Organizational Strategic Agility and Goal Achievement: An Empirical Study in Thailand

Sunanvadee Palasak

A Thesis Submitted in Partial Fulfillment of Requirements for

degree of Doctor of Philosophy in Management

December 2021

ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย

วิทยานิพนธ์

ของ

สุนันวดี พละศักดิ์

เสนอต่อมหาวิทยาลัยมหาสารคาม เพื่อเป็นส่วนหนึ่งของการศึกษาตามหลักสูตร

ปริญญาปรัชญาดุษฎีบัณฑิต สาขาวิชาการจัดการ

ธันวาคม 2564

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DEGREE Doctor of Philosophy **MAJOR** Management

UNIVERSITY Mahasarakham University **YEAR** 2021

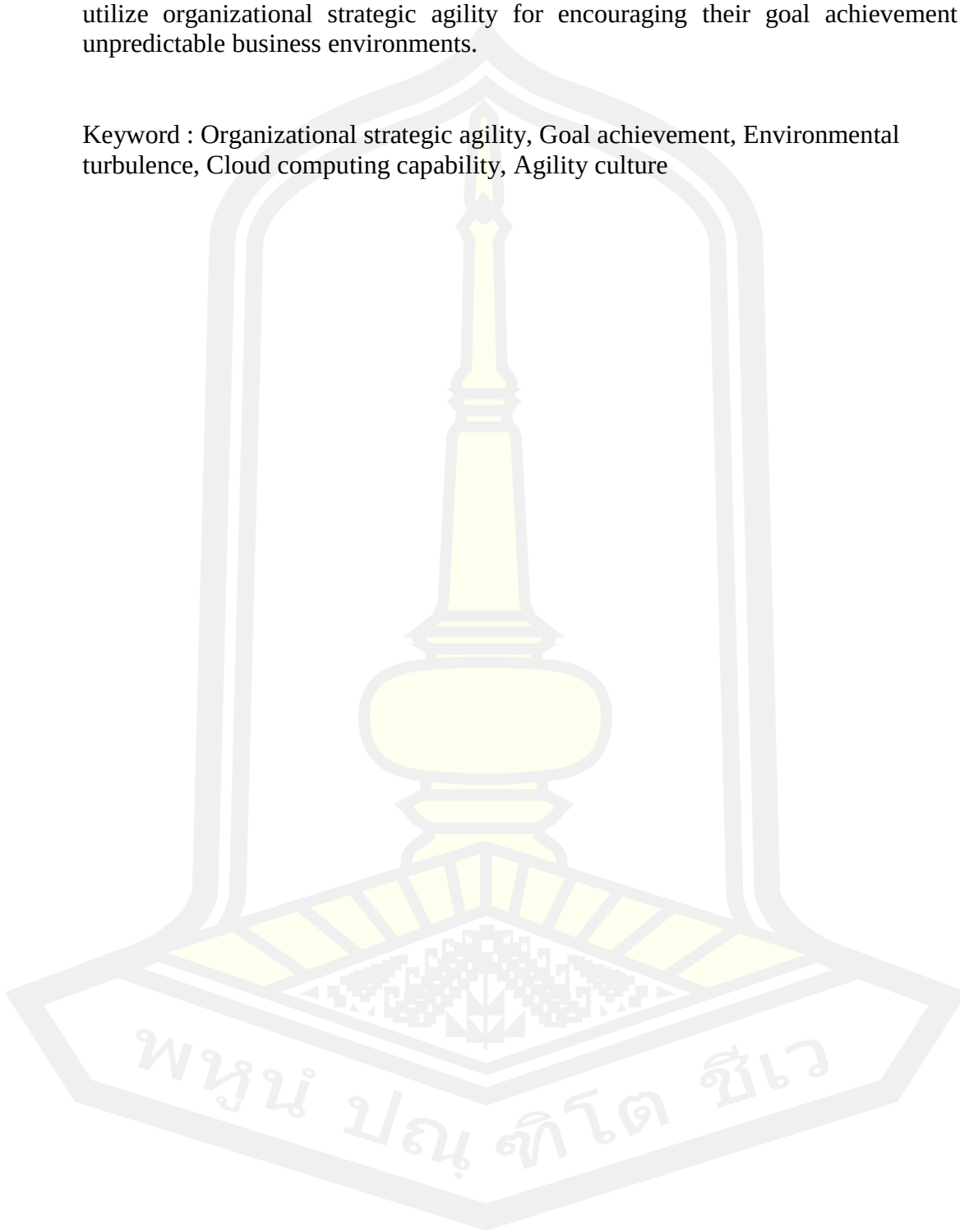
ABSTRACT

The objectives of this research are to investigate the relationship between organizational strategic agility (operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility) and goal achievement. This research also investigates the relationship among organizational strategic agility and its antecedents that are environmental turbulence (technological turbulence, market turbulence) and cloud computing capability (cloud computing flexibility, cloud computing integration). Additionally, the moderating effects of agility culture in the relationship between organizational strategic agility, environmental turbulence, and cloud computing capability. This research applies dynamic capability and contingency theories to draw the conceptual model. Electronic commerce (e-Commerce) in Thailand is chosen to understand the agility phenomenon and 1,685 e-Commerce businesses in computer, IT gagged, software, and application are selected to gather data by survey approach. The data from 401 e-Commerce businesses are analyzed by structural equation modeling to assess the construct validity and reliability and test the posited hypotheses.

The results of the study are described as follows. Firstly, the result found that three dimensions of organizational strategic agility included: operational agility, customer alertness agility, and strategic business relationship agility positively influences, while competitor awareness agility negatively influences both two dimensions of goal achievement. Secondly, two dimensions of cloud computing capability included: cloud computing flexibility and cloud computing integration positively influences organizational strategic agility. Thirdly, two dimensions of environmental turbulence differently influence organizational strategic agility. Technological turbulence does not positively influence organizational strategic agility while market turbulence positively influences organizational strategic agility. Fourthly, agility culture is likely to positively moderate the relationship among environment turbulence, cloud computing capability, and organizational strategic agility. Agility culture positively moderates the relationship between environmental turbulence and organizational strategic agility while agility culture does not positively moderate the relationship between cloud computing capability and organizational strategic agility.

