

# Digital Accounting, Financial Reporting Quality and Digital Transformation: Evidence from Thai Listed Firms

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## Abstract

The study examines the effects of digital accounting on financial reporting quality, accounting information usefulness, and strategic decision effectiveness of listed firms in Thailand through digital transformation as the moderating variable. A total of 313 listed firms in Thailand were selected as the sample for the study. Structural equation model and multiple regression analysis are applied to test the research relationships. The results of the study show that digital accounting has a significant effect on financial reporting quality, accounting information usefulness, and strategic decision effectiveness. Financial reporting quality significantly affects both accounting information usefulness and strategic decision effectiveness while accounting information usefulness has a significant effect on strategic decision effectiveness. Both financial reporting quality and accounting information usefulness mediate the digital accounting-strategic decision effectiveness relationship. In addition, digital transformation moderates the digital accounting-financial reporting quality relationship and the digital accounting-accounting information usefulness relationship, but it does not moderate other relationships. Accordingly, digital accounting plays a significant role in determining and explaining firms' goal achievement. Executives are suggested to learn, invest and utilize the digital accounting system in the organization to ensure goal achievement and enhance organizational sustainability.

**Keywords:** Digital Accounting, Financial Reporting Quality, Accounting Information Usefulness, Digital Transformation, Strategic Decision Effectiveness

**JEL Classification Code:** M41, M42, M49

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## 1. Introduction

The digital capability of a business is fundamental to the remaining competitive in today's market. Digital technologies are rapidly changing and evolving, which in turn increases competition and the need for companies to innovate quickly. It has never been more dangerous for companies to neglect the importance of digital technologies. Digital technology refers to a collection and a paradigm of

various intelligent and innovative technologies in business environments, such as the Internet of Things, big data, data analytics, artificial intelligence, and cloud computing (Ritter & Pedersen, 2020).

To achieve business success, efficiency and productivity are vital. Digital technology can help improve communication, collaboration, content management, access to analytics data and social networking as well as staff and customer experience. Successful enterprises are embracing technology to create digital workplaces that improve business cohesion (Khin & Ho, 2019). It's evident that in this new world, technology is not a choice, but a fundamental business strategy that must be interwoven into every part of an organization. Transformation can enable better collaboration within and between organizations, more personalized ways of customer engagement, higher employee innovation and productivity, and more accurate insights from data, all of which help a business grow and give it a better chance of thriving.

Digital accounting refers to the creation, representation, and transfer of financial information in an electronic format.

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Instead of using papers, all accounting transactions are conducted in an electronic environment. It rather values and empowers accounting professionals by making their work more efficient. Digital accounting refers to the formation, representation, and transmission of financial data in an electronic format. Computers and accounting software have transformed the financial industry. Technology advancements have enhanced the accountant's ability to interpret and report data faster, more efficiently, and more effectively than ever before (Troshani et al., 2019).

Digital accounting involves conducting all accounting transactions in an electronic environment under the current digital economy. It can enhance firms to complete functional tasks more quickly and accurately and interpret and report data and information faster, more efficiently, and more effectively. Firms with successful digital accounting can obtain information accuracy to make critical decisions and upgrade accounting systems to support increased scales of operations. They can remotely access firms' financial data and information by logging in the system from anywhere and at any time to track results and data. They can also apply digital accounting to directly and indirectly achieve success, survival, and sustainability in business operations. Accordingly, digital accounting is considered a valuable business approach for helping firms provide quality financial reporting, create accounting information usefulness and support strategic decision effectiveness.

Financial reporting quality refers to the reports that are more complete, neutral, and free from error and provide more useful predictive or confirmatory information about firms' underlying economic position, event, and performance (Shuraki et al., 2021). Providing high-quality financial reporting information is important because it will positively influence capital providers and other stakeholders in making investment, credit, and similar resource allocation decisions enhancing overall market efficiency. Financial reporting quality relates to the quality of the information that is contained in financial reports, including note disclosures. High-quality reporting provides relevant, decision-useful information, which confidently represents the economic reality of a company's activities during the reporting period as well as the company's financial condition at the end of the reporting period. Quality of reported results or earnings quality relates to the earnings and cash generated by a company's actual economic activities and the resulting financial condition. High-quality earnings result from activities that a company will likely be able to sustain in the future and provide an adequate return on the company's investment.

Second, accounting information usefulness is defined as the ability of accounting information to capture and summarize information that legitimizes and confirms firms' economic decision-making (Ouda & Klischewski, 2019).

To be useful in making decisions, financial information must possess severe normative qualities. The primary one is the relevance to the particular decision at the hand of the attribute selected for measurement. The secondary one is the reliability of the measurement of the (relevant) attribute. Objectivity, verifiability freedom from bias and accuracy are terms for overlapping parts of the reliability quality. Other qualities, such as comparability, understandability, timeliness, and economy, are also emphasized. A set of such desirable qualities is used as criteria for evaluating alternative accounting methods. There should be an accounting system in place that is comprehensive enough to be able to routinely collect, record, and aggregate all transactions so that users of the accounting information are assured that they are reading about the complete results of a business. This also means that there are no "surprises" that appear as retroactive adjustments to the financial statements.

Finally, strategic decision effectiveness refers to the extent to which a decision either results in desired outcomes or responds to rapid changes (Cao et al., 2019). It reflects firms' goal achievements, which include enhancement of decision-making speed and timeliness, decision outcomes, problem-solving performance, information processing performance, risk preferences, and acceptance by employees and subordinates. It can assist firms to understand customers and markets, serve them better and increase customer loyalty. Firms with strategic decision effectiveness can understand customers well, make real-time decisions and respond quickly to changes. In this study, digital accounting is hypothesized to have a significant effect on financial reporting quality, accounting information usefulness, and strategic decision effectiveness while financial reporting quality possibly leads to both accounting information usefulness and strategic decision effectiveness. Furthermore, accounting information usefulness tends to affect strategic decision effectiveness. Likewise, both financial reporting quality and accounting information usefulness are proposed as the moderators of the research relationships.

In addition, digital transformation is the process of using digital technologies to create new—or modify existing—business processes, culture, and customer experiences to meet changing business and market requirements. Digital transformation marks a rethinking of how an organization uses technology, people, and processes in pursuit of new business models and new revenue streams, driven by changes in customer expectations around products and services (Peter et al., 2020). It is the ability of firms to create and reinforce disruptions in society and industry. For companies, a digital business strategy is viewed as means of transforming their business, streamline processes, and making use of technologies to enhance their interaction with customers and employees and deliver an excellent customer experience at the same time. Organizations need to evolve to address the

changing business landscapes. Digital transformation can be defined as the acceleration of business activities, processes, competencies, and models to fully leverage the changes and opportunities of digital technologies and their impact in a strategic and prioritized way.

This study attempts to investigate the effects of digital accounting on financial reporting quality, accounting information usefulness, and strategic decision effectiveness of listed firms in Thailand. Moreover, it examines the moderating effects of digital transformation on the relationships between digital accounting, financial reporting quality, accounting information usefulness, and strategic decision effectiveness. The key research question in this study is how digital accounting affects strategic decision effectiveness. The specific research questions are: (1) How digital accounting affects both financial reporting quality and accounting information usefulness, (2) How financial reporting quality affects both accounting information usefulness and strategic decision effectiveness, (3) How accounting information usefulness affects strategic decision effectiveness, (4) How both financial reporting quality and accounting information usefulness mediate the research relationships, and (5) How digital transformation moderates the research relationships.

## 2. Literature Review and Hypotheses Development

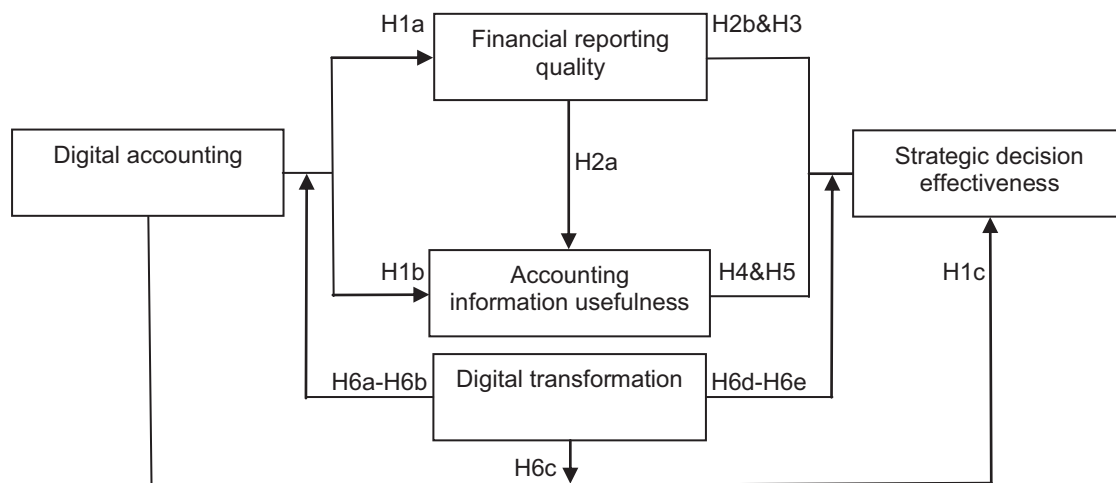
In this study, digital accounting plays a significant role in determining superior organizational outcomes, namely financial reporting quality, accounting information usefulness, and strategic decision effectiveness. The resource-based view (RBV) is a managerial framework used to determine the strategic resources a firm can exploit

to achieve sustainable competitive advantage (Barney, 1991). Characteristics of this resource are valuable, rare, inimitable, and substitutable. Here, digital accounting is a valuable resource of a firm that can lead to achieving sustainable competitive advantages and great organizational performance in competitive markets and environments. Best digital accounting potentially leads to great financial reporting quality, accounting information usefulness, and strategic decision effectiveness. Thus, the hypothesized relationships are shown in Figure 1.

### 2.1. Strategic Decision Effectiveness

In this study, strategic decision effectiveness is an important outcome of digital accounting application and it is defined as the extent to which a decision either results in desired outcomes or responds to rapid technological changes (Cao et al., 2019). Strategic decisions are intended to provide a competitive advantage and try to change the overall scope and direction of the company. They are important for organizational health and survival. Strategic decision-making is a critical first step in setting the business apart from the competition. This type of decision-making requires problem-solving from multiple angles (e.g., not just looking at a market that is growing and assuming it should be pursued). In today's volatile and uncertain environment, the weight of these decisions is even more important. And the insights that feed into these decisions are both critical and challenging to develop.

Furthermore, strategic decision effectiveness refers to the extent to which the decision achieves the goals set by the management and at the proper time within the considered constraints (Van Riel et al., 2011). It reflects firms' goal achievements, which include enhancement



**Figure 1:** Conceptual Model of the Digital Accounting-Strategic Decision Effectiveness Relationships

of decision-making speed and timeliness, decision outcomes, problem-solving performance, information processing performance, risk preferences, and acceptance by employees and subordinates. It can assist firms to understand customers and markets, serve them better and increase customer loyalty. Firms with strategic decision effectiveness can understand customers well, make real-time decisions and respond quickly to changes. They can make correct choices, achieve normative benchmarks and gain outstanding organizational performance.

## 2.2. Digital Accounting

Digital accounting, or e-accounting, as a corresponding analog, refers to the representation of accounting information in the digital format, which then can be electronically manipulated and transmitted (Troshani et al., 2019). Digital accounting refers to the creation, representation, and transfer of financial information in an electronic format. Instead of using papers, all accounting transactions are conducted in an electronic environment. In addition to making things easier for firms, a digital accounting system stores information in a specific area, giving the owners real-time access to essential details and information. In a digital accounting system, critical financial data, from cash flow to balance sheets, will be accessible in a few clicks (Berman, 2012). One of the primary reasons why businesses and companies today are looking for automation and digitizing operations is because doing so enables them to save more by minimizing the cost of services. Using digital data is more cost-effective than other forms of recording data. It works faster and saves businesses time so they can concentrate on different parts of the company (Shan, 2021). Therefore, digital accounting can offer more benefits, namely (a) convenience and improved pace of productivity, (b) security and agility, (c) easy invoicing and payment tracking, (d) better integration and syncing, (e) facilitation of tax preparation, (f) making bank reconciliation easily, (g) specialized functions, and (h) allowing to obtain real-time advice. Firms with successful digital accounting can have information accuracy to make critical decisions and upgrade accounting systems to support increased scales of operations. Therefore,

*H1: Digital accounting has a positive effect on (a) financial reporting quality, (b) accounting information usefulness, and (c) strategic decision effectiveness.*

## 2.3. Financial Reporting Quality

High-quality reporting provides decision-useful information, which is relevant and faithfully represents the economic reality of the company's activities during the reporting period as well as the company's financial condition

at the end of the period (Shuraki et al., 2021). The quality of financial reports improves transparency by enhancing the global comparability and quality of financial information, strengthens accountability by reducing the information gap between the shareholders and management, minimizes information asymmetry and information uncertainty between firms and external suppliers of capital, and contributes to economic efficiency by helping investors to identify risks and opportunities across the world. It also strengthens the monitoring of firms' performance to reduce their opportunistic behaviors (Rahman & Masum, 2021).

Firms with financial reporting quality can minimize earnings management, increase information transparency and enhance optimal decision-making. Moreover, financial reporting quality refers to the extent to which the financial statements provide true and fair information about the underlying performance, financial health, and position (Arthur et al., 2019) of the firm. As mentioned earlier, financial reporting quality is a key outcome of digital accounting. At the same time, it critically affects firms' strategic decision effectiveness. Accordingly, financial reporting quality is proposed to mediate the digital accounting-strategic decision effectiveness relationships. Therefore,

*H2: Financial reporting quality has a positive effect on (a) accounting information usefulness and (b) strategic decision effectiveness.*

*H3: Financial reporting quality mediates the digital accounting-strategic decision effectiveness relationships.*

## 2.4. Accounting Information Usefulness

Interestingly, accounting information usefulness is defined as an ability of accounting information to capture and summarize information that legitimizes and confirms firms' economic decision-making (Ouda & Klischewski 2019). The main characteristics of accounting information are relevance, materiality, understandability, comparability, consistency, reliability, neutrality, timeliness, and economic realism, which make financial reporting information useful to users. These normative qualities of information are based largely upon the common needs of users.

To be useful in making decisions, financial information must possess certain normative qualities. The primary one is the relevance to the particular decision at the hand of the attribute selected for measurement. The secondary one is the reliability of the measurement of the (relevant) attribute. Objectivity, verifiability freedom from bias and accuracy are terms for overlapping parts of the reliability quality. Other qualities, such as comparability, understandability, timeliness, and economy, are also emphasized. A set of such desirable qualities is used as



criteria for evaluating alternative accounting methods. There should be an accounting system in place that is comprehensive enough to be able to routinely collect, record, and aggregate all transactions so that users of the accounting information are assured that they are reading about the complete results of a business. If the reporting financial information possesses the qualities cited in the above definition, then the information user may attribute different meanings to each of the characters and interpret the information to make proper decisions (Shaughnessy & Goulding, 2021). Therefore,

*H4: Accounting information usefulness has a positive effect on strategic decision effectiveness.*

*H5: Accounting information usefulness mediates the digital accounting-strategic decision effectiveness relationships.*

## 2.5. Digital Transformation

Digital transformation is the process of using digital technologies to create new—or modify existing—business processes, culture, and customer experiences to meet changing business and market requirements. This reimagining of business in the digital age is digital transformation (Peter et al., 2020). Digital transformation helps an organization keep up with emerging customer demands and therefore survive in the face of the future. It allows companies to compete better in an economic environment that is constantly changing in response to technology evolutions. Digital transformation provides a valuable opportunity for core business functions, such as finance and HR, to move away from manual processes and automate key areas like payroll, enabling leaders to focus on wider business opportunities (Hilali et al., 2020). Digital transformation is all about becoming a digital enterprise—an organization that uses technology to continuously evolve all aspects of its business models (what it offers, how it interacts with customers, and how it operates. While every digital transformation initiative will have its own specific goals, the main purpose of any digital transformation is to improve your current processes. Digital transformation is important because companies must evolve to remain competitive in their industry (Vial, 2019).

Digital transformation is not just about disruption or technology. It's about value, people, optimization, and the capability to rapidly adapt when such is needed through an intelligent use of technologies and information. Digital transformation is the profound transformation of business and organizational activities, processes, competencies, and models to fully leverage the changes and opportunities of a mix of digital technologies and their accelerating impact across society in a strategic and prioritized way, with present and future shifts in mind. (Garzoni et al., 2020). Therefore,

*H6: Digital transformation moderates (a) the digital accounting-financial reporting quality relationships, (b) the digital accounting-accounting information usefulness relationships, (c) the digital accounting-strategic decision effectiveness relationships, (d) the financial reporting quality-strategic decision effectiveness relationships, and (e) the accounting information usefulness-strategic decision effectiveness relationships.*

## 3. Research Methods

### 3.1. Sample Selection and Data Collection Procedure

In this study, listed firms in Thailand were selected as the sample of the study. The key informants were accounting executives, namely chief financial officer, accounting director, and other accounting executives whose responsibilities consist of preparing quality financial reports, ensuring compliance with accounting standards, laws, regulations, and procedures, and providing all accounting and financial data for management and other stakeholder needs and requirements. With regard to the questionnaire mailing, 768 questionnaires were mailed, of which 331 responses were received. However, only 313 were usable. The effective response rate was approximately 40.76%. With an appropriate follow-up procedure, the response rate for a mail survey should be 20% or greater, hence the response rate is considered acceptable (Aaker et al., 2001).

### 3.2. Measures

All constructs were measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). For digital accounting, a twelve-item scale was developed to gauge how firms conduct all accounting transactions in an electronic environment under the current digital economy. For, financial reporting quality, a ten-item scale was created to assess how firms provide true and fair information through the financial statements about underlying performance, financial health, and position of the firm. For accounting information usefulness, an eight-item scale was initiated to evaluate how firms capture and summarize information that legitimizes and confirms firms' economic decision-making. For digital transformation, an eight-item scale was used to measure how firms used digital technologies and assets to modify their value creation paths to remain competitive. For, strategic decision effectiveness, a seven-item scale was used to measure how the firm's decisions achieve the goals set by the management and at the proper time within the considered constraint.

The control variables consisted of the number of staff in an organization, years in business operations, and registered capital. Staff was measured by the number of employees in a firm. Furthermore, years in business operations (YO) was measured by the number of years a firm has been in existence. Registered capital (RC) was measured by the amount of money a firm has invested in doing business.

### 3.3. Methods

For verifying the validity and reliability of the research instrument, factor analysis is a technique that is used to reduce a large number of variables into fewer numbers of factors. Factor loadings had values between 0.72–0.96, which is greater than the 0.40 cut-off and are statistically significant (Nunnally & Bernstein, 1994). Next, discriminant power was used to gauge the validity of the measurements by item-total correlation. Item-total correlations had values between 0.69–0.96, which is greater than the 0.30 cut-off (Churchill, 1979). Finally, the reliability of the measurements was evaluated by the Cronbach alpha coefficient. Cronbach alpha coefficients were between 0.90–0.95, which is greater than the 0.70 cut-off (Nunnally & Bernstein, 1994). The scales of all measures appear to produce internally consistent results and they are deemed appropriate for further analysis. Table 1 presents the results for factor loadings, item-total correlation, and Cronbach alpha for multiple-item scales used in this study.

**Table 1:** Results of Measure Validation

Items	Factor Loadings	Item-Total Correlation	Cronbach Alpha
Digital accounting (DA)	0.72–0.84	0.69–0.85	0.90
Financial reporting quality (FQ)	0.91–0.96	0.91–0.96	0.95
Accounting Information usefulness (AU)	0.83–0.90	0.83–0.90	0.90
Digital transformation (DT)	0.87–0.94	0.87–0.94	0.93
Strategic decision effectiveness (DE)	0.85–0.91	0.85–0.91	0.93

**Table 2:** Descriptive Statistics and Correlation Matrix

Variables	DE	DA	FQ	AU	DT
Mean	4.17	4.14	4.34	4.33	4.41
Standard Deviation	0.51	0.58	0.51	0.53	0.51
Strategic decision effectiveness (DE)					
Digital accounting (DA)	0.44***				
Financial reporting quality (FQ)	0.52***	0.46***			
Accounting information usefulness (AU)	0.64***	0.51***	0.74***		
Digital transformation (DT)	0.51***	0.47***	0.59***	0.64***	

\*\*\* $p < 0.01$ .

To test the research relationships, a structural equation model was used to investigate the direct and mediating relationships of the study. Moreover, multiple regression analysis was applied to examine the moderating effects of the aforementioned relationships.

## 4. Results and Discussion

Table 2 presents descriptive statistics and the correlation matrix for all variables. Multicollinearity is a situation where two or more predictors are highly linearly related. In general, an absolute correlation coefficient of  $>0.8$  among two or more predictors indicates the presence of multicollinearity (Hair et al., 2010). The correlations ranged between 0.44 to 0.74 at a  $p$ -value  $< 0.01$  significance level, which means the possible relationships of the variables in the conceptual model could be tested. Thus, there are no substantial multicollinearity problems encountered in this study.

Table 3 presents the results of the research relationships. Figure 2 shows a summary of the digital accounting-strategic decision effectiveness relationships. Here, the goodness of fit index (GFI) (an index that ranges from 0 to 1) with a value of 0.95 indicates a relatively good fit (Byrne, 1998). Next, the comparative fit index (CFI) (an index that ranges from 0 to 1) with a value of 0.94 indicates a relatively good fit (Bentler, 1990). In addition, the incremental fit index (IFI) with a value of 0.93 indicates a relatively

**Table 3:** Results of Path Coefficients and Hypotheses Testing

Hypotheses	Relationships	Coefficients	t-value	Results
H1a	DA → FQ	0.45***	4.58	Supported
H1b	DA → AU	0.43***	4.95	Supported
H1c	DA → DE	0.26*	2.65	Supported
H2a	FQ → AU	0.84***	11.73	Supported
H2b	FQ → DE	0.23*	2.27	Supported
H3	DA → FQ	0.45***	4.58	Supported
	FQ → DE	0.23*	2.27	
H4	AU → DE	0.65***	4.37	Supported
H5	DA → AU	0.43***	4.95	Supported
	AU → DE	0.65***	4.37	

\* $p < 0.10$ , \*\*\* $p < 0.01$ .



**Figure 2:** A Summary of the Digital Accounting-Strategic Decision Effectiveness Relationships

\* $p < 0.10$ , \*\*\* $p < 0.01$ ; GFI: 0.95; CFI: 0.94; IFI: 0.93; RMSEA: 0.03.

good fit (Kline, 1998). Last, the root mean square error of approximation (RMSEA) with a value of 0.03 is considered less than 0.05 which indicates a close fit, and a value less than 0.08 suggests a marginal fit (Bollen & Long, 1993). This study shows that the initial test of the measurement model resulted in a good fit for the data.

Interestingly, digital accounting is a key determinant of financial reporting quality ( $b = 0.45$ ,  $p < 0.01$ ), accounting information usefulness ( $b = 0.43$ ,  $p < 0.01$ ) and strategic decision effectiveness ( $b = 0.26$ ,  $p < 0.06$ ). In the existing literature, digital accounting means storage, formation, transmission, and representation of accounting data in an electronic format (Troshani et al., 2019). A digital format can boost productivity because the financial manager or accountant can input and extract data within a few minutes. With a digital format, less time is required to process every transaction, and the accounting department can

produce reports within minutes. This may reduce the cost of employing a financial manager and improve productivity in the accounting department. One of the biggest benefits of moving accounting books from paper to digital is that financial information can be reviewed, analyzed, and sorted easily to produce accurate reports. In a digital format, the information is readily available to run all types of financial reports, and a financial manager could produce a cash flow statement within a few minutes. The ability to work with real-time financial data can be of great value to any business (Shan, 2021).

For the usefulness of accounting information, firms can use digital accounting for creating accounting information by capturing and summarizing information that determines the firm's financial position, health, and value. They can enhance decision value that either results in desired outcomes or respond to rapid technological changes. They can make

better decisions, achieve high efficiency, and increase productivity. Accordingly, digital accounting positively leads to high financial reporting quality, potential accounting information usefulness, and successful strategic decision effectiveness. *Therefore, Hypotheses 1a–1c are supported.*

In addition, financial reporting quality positively affects accounting information usefulness ( $b = 0.84, p < 0.01$ ) and strategic decision effectiveness ( $b = 0.23, p < 0.08$ ). Interestingly, quality financial reports are reports that are complete, neutral, and free from error and provide useful predictive or confirmatory information about firms' underlying economic position, event, and performance (Shuraki et al., 2021). With high financial reporting quality, firms can contribute to the accounting information usefulness, and they can use this financial report for supporting stakeholders to make accurate decisions. They can also achieve strategic decision effectiveness. *Therefore, Hypotheses 2a–2b are supported.*

To test the mediating effects of the research relationships, financial reporting quality is a main result of digital accounting implementation ( $b = 0.45, p < 0.01$ ) while at the same time, it definitely enhances strategic decision effectiveness ( $b = 0.23, p < 0.08$ ). According to Baron and Kenny (1986), a mediating variable is a variable that explains the relationship between a predictor (independent) variable and a criterion (dependent) variable. The mediator is considered an intervening variable which explains the relationship between a predictor variable and a criterion variable. Accordingly, financial reporting potentially mediates the digital accounting-strategic decision effectiveness relationships. *Therefore, Hypothesis 3 is supported.*

Furthermore, accounting information usefulness becomes a significant player in enhancing strategic decision effectiveness ( $b = 0.65, p < 0.01$ ). Indeed, accounting information usefulness is the ability of accounting information to capture and summarize information that legitimizes and confirms firms' economic decision-making (Ouda & Klischewski, 2019). Firms with potential accounting information usefulness can enable great decision-making that can result in achieving desired goals and enhancing sustainable outstanding performance. Thus, accounting information usefulness significantly affects strategic decision effectiveness. *Therefore, Hypothesis 4 is supported.*

For investigating the mediating effects of the research relationships, accounting information usefulness can help link digital accounting to strategic decision effectiveness. According to Baron and Kenny (1986), a mediating variable is a variable that links the independent and the dependent variables, and whose existence explains the relationship between the other two variables. A mediating variable is also known as a mediator variable or an intervening variable. Accordingly, accounting information usefulness positively affects strategic decision effectiveness ( $b = 0.65, p < 0.01$ ) and it is an outcome of digital accounting implementation ( $b = 0.43, p < 0.01$ ). Thus, it mediates the digital accounting-strategic decision effectiveness relationship. *Therefore, Hypothesis 5 is supported.*

Table 4 presents the results of the moderating effects. Here, digital transformation explicitly moderates the digital accounting-financial reporting quality relationships ( $b = 0.14, p < 0.10$ ) and the digital accounting-accounting information usefulness relationships ( $b = 0.15, p < 0.10$ ). For companies, a digital business strategy is viewed as

**Table 4:** Results of Multiple Regression Analysis<sup>a</sup>

Independent Variables	Dependent Variables				
	FQ	AU	DE	DE	DE
DA	0.32*** (0.10)	0.31*** (0.12)	0.25** (0.11)		
FA				0.31*** (0.11)	
AU					0.49*** (0.11)
DI	0.49*** (0.10)	0.53*** (0.09)	0.41*** (0.11)	0.32*** (0.12)	0.19* (0.11)
DA * DI	0.14* (0.09)	0.15* (0.09)	0.05 (0.10)		
FA * DI				0.07 (0.09)	
AU * DI					0.05 (0.08)
SO	0.11 (0.07)	0.10 (0.07)	0.10 (0.08)	0.08 (0.08)	0.06 (0.07)
YO	0.09 (0.08)	0.03 (0.08)	0.01 (0.09)	0.08 (0.09)	0.03 (0.08)
RC	0.02 (0.08)	0.02 (0.07)	0.14 (0.08)	0.13 (0.08)	0.11 (0.08)
Adjusted R <sup>2</sup>	0.42	0.47	0.31	0.34	0.42

<sup>a</sup> $p < 0.10$ ,  $**p < 0.05$ ,  $***p < 0.01$ , Beta coefficients with standard errors in parenthesis.



means of transforming their business, streamline processes, and making use of technologies to enhance their interaction with customers and employees, and deliver an excellent customer experience at the same time (Peter et al., 2020). It creates and reinforces disruptions in society and industry. Firms with successful digital transformation can combine various technologies and processes to ensure better value creation for the benefit of customers and the firm. Digital transformation can strengthen the digital accounting-financial reporting quality relationships and the digital accounting-accounting information usefulness relationship. Thus, digital transformation can explicitly moderate the aforementioned research relationships. *Therefore, Hypotheses 6a–6b are supported.*

Surprisingly, digital transformation does not moderate the digital accounting-strategic decision effectiveness relationship ( $b = 0.05$ ,  $p < 0.60$ ), the financial reporting quality-strategic decision effectiveness relationship ( $b = 0.07$ ,  $p < 0.39$ ) and the accounting information usefulness-strategic decision effectiveness relationship ( $b = 0.05$ ,  $p < 0.57$ ). In this study, digital transformation is the process of using digital technologies to transform existing traditional and non-digital business processes and services, or creating new ones, to meet with the evolving market and customer expectations, thus completely altering the way businesses are managed and operated, and how value is delivered to customers (Hilali et al., 2020). While digital accounting already utilizes the benefits and advantages of digital technologies to enhance successful strategic decision effectiveness, digital transformation helps strengthen the significant relationship between digital accounting and strategic decision effectiveness. Digital accounting implementation significantly affects strategic decision effectiveness. Moreover, digital transformation is not a moderator of the financial reporting quality-strategic decision effectiveness relationships and the accounting information usefulness-strategic decision effectiveness relationships. In the current study, both financial reporting quality and accounting information usefulness play important roles in determining and explaining the success of strategic decision effectiveness. They have strong effects on strategic decision effectiveness. Therefore, it is possible that digital transformation may not assist to enhance this relationship. *Therefore, Hypotheses 6c–6e are not supported.*

## 5. Contributions and Directions for Future Research

### 5.1. Theoretical Contribution and Directions for Future Research

This study confirms that the resource-based view of the firms is considered a valuable theory that can clarify and verify the effects of digital accounting on financial

reporting quality, accounting information, and strategic decision effectiveness. In this study, digital accounting, financial reporting quality, accounting information, and strategic decision effectiveness are put in the same conceptual model. All research relationships are empirically approved. The current study has focused on the concept of digital accounting as a whole, hence, to expand the digital accounting-strategic decision effectiveness in the current study, future research needs to create dimensions of digital accounting using “an inductive approach” and applying “a grounded theory” which is a guideline for building its dimensions. In addition, future research may need to reconceptualize the moderating roles of digital transformation to enhance its benefits and advantages more in the empirical study. According to the research results, future research may consider digital transformation as an independent variable of the study because it explicitly determines the valuable outcomes of the study.

To test the generalizability of the study, future research may conduct a comparative study. This study has applied multiple regression analysis to solely test the moderating effects of the research relationships. Future research may consider using multiple regression analysis as a major approach to test both the direct and indirect effects of the research relationships and compare the research results with the structural equation model. Similarly, partial least squares regression is considered important in testing research relationships. Future research may also apply those statistical methods to yield more benefits of the study and increase the generalizability of the study.

### 5.2. Managerial Contribution

Digital accounting is considered important for firms to survive and sustain in a world filled with high digital technology growth. Accordingly, the success of digital accounting implementation can reflect how firms’ executives invest, apply and use digital accounting as a valuable tool in business operations. They must allocate assets, resources, and capabilities to achieve the success of digital technology usage. Likewise, executives need to encourage their staff to learn and understand the digital accounting concepts. In addition, they must be informed of the benefits and complications of digital accounting. As digital technologies dramatically reshape industry after industry, managers and executives must pursue large-scale change efforts to capture the benefits of these trends or simply to keep up with competitors.

## 6. Conclusion

Interestingly, this study examines the effects of digital accounting on financial reporting quality, accounting

information usefulness, and strategic decision effectiveness of listed firms in Thailand. Mediating effects of both financial reporting quality and accounting information usefulness and moderating effects of digital transformation are also investigated. In this study, 313 listed firms in Thailand were selected as the study sample. The results of the study showed that digital accounting has a significant effect on financial reporting quality, accounting information usefulness, and strategic decision effectiveness. Furthermore, financial reporting quality significantly affects both accounting information usefulness and strategic decision effectiveness while accounting information usefulness has a significant effect on strategic decision effectiveness. Both financial reporting quality and accounting information usefulness are the mediators of the digital accounting-strategic decision effectiveness relationships. In addition, digital transformation moderates the digital accounting-financial reporting quality relationship and the digital accounting-accounting information usefulness relationship, but it does not moderate other relationships. However, future research needs to create dimensions of digital accounting by applying a grounded theory.

Future research may reconceptualize the moderating roles of digital transformation to enhance more benefits and consider digital transformation as an independent variable and an antecedent variable of the study. Both multiple regression analysis and partial least squares regression are needed for testing the research relationships. More importantly, the executives of the firms can invest, apply and utilize digital accounting as a valuable tool in business operations through allocating assets, resources, and capabilities to achieve the success of digital technology usage.

## References

- Aaker, D. A., Kumar, V., & Day, G. S. (2001). *Marketing research*. New York: John Wiley and Sons.
- Arthur, N., Chen, H., & Tang, Q. (2019). Corporate ownership concentration and financial reporting quality: international evidence. *Journal of Financial Reporting and Accounting*, 17(1), 104–132. <https://doi.org/10.1108/JFRA-07-2017-0051>
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037//0022-3514.51.6.1173>
- Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, 107, 238–246. <https://doi.org/10.1037/0033-2909.107.2.238>
- Berman, S. J. (2012). Digital transformation: Opportunities to create new business models. *Strategy and Leadership*, 40(2), 16–24. <https://doi.org/10.1108/10878571211209314>
- Bollen, K. A., & Long, J. S. (1993). *Testing structural equation models*. California: Sage Publications.
- Byrne, B. M. (1998). *Structural equation modeling with LISREL, Prelis, and Simplis: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Cao, G., Duan, Y., & Cadden, T. (2019). The link between information processing capability and competitive advantage is mediated through decision-making effectiveness. *International Journal of Information Management*, 44, 121–131. <https://doi.org/10.1016/j.ijinfomgt.2018.10.003>
- Churchill, G. A., Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73. <https://doi.org/10.2307/3150876>
- Garzoni, A., Turi, I. D., Secundo, G., & Vecchio, P. D. (2020). Fostering digital transformation of SMEs: A four levels approach. *Management Decision*, 58(8), 1543–1562. <https://doi.org/10.1108/MD-07-2019-0939>
- Hair, J. F., Black, W. C., Bain, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7<sup>th</sup> ed.). Englewood Cliffs, NJ: Person Prentice Hall.
- Hilali, W. E., Manouar, A. E., & Idrissi, M. A. J. (2020). Reaching sustainability during a digital transformation: A PLS approach. *International Journal of Innovation Science*, 12(1), 52–79. <https://doi.org/10.1108/IJIS-08-2019-0083>
- Khin, S., & Ho, T. C. F. (2019). Digital technology, digital capability and organizational performance: A mediating role of digital innovation. *International Journal of Innovation Service*, 11(2), 177–195. <https://doi.org/10.1108/IJIS-08-2018-0083>
- Kline, R. B. (1998). *Principles and practices of structural equation modeling*. New York: The Guilford Press.
- Nogueira, S. P. S., Jorge, S. M. F., & Oliver, M. C. (2013). The usefulness of financial reporting for internal decision-making in Portuguese municipalities. *Management Research: The Journal of the Iberoamerican Academy of Management*, 11(2), 178–212. <https://doi.org/10.1108/MRJIAM-Dec-2011-0465>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Ouda, H. A. G., & Klischewski, R. (2019). Accounting and politicians: A theory of accounting information usefulness. *Journal of Public Budgeting, Accounting, and Financial Management*, 31(4), 496–517. <https://doi.org/10.1108/jpbafm-10-2018-0113>
- Peter, M. K., Kraft, C., & Lindeque, J. (2020). Strategic action fields of digital transformation: An exploration of the strategic action fields of Swiss SMEs and large enterprises. *Journal of Strategy and Management*, 13(1), 160–180. <https://doi.org/10.1108/JSMA-05-2019-0070>
- Rahman, M. M., & Masum, M. H. (2021). The extent of corporate social responsibility disclosure: evidence from Bangladesh.

- Journal of Asian Finance, Economics, and Business*, 8(4), 563–570. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0563>
- Ritter, T., & Pedersen, C. L. (2020). Digitalization capability and the digitalization of business models in business-to-business firms: past, present, and future. *Industrial Marketing Management*, 86, 180–190. <https://doi.org/10.1016/j.indmarman.2019.11.019>
- Shan, Y. G., & Troshani, I. (2021). Digital corporate reporting and value relevance: evidence from the US and Japan. *International Journal of Managerial Finance*, 17(2), 256–281.
- Shaughnessy, K., & Goulding, F. (2021). Sprinting to digital transformation: A time-boxed, agile approach. *Strategy and Leadership*, 49(1), 18–24. <https://doi.org/10.1108/SL-12-2020-0157>
- Shuraki, M. G., Pourheidari, O., & Azizkhani, M. (2021). Accounting comparability, financial reporting quality, and audit opinions: Evidence from Iran. *Asian Review of Accounting*, 29(1), 42–60. <https://doi.org/10.1108/ARA-06-2020-0087>
- Troshani, I., Locke, J., & Rowbottom, N. (2019). Transformation of accounting through digital standardization: Tracing the construction of the IFRS taxonomy. *Accounting, Auditing and Accountability Journal*, 32(1), 133–162. <https://doi.org/10.1108/AAAJ-11-2016-2794>
- Van Riel, A. C. R., Semeijn, J., Hammedi, W., & Henseler, J. (2011). Technology-based service proposal screening and decision-making effectiveness. *Management Decision*, 49(5), 762–783. <https://doi.org/10.1108/00251741111130841>
- Vial, G. (2019). Understanding digital transformation: a review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>