to demonstrate that the measuring instrument meets the measured objectives (Polit and Beck, 2012). Three experts chose questions for the questionnaire with an IOC value greater than 0.5. The IOC analysis ranged from 0.67 to 1.00.
- 2 Reliability: the questionnaire was used to conduct a 50-set pilot test with nontarget sample groups to check relevant and appropriate questions. The questionnaire's confidence was then tested with the questionnaire confidence test package, which used Cronbach's alpha coefficient formula and the alpha criterion to calculate the questionnaire's confidence. Cronbach's alpha coefficient can be used to calculate the instrument's confidence level [Cronbrach, (1990), p.204]. The result should be greater than 0.7, suggesting that the questionnaire or questionnaires used in this study are reliable and capable of measuring the variable. To determine the questionnaire's confidence level: Cronbach's alpha coefficient was used to determine that the questionnaire's confidence level was between 0.729 and 0.908, which was regarded to pass the required standards.
- 3 Structure equation model (SEM) of innovative accountants' competency is measured by seven observed variables, which consist of
  - a professional accounting expertise
  - b knowledge of the business world
  - c abilities to communicate

- d knowledge of information systems
- e being creative
- f capabilities in information technology
- g morality and professional ethics.

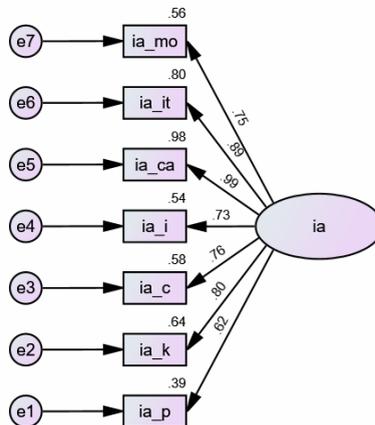
The results of the analysis model’s fit index of innovative accountant competency are indicated by the index examining the absolute quality of fit measure (Lee and Monhavgemi, 2015) using specified criteria. The model is concordant with empirical data of Hair et al. (2010) and Kline (2005) collected from samples, as presented in Table 1. Moreover, the model analysis results fit the research framework, as presented in Table 2. When considering the criteria of every key performance indicator, the empirical data and the factor analysis model are perfectly goodness-of-fit.

**Table 1** Results of the analysis of the model goodness-of-fit of innovative accountant competency

<i>Quality of fit measure</i>	<i>Model’s fit based on criteria</i>	<i>Statistics</i>	<i>Results</i>
Chi-square/df	Less than 3.00	4.876	Passed
p-value of Chi-square	More than 0.05	0.300	Passed
GFI	More than 0.90	0.995	Passed
AGFI	More than 0.90	0.968	Passed
CFI	More than 0.90	1.000	Passed
RMR	Less than 0.05	0.003	Passed
RMSEA	Less than 0.05	0.027	Passed

*Source:* Criteria recommended value refers to Lee and Monhavgemi (2015)

**Figure 2** Results of analysis of model goodness-of-fit (see online version for colours)



Notes: Chi-square = 4.876, df = 4, chi-square = 1.219, p = 0.300, GFI = 0.995, AGFI = 0.968, CFI = 1.000, RMR = 0.003, RMSEA = 0.027.

Furthermore, the software application was used to analyse the data collected from the questionnaire. To distribute the variables investigated, divide the data analysis into

fundamental data analysis of the respondents into descriptive statistics, such as the mean and standard deviation. Conclusively, a study of the association between empirical factors such as innovative accountant competency, BME, FRQ, FG, and FI was analysed by regression analysis to analyse the relationship between dependent variables and independent variables. Ordinary least squares (OLS) regression analysis was used to test the hypotheses. Several equations were formulated to examine all of those relationships related to hypotheses on each submodel.

**Table 2** Results of the analysis of the model fit of research framework

	<i>Observed variables</i>	<i>Validity (factor loadings)</i>	<i>R<sup>2</sup></i>
Innovative accountants (IA)	ia_p	0.62**	0.39
	ia_k	0.80**	0.64
	ia_c	0.76**	0.58
	ia_i	0.73**	0.54
	ia_ca	0.99**	0.98
	ia_it	0.89**	0.80
	ia_mo	0.75**	0.56
Business management efficiency	bme_rc	0.92**	0.74
	bme_pr	0.87**	0.61
	bme_rm	0.83**	0.72
Financial reporting quality	fr_d	0.75**	0.75
	fr_f	0.71**	0.74
	fr_c	0.79**	0.73
	fr_v	0.81**	0.67
	fr_t	0.73**	0.60
	fr_u	0.70**	0.67
Firm growth	fg_cu	0.86**	0.73
	fg_nf	0.81**	0.67
	fg_in	0.84**	0.65
Firm image	fi_i	0.72**	0.57
	fi_r	0.87**	0.56

Notes: \*\*p < 0.01; chi-square = 54.845; df = 24; chi-square/df = 2.24; p = 0.355; GIF = 0.992; AGFI = 0.988; CFI = 0.998; RMR = 0.032; RMSEA = 0.042.

#### 4 Results and discussion

The results of a descriptive statistical analysis of the respondent characteristics are presented in Table 3.

Table 3 presents the demographics of respondents as accounting directors who represent the firm to answer all questions in the questionnaire. Of the 441 participants with return questionnaires, approximately 74.15% of respondents are female, and the rest are male. In terms of age, 37.19% are more than 40 years old, and 24.04% are 30–40

years old. The most education level is bachelor's degrees, 56.24%, and 42.86% is a master's degree. For work experiences, 46.94% are more than 15 years, and 30.84% are 11–15 years. Operation capital is 100,000,001–150,000,000 Bath, which amounts to 55.10%. Operational years are more than 15 years, amounting to 50.08%.

**Table 3** Demographic characteristics of respondents

<i>Descriptions</i>	<i>Categories</i>	<i>Frequencies</i>	<i>Percent (%)</i>
Gender	Male	114	25.85
	Female	327	74.15
Age	Less than 30 years old	79	17.91
	30–40 years old	106	24.04
	41–50 years old	164	37.19
	More than 50 years old	92	20.86
Education level	Bachelor's degrees	248	56.24
	Master's degree	189	42.86
	Higher than master's degree or PhD	4	0.9
Work experiences	5–10 years	98	22.22
	11–15 years	136	30.84
	More than 15 years	207	46.94
Current operation capital	Less than 25,000,000 Bath	13	2.95
	25,000,000–50,000,000 Bath	141	31.97
	50,000,001–100,000,000 Bath	44	9.98
	100,000,001–150,000,000 Bath	243	55.10
Operational years	5–10 years	104	23.58
	11–15 years	113	25.62
	More than 15 years	224	50.80

**Table 4** descriptive statistics and correlation matrix analysis

<i>Variables</i>	<i>IAC</i>	<i>BME</i>	<i>FRQ</i>	<i>FG</i>	<i>FI</i>
Mean	4.38	4.27	4.37	4.27	4.26
Standard deviation	0.39	0.48	0.41	0.46	0.5
Innovative accountants competency (IAC)					
Business management efficiency	0.408***				
Financial reporting quality	0.565***	0.464***			
Firm growth	0.507***	0.548***	0.506***		
Firm image	0.681***	0.503***	0.712***	0.408***	

Note: \*\*\* $p < 0.01$ .

Additionally, the results of descriptive statistics and correlation matrix analysis of the variables are presented in Table 4. Multicollinearity might occur when the intercorrelation in each predicted variable is more than 0.80, which is a strong relationship (Hair et al., 2010).

**Table 5** Results of regression analysis for test hypotheses H1–H2 and H5

<i>Independent variables</i>	<i>Dependent variables</i>		
	<i>BME</i>	<i>FRQ</i>	<i>FI</i>
<i>Innovative accountants competency (IAC)</i>			
Professional accounting expertise	0.164*** (0.032)	0.201*** (0.010)	0.288*** (0.080)
Knowledge of the business world	0.388*** (0.040)	0.279*** (0.012)	0.511*** (0.117)
Ability to communicate	0.266*** (0.030)	-0.002 (0.009)	0.489*** (0.088)
Knowledge of information systems	0.273*** (0.038)	0.247*** (0.012)	0.359*** (0.086)
Being creative	0.265** (0.060)	0.339*** (0.019)	0.221*** (0.133)
Capabilities in information technology	0.316*** (0.047)	0.036** (0.015)	0.407*** (0.110)
Morality and professional ethics	0.264*** (0.033)	0.026** (0.010)	0.385*** (0.073)
Firm size	0.218 (0.041)	0.197 (0.059)	0.334 (0.942)
Firm age	-0.067 (0.062)	-0.220 (0.054)	-0.267 (0.061)
Adjusted R <sup>2</sup>	0.746	0.976	0.673
SEE	0.506	0.157	0.600

Notes: Sig. of F = 0.000, \*\*p < 0.05, \*\*\*p < 0.01.

Table 5 presents the results of the OLS regression analysis of the effect of innovative accountants competency that has certain dimensions, namely,

- 1 professional accounting expertise
- 2 knowledge of the business world
- 3 ability to communicate
- 4 knowledge of information systems
- 5 being creative
- 6 capabilities in information technology
- 7 morality and professional ethics have a positive, significant effect on BME and financial image.

Thus, Hypotheses 1a–1g are strongly supported. Here, innovative accountants and corporate image are examined. The results show that innovative accountant competencies have certain dimensions, namely

- 1 professional accounting expertise
- 2 knowledge of the business world
- 3 abilities to communicate
- 4 knowledge of information systems
- 5 being creative
- 6 capabilities in information technology
- 7 morality and professional ethics, and have a positive, significant effect on the financial image.

Thus, Hypotheses 5a–5g are strongly supported. Table 5 also shows certain dimensions of innovative accountant competency, namely,

- 1 professional accounting expertise
- 2 knowledge of the business world
- 3 abilities to communicate
- 4 knowledge of information systems
- 5 being creative
- 6 capabilities in information technology
- 7 morality and professional ethics, have a positive, significant effect on FRQ.

Thus, Hypotheses 2a–2b and H2d–H2g are supported, and H2c is not. First, an accountant can adjust to changing circumstances. Technology and competence in the profession of intelligent learning skills and a thorough comprehension of accounting subjects will assist the company in operating profitably (Damasiotis et al., 2015). Furthermore, being a competent innovator accountant necessitates a thorough understanding of business and economics, as it is critical in presenting data for economic decision-making. Furthermore, business planning and marketing abilities are beneficial in presenting both quantitative and qualitative data. Communication abilities will aid accountants in integrating across disciplines, by presenting information that is relevant and applicable to the entire scenario, and being creative, that will be able to develop accounting innovations, such as work process improvements. Additionally, accountants who can use data analytics technologies will make the cost, productivity, and risk-management processes more efficient. As seen from the following, an accountant's role still involves adding value to the company. Accountants will be able to work more effectively thanks to new technologies. In addition to accountants, robots will be able to cut repetitious labor time in portions that are already automated. It may also swiftly present and evaluate data to assist executives in making better decisions. Consequently, it is reasonable to conclude that innovative accountants must be capable of working as full-time business partners. According to Zainuddin and Sulaiman (2016), accountants must be 'hybrid accountants' within a business in the twenty-first century. Consequently, management accountants should be proactive in leadership, strategic management, operational alignment, and long-term learning and improvement to be competent and reliable in an organisation. They are now in charge of acting as internal business advisors.

They must collaborate closely with all operational and top-level managers. They also help managers make better decisions by offering useful information. They are also involved in discussions about value-added activities. They must adjust to the fast-changing environment and deal with unanticipated changes. Additionally, changes in management accounting are underway to ensure that accountants become leaders of business change and that management accounting has a more effective instrument for decision-making support. It impacts the work of managerial accountants (Pietrzak and Wnuk-Pel, 2015). Second, as a consequence of innovative accountant competency in terms of FRQ, the findings of this study suggest that accountants' professionalism, in combination with their understanding of business administration, information systems, creativity, information technology, and professional ethics, allows for the presentation of high-quality financial reporting. To become an accountant innovator, an accountant must modify their presentation of financial data to meet sophisticated accounting judgments generated by a computer that can make automatic adjustments such as cost reduction. Understanding business and marketing is also required. Emerging technology companies will have more inventive and sophisticated business models that will require an understanding of interpretation and the ability to adapt their economic substance to a framework or accounting standards for transaction recognition (Chairat, 2021). Additionally, organisational growth is influenced by an accountant's ability to generate excellent financial reports due to knowledge and adjustment in areas such as the application of discretionary judgment (Tontiset, 2018). Given the findings between innovative accountant competency and FRQ, this new research point of view of accountants is consistent with Hartono and Abdillah (2018), Sutarsih et al. (2018), Adrian et al. (2019) and Aruan et al. (2020) who stated that personnel competency information technology, internal control systems, and the availability of treasury staff affect the quality of financial statements to be more accurate and complete. However, innovative accountant competency has certain dimensions; namely, the ability to communicate does not affect FRQ because change and innovation are the consequences of interactions between diverse cultures, values, and power coalitions, in which the symbolic meaning of new accounting tools is built during the change process and influences the outcome. The focus of future accounting roles will be judgment and analysis. Conversely, communication with management to provide information collected from the system must lead to fast and intelligible decision-making modifications. To find answers for the organisation, communicate, and collaborate with colleagues from various professions. In other words, accountants who are good communicators are more likely to collaborate on strategic projects (Chairat, 2021). This study investigates the effect of innovative accountant competency on FI based on Kotler (2000), who stated that this behavioral expression of self-improvement defines corporate image management in terms of value and corporate credibility. Individuals' attitudes and actions toward a thing are significantly associated with the corporate image due to a person's impressions, thoughts, and beliefs about that object. Consequently, accountants must reskill to keep up with the changing nature of business. Knowledge of accounting information systems and technology is improved to the point where it can contribute to system creation and soft skills for talking and collaborating with peers from different professions to solve challenges. The organisation will promote a positive image of itself in corporate identity, communication among personnel, consumers, and individuals outside the business to identify its distinctiveness. The results of this study section reveal that besides knowing financial accounting, accountants are important in other areas to help organisations

achieve their goals (FAP, 2021). In major point, regardless of what areas of knowledge an accountant needs to improve, professional ethics must always be kept as a priority. Accountants play a critical role in the presentation of financial and non-financial data. For example, in financial data in the form of financial statements, users expect to see positive company success rather than operating losses. The information must be presented accurately, fully, and truthfully. Moreover, there must be parity in presenting information among stakeholders familiar with the financial data. No one gets more or less than the other does. Consequently, accountants' accountability and understanding of ethical information presentation are critical (Abreu, 2015). Consistent with research by Zainuddin and Sulaiman (2016) and Ditkaew and Pitchayatheeranart (2018), 21st century accountants must be hybrid accountants who face a rapidly changing environment, both internal and external factors. Therefore, the account must accept any changes. Of course, the presentation of information business processes that are important to the organisational development that management accountants must present must be adapted, as the Association of Management Accountants has set standards to guide the professional practice of management accountants to ensure that the information presented to the management is accurate, clear, and credible.

**Table 6** Results of path coefficients

<i>Hypotheses</i>	<i>Relationship</i>	<i>Standardised coefficients</i>	<i>Standard error</i>	<i>t-value</i>
H3a	BME → FG	0.928***	0.015	63.363
H3b	IA → BME	0.794***	0.024	33.261
	BME → FG	0.928***	0.015	63.363
H4a	FRQ → FG	0.885***	0.018	48.507
H4b	IA → FRQ	0.938***	0.014	69.174
	FRQ → FG	0.885***	0.018	48.507
H5a	FRQ → FI	0.662***	0.029	22.533
H5b	IA → FRQ	0.938***	0.014	69.174
	FRQ → FI	0.662***	0.029	22.533

Note: \*\*\* $p < 0.01$ .

Table 6 presents the results of path coefficients and hypothesis testing. The results show that BME is positively related to FG ( $\beta = 0.928$ ,  $p < 0.01$ ). BME is also the mediator of the innovative accountant's competency-FG relationships. Therefore, Hypotheses 3a–3b are fully supported.

Consequently, faced with disruptive technology, it might be claimed that the function of accountants in maintaining and analysing data to support an organisation's operations must be credited for its growth. Make corporate business decisions, implement financial initiatives and innovations, and offer financing and implementation to support the entire organisation's strategic goals. Communicate the firm's goals and progress toward reaching those goals to external stakeholders such as shareholders, investors, and analysts per the stated strategic plan so that all parties can have confidence in the organisation's long-term growth. In accordance with the field of business administration study and the organisation's growth, Pe'er et al. (2016) and Demir et al. (2017) said that as the company grows, management tasks go beyond the entrepreneur's capabilities (Mount et al., 1993). This forces the entrepreneur to delegate duties, and decision-making becomes increasingly decentralised (Gilbert et al., 2006). Through administrative

hierarchies of authority, the corporation ends up with a multi-unit administration (Vaz, 2021). Additionally, human resources are one of the key factors for the growth of economies and, therefore, for the growth of firms (Barbero et al., 2011; Demir et al., 2017; Lee et al., 2019). The empirical literature recognises that human resources (with more knowledge, skill, and experience influencing the process of endogenous growth) are determinants for firm success and growth (Rauch et al., 2005; Vaz, 2021).

**Table 7** A summary of hypothesis testing results

<i>Hypotheses</i>	<i>Relationships</i>	<i>Result</i>
H1a	Innovative accountants competency that is professional accounting expertise, positive effect on BME.	Supported
H1b	Innovative accountants competency that is knowledge of the business world, positive effect on BME	Supported
H1c	Innovative accountants that can communicate, positive effects on BME.	Supported
H1d	Innovative accountants competency that is knowledge of information systems, positive effect on BME	Supported
H1e	Innovative accountants competency that being creative, positive effect on BME	Supported
H1f	Innovative accountants competency that is capabilities in information technology, positive effect on BME	Supported
H1 g	Innovative accountants competency that is morality and professional ethics, positive effect on BME	Supported
H2a	Innovative accountants competency that is professional accounting expertise, positive effect on FRQ	Supported
H2b	Innovative accountants competency that is knowledge of the business world, positive effect on FRQ	Supported
H2c	Innovative accountants that can communicate a positive effect on FRQ	Not supported
H2d	Innovative accountants competency that is knowledge of information systems, positive effect on FRQ	Supported
H2e	Innovative accountants competency that being creative, positive effect on FRQ	Supported
H2f	Innovative accountants competency that is capabilities in information technology, effect on FRQ.	Supported
H2 g	Innovative accountants competency that is morality and professional ethics, positive effect on FRQ.	Supported
H3a	BME, positive effect on FG	Supported
H3b	Business management mediates innovative accountants competency-FG relationship	Supported
H4a	FRQ, positive effect on FG	Supported
H4b	FRQ mediates innovative accountants competency- FG relationship	Supported
H5	Innovative accountant’s competency, positive effect on the FI	Supported
H6a	FRQ, positive effect on FI	Supported
H6b	FRQ mediates innovative accountant’s competency - FI relationship	Supported

Additionally, Table 6 shows that the quality of financial reporting positively affects FG ( $\beta = 0.885$ ,  $p < 0.01$ ) and that FRQ is the mediator of innovative accountant competency-FG relationships. Therefore, Hypotheses 4a–4b are fully supported. Moreover, FRQ positively affects FI ( $\beta = 0.662$ ,  $p < 0.01$ ), and FRQ is also the mediator of innovative accountant competency-FI relationships. Therefore, Hypotheses 5a–5b fully supported. Able to discuss whether an entity has fully applicable financial reporting information relevant to timely decision-making through clear, concise, formatted reports, units, and language that is easy to understand will help managers use financial reporting data in their management, resulting in increased market share, revenue, and net profit for the company. Consistent with Tontiset's (2018) study, accountants' professionalism and IT competence are the main factors affecting accounting data and organisational success. Additionally, consistent with previous research by Tontiset (2018), Krismiaji et al. (2016), and Fitrius (2019), financial information quality in terms of decision-making, timeliness, and comparability was an important factor. It can affect the value of financial reports and the economic decision-making performance of users of financial statements.

## 5 Contributions and directions for future research

This study verified and confirmed that the pragmatic KBV theory is used to explain IAC as valuable intangible resources in the firm, which considers knowledge an essential resource. Further, we confirmed that human resources can be viewed as valuable assets that can value a firm. Consequently, when a firm has an accountant with the potential to be an innovative accountant, the knowledge and adaptability of the accountant influences the efficiency of business management and offers innovative quality financial reports to them. The information from financial reports is used by users, and it is tied to the organisation's growth and excellent reputation. In terms of professional contribution, accounting directors strongly agree with accountants' skills and expertise beyond accounting knowledge such as business administration expertise, economics, communication skills, creativity, and information technology on working principles of professional ethics. Consequently, this will impact the organisation's comprehension of business management and confirmation of the accuracy of financial reports to expand the company and its image with good human resource management. However, there are some future research needs. First, analytics linked IAC should be tested, such as the vision of executives to demonstrate the importance of investing in human resources, and the necessity of encouraging innovative accountants and testing for technology turbulence may be added to determine whether it has an impact on the relationship according to the conceptual model. Second, enquiry about being an accountant from an investor's point of view to confirm the study results should be made.

## 6 Conclusions

In an era when the technological transformation is becoming more prevalent, every organisation experiences the entry of new technology into applications in various industries, whether in the manufacturing or service sectors. There is a popular adage 'AI will replace accountants'. When the author hears it, he wonders, 'What exactly is the role of an accountant?' Imagining future accounts in technological conditions, what

progress has been accomplished thus far? This study states that IAC is measured by seven observed variables that consist of

- 1 professional accounting expertise
- 2 knowledge of the business world
- 3 ability to communicate
- 4 knowledge of information systems
- 5 being creative
- 6 capabilities in information technology
- 7 morality and professional ethics are a major key determinant of FG and FI.

Thus, this study examines the effect of innovative accountants' competency on FG through the mediating effect of BME and FRQ. Additionally, we examine the effect of innovative accountants' competency on the FI through the mediating effect of FRQ. The result makes the entity's operation more efficient and visualised; the organisation should provide training to enhance knowledge and competence for accountants working in the business, with an emphasis on reskill, hardskill, and softskill in response to the term 'innovative accountants characteristics' of the company, such as the company setting aside funds to ensure that accountants have the resources needed to practice as true innovative accountants. Moreover, strong support for the accountant's function requires the administrative committee to collaborate on the strategy and participate in its evolution. The human health and the organisation's work system in the pages to support the organisation's figures, so it can be observed that the accountants world aside from Hi-Tech, the future must also have Hi-Touch.

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## Appendix

### Questionnaire

*The title:* The effect among innovative accountant competency, BME, FRQ, and FG.

*Section 1:* Personal information of accounting directors and organization information.

*Instructions:* Please checkmark with ✓ to indicate one choice that is the most accurate according to your opinion.

- |                             |  |   |
|-----------------------------|--|---|
| 1 Gender                    | <input type="checkbox"/> 1. Male                               | <input type="checkbox"/> 2. Female                  |
| 2 Age                       | <input type="checkbox"/> 1. Less than 30 years old             | <input type="checkbox"/> 2. 30–40 years' old        |
|                             | <input type="checkbox"/> 3. 41–50 years old                    | <input type="checkbox"/> 4. More than 50 years' old |
| 3 Education                 | <input type="checkbox"/> 1. Lower bachelor's degree            |   |
|                             | <input type="checkbox"/> 2. Bachelor's degree                  |   |
|                             | <input type="checkbox"/> 3. Master's degrees                   |   |
|                             | <input type="checkbox"/> 4. Higher than master's degree or PhD |   |
| 4 Works experience          | <input type="checkbox"/> 1. Less than 5 years                  | <input type="checkbox"/> 2. 5–10 years              |
|                             | <input type="checkbox"/> 3. 11–15 years                        | <input type="checkbox"/> 4. More than 15 years      |
|                             |  |   |
| 5 Current operation capital | <input type="checkbox"/> 1. Less than 25,000,000 Bath          |   |
|                             | <input type="checkbox"/> 2. 25,000,000–50,000,000 Bath         |   |
|                             | <input type="checkbox"/> 3. 50,000,001–100,000,000 Bath        |   |
|                             | <input type="checkbox"/> 4. 100,000,001–150,000,000 Bath       |   |
|                             | <input type="checkbox"/> 5. More than 150,000,000 Bath         |   |
| 6 Operational years         | <input type="checkbox"/> 1. Less than 5 years                  | <input type="checkbox"/> 2. 5–10 years              |
|                             | <input type="checkbox"/> 3. 11–15 years                        | <input type="checkbox"/> 4. More than 15 years      |
|                             |  |   |
|                             |  |   |

## Section 2: Opinion on innovative accountants' competency in companies.

Instructions: Please checkmark with ✓ to indicate one choice that is the most accurate according to your opinion.

Items	Questions	Level of agreement				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
		5	4	3	2	1

*Professional accounting expertise*

- 1 In today's corporate world, smart learning abilities and an awareness of accounting are required.
- 2 The accounting profession's knowledge and expertise are critical in the disruptive technology era.

Items	Questions	Level of agreement				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
		5	4	3	2	1

*Professional accounting expertise*

- 3 Knowledge of the accounting profession can assist in the preparation of accurate financial statements.
- 4 Knowledge of the accounting profession can help prepare financial statements to be worth the resources spent.

Items	Questions	Level of agreement				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
		5	4	3	2	1

*Knowledge of the business world*

- 5 Accountants with expertise in business and economics play a key role in presenting information for economic decision-making.
- 6 An accountant with business and finance knowledge helps build confidence in preparing financial statements.
- 7 Accountants with marketing and business planning abilities can offer quantitative and qualitative data to users to help them make reliable decisions.
- 8 An accountant's economics skills make the preparation of financial statements cost-effective for the resources used.

Items	Questions	Level of agreement				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
		5	4	3	2	1

*Abilities to communicate*

- 9 Accountants who can communicate and operate in a team can help with cross-disciplinary integration and offer data to managers for financial gain.
- 10 Communication skills in an accountant will aid in the preparation of financial statements and the timely filing of financial statements.

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*Knowledge of information system*

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- 11 The ability to import data into an accountant's business program ensures that quantitative and qualitative outcomes are accurate.
  - 12 Accurate data can be obtained with the help of an accountant who can find and edit data from a range of sources.
  - 13 The capacity of an accountant to use materials for presentations enhances the quality of data delivered to users.
  - 14 In this age of disruptive technology, accountants' ability to use business software is critical.
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*Being creative*

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- 15 Accountants with innovative approaches to accounting can optimize their workflow.
  - 16 The ability to generate new ideas and increase an accountant's education aids in the improvement of work processes
  - 17 In accounting, the capacity to think creatively can aid in preparing financial statements, allowing you to save money on resources spent.
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*Capabilities in information technology*

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- 18 Accountants who are knowledgeable in both hardware and software will assist you in finding and presenting information effectively.
  - 19 The capacity of an accountant to use analytics tools can improve workflow efficiency.
  - 20 An accountant who understands how to use technology will improve workflow efficiency.
  - 21 How to use an accountant ICT where information security is a confirmation of the reliable presentation of financial statements
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*Morality and professional ethics*

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- 22 Values and a positive approach toward accounting play a critical part in ensuring that operations run smoothly in the disruptive technology era.
  - 23 Regular practice of accountants who are aware of professional ethics increases the credibility of professional work.
  - 24 Professional ethics and attitudes contribute to the betterment of the accounting profession, resulting in increased firm credibility.
-

*Section 3: Opinion on BME in companies.*

*Instructions:* Please checkmark with ✓ to indicate one choice that is the most accurate according to your opinion.

<i>Items</i>	<i>Questions</i>	<i>Level of agreement</i>				
		<i>Strongly agree</i>	<i>Agree</i>	<i>Not sure</i>	<i>Disagree</i>	<i>Strongly disagree</i>
		5	4	3	2	1
<i>Reduce cost</i>						
1	The organization has the potential to eliminate waste in the workplace successfully.					
2	The firm has the opportunity to reduce manufacturing expenditures that are not justified by the work done.					
3	The organization can efficiently eliminate raw material and product waste.					
<i>Productivity</i>						
4	The business has the potential to add value and improve product quality.					
5	The company has products/services that have utilitarian value compared to competitors.					
<i>Risk management</i>						
6	The company can develop a method for effective risk management planning.					
7	Companies can define criteria modeled on their strategic and risk management plans.					
8	The company has allocated duties and responsibilities in departments for effective job responsibilities.					

*Section 4: Opinion on FRQ in companies.*

*Instructions:* Please checkmark with ✓ to indicate one choice that is the most accurate according to your opinion.

<i>Items</i>	<i>Questions</i>	<i>Level of agreement</i>				
		<i>Strongly agree</i>	<i>Agree</i>	<i>Not sure</i>	<i>Disagree</i>	<i>Strongly disagree</i>
		5	4	3	2	1
<i>Relevant</i>						
1	The company understands the importance of accounting data in predicting future events.					
2	The company has the knowledge to make timely and demanding judgments about important topics.					
3	The company focuses on giving accounting information that aids in making economic decisions by lowering future uncertainty.					
4	The company has accounting information that can be understood in the content that is relevant and fully relevant to the situation that occurred.					

Items	Questions	Level of agreement				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
		5	4	3	2	1
<i>Faithful</i>						
5	The company has accounting information that is complete and accurate according to the needs of users.					
6	The company is dedicated to providing information that is without bias.					
<i>Comparability</i>						
7	Accounting information that may be compared across accounting periods is important to the organization.					
8	The company has information prepared to compare historical data from one period to another in order for users to compare accounting data.					
9	Accounting data that may be compared to other companies is very important.					
<i>Verification</i>						
10	The company's accounting data can verify balance confirmation and calculate results.					
11	The accounting information of a company can be checked for correctness and source.					
<i>Timely</i>						
12	The company has up-to-date accounting information for users to make decisions on such issues.					
13	The company offers real-time accounting information that allows users to use the information immediately.					
<i>Understandable or simple format</i>						
14	The company provides accounting information both internally and externally to provide users with an accurate and complete understanding of the information.					
15	The company focuses on providing accounting information in an easily understandable format to benefit economic decision-making.					

*Section 5: Opinion on FG.*

*Instructions:* Please checkmark with ✓ to indicate one choice that is the most according to your opinion.

<i>Items</i>	<i>Questions</i>	<i>Level of agreement</i>				
		<i>Strongly agree</i>	<i>Agree</i>	<i>Not sure</i>	<i>Disagree</i>	<i>Strongly disagree</i>
		5	4	3	2	1
<i>Customers</i>						
1	The company can improve its operations to be more efficient in responding to the needs of customers.					
2	The company can increase its market share from competitors by acquiring new customers and retaining existing customers.					
3	The company maintains the same database of old customers and increases the new one for management.					
<i>Revenue and net profit</i>						
4	The company's revenue growth is constant and consistent.					
5	The company's revenue is in line with the goals set.					
6	The company has enough income to meet the burden of regular expenses.					
7	The company continues to profit from operations and is growing at a reasonable rate.					
8	The company has appropriately allocated net profits as reserves for operations or business expansion.					
9	The company's revenue growth rate has increased compared to the previous year.					
<i>Financial</i>						
10.	The company has an increased return on operations.					
11	The company has an efficient return on investment, considering the investment worthiness.					
12	The company can provide data, analysis, planning, control, and reporting in budget management.					
13	The company can expand its investment in other types of businesses from the returns from the original business.					
14	The company has invested in expanding the business to a larger size to meet the needs of customers and trading partners.					

Section 6: Opinion on the FI.

Instructions: Please checkmark with ✓ to indicate one choice that is the most according to your opinion.

<i>Items</i>	<i>Questions</i>	<i>Level of agreement</i>				
		<i>Strongly agree</i>	<i>Agree</i>	<i>Not sure</i>	<i>Disagree</i>	<i>Strongly disagree</i>
		5	4	3	2	1
<i>Identity of the company</i>						
1	The business is well-known for its products or services.					
2	The company's name is simple to remember.					
<i>Reputation</i>						
3	The company is well-known.					
4	The company is reliable and trustworthy with customers and investors.					
5	The company can impress customers.					