This research integrating several theories and agility concepts provide novel approaches and recommendations for e-Commerce organizations and others to utilize organizational strategic agility for encouraging their goal achievement in unpredictable business environments.

Keyword : Organizational strategic agility, Goal achievement, Environmental turbulence, Cloud computing capability, Agility culture



ACKNOWLEDGEMENTS

My deepest gratitude to my family, whose value to me, they let me grow as I dreamed and given me study opportunities as good as they can.

My deep gratitude to my advisors, Assistant Professor Dr. Sutana Boonlua and Assistant Professor Dr. Sumittra Jirawuttinunt whose spent time looking after and valuable guided me through this dissertation. My heartfelt gratitude to all the dissertation committee members whose encourage and given value recommendation to this dissertation. I am truly grateful to all the Roi Et Rajabhat University, where is given me a chance and scholarship to study; Mahasarakham University, where provides me valuable knowledge. I would like to thanks my friends for supporting me and made my study life was so funniest memories.

Sunanvadee Palasak

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CHAPTER I

INTRODUCTION

Background

Rising of advanced technology makes a huge challenge to organizations to change their traditional business models, strategic capabilities to help organizations respond to unanticipated environmental opportunities and threats (Verhoef et al., 2021). Moreover, the internet and the powerful digital technology transform and blend people's lifestyles into the virtual world that become the digital society (Nambisan, Wright & Feldman, 2019). The huge expanding growth number of the digital society on the internet and the development of advanced technology influences business organizations to integrate digital technology is a component in which business digitization and electronic commerce (e-Commerce) (Izadi, Dong & Esfidani, 2021). This is the so-called emerging digital economy of the business world, and the potential of e-Commerce has encouraged various businesses and boosted the economy of countries (Wingreen, Mazey, Baglione & Storholm, 2019).

It is not only the important role of new advanced technology, the recent a corona virus disease 2019 (COVID-19) pandemic also has clearly shown how e-Commerce initiatives are critical for many organizations, regions, and countries worldwide (Lin, Li, Luo & Benitez, 2020). A coronavirus is a group of viruses that basis minor illness and certain types of viruses can infect the lower airway, and commencing severe illnesses such as, pneumonia, bronchitis and people infected with this virus can contagions are serious (Bhatti, Akram & Khan, 2020). COVID-19 is discovered in Wuhan city of China, within a week millions of people were contaminated with this virus in China and Thailand found the first sick person outside China (Tantrakarnapa, Bhopdhornangkul & Nakhaapakorn, 2020). As a result of Covid-19 impact, huge demands of customers turn to e-Commerce, organizations need to develop their capabilities which facilitate between organizations and customers (Lin et al., 2020; Tran, 2021).

Thailand, where an e-Commerce is a business rising star nowadays; this proved by the 2020 report from the Department of Business Development about a huge 24,797 million incomes and the number of e-Commerce organizations in every business sector approximately increase to 13,000 business organizations (Department of Business Development, 2021). The number of that internet users in 2020 is almost close to 70 percent of Thai people or 47.5 million internet users in Thailand; this makes e-Commerce in Thailand attracted new business competitors to get into the e-Marketplaces and cause them speed up in advance level by providing more rapidly activities to attract potential customers with immersive shopping experiences beyond competitors (Electronic Transactions Development Agency, 2021). Businesses utilized those opportunities to become more popular across the world because convenience technology brings more opportunities to e-Commerce businesses to connect with huge online customers around the world (Akhtar, Khan, Tarba & Jayawickrama, 2018; Irfan, Wang & Akhtar, 2019; Sihotang, Kartini & Rufaidah, 2016). On the other hand, opportunities provide the potential doors for competitors across the world may get involved in the e-Commerce wars easily.

The booming of digital transformation and the strong use of new technologies force organizations to develop their strategies and management practices that cause practitioners and scholars to recommend businesses provide organizational strategic agility for managing those disruptive factors for organizations (Felipe, Leidner, Roldán & Leal-Rodríguez, 2019). The agility concept first emerged in the early 1990s as a management topic in the manufacturing industry, which is mainly referring to manufacturer that is able to respond rapidly to customer need and market forces (Yusuf, Sarhadi & Gunasekaran, 1999). Thereafter, various different aspects of agility have attracted interest among practitioners and academics in many disciplines such as management, marketing, and human resource management (Doz, 2020). In general terms, organizational agility is a wide range of capabilities via speedy allocating resources from inside and outside organizations to successfully administer unpredictable factors, is which flip changes as opportunities to grow and succeed in organizational goal achievement (Baškarada & Koronios, 2018; Teece, Peteraf & Leih, 2016; Worley & Lawler, 2010). Moreover, goal achievement is the right agility matrics

to agile attributes, agile capability, agile enablers and improvement paths that are the line with organizational strategic agility (Nejatian, Zarei, Nejati & Zanjirchi, 2018).

An e-Commerce is disrupted by advanced technology which brings a great challenge for businesses to manage environmental turbulence such as the uncertainty of hyper-competition, customers' demand and unpredictable business environment (Ahammad, Glaister & Gomes, 2020; Wingreen et al., 2019). Cloud computing is one of the most novel innovative cloud in information technology (IT) that it is a technology-enabling platform where software and hardware services are delivered on-demand to customers across networks in self-service modes, freedom of location, and customers' device (Ali, Warren & Mathiassen, 2017; Wang et al., 2016). The cloud computing supports organizations overcome their limitation of IT capabilities in hardware and software framework inflexibility or integration that is characterized in traditional IT architecture. Thus, cloud computing capabilities support organizational strategic agility by increasing capabilities (Liu, Chan, Yang & Niu, 2018).

Further, a recent research trend posits the need to go more thoroughly into the supporting role of organizational and contextual factors that can affect organizational strategic agility from a cultural perspective (Felipe, Roldán & Leal-Rodríguez, 2016). The organizational culture can strengthen its organizational strategic agility with regard to the uncertain environment and previous research found that organizations, where are providing a strong agile culture, are expected to have excellent agile capabilities to make modifications in accordance with the needs of the environmental turbulence and using high technology (Arokodare, Asikhia & Makinde, 2019; Jermsittiparsert & Wajeetongratana, 2019).

Nevertheless, comprehension of organizational agility about the definition, antecedents, consequences, and composition provides a part of the way but does not demonstrate everything organizations might ever need to know about agility in some recent business context (Tallon, Queiroz, Coltman, & Sharma, 2019). Major agile research have examined agility as a supply chain concept, a manufacturing concept, or attributes of organizational agility (Aburub, 2015; Baškarada & Koronios, 2018) and tended to emphasize the sophisticated ways of the association between agility and spending money on making technological infrastructures or agility papers have been qualitative, theoretical papers, emphasize on agile attributes that make other fields lack

empirical findings and managerial guidelines (Asseraf, Lages & Shoham, 2019; Tallon et al., 2019).

One of the most commonly ignored variables that may affect organizational agility is organizational culture (Felipe et al., 2016; Gagel, 2017; Yadav & Dixit, 2017) because major researchers research attributes or characteristics of agility such as flexibility, quickness, competency, and responsiveness (Baškarada & Koronios, 2018; Tallon et al., 2019). Therefore, this research employs the agile culture with the view of contingency theory to understand the cultural design for supporting organizations to integrate its antecedents and organizational structure in environmental turbulences conditions to enhance organizational strategic agility and employs dynamic capability theory which implies that organizational strategic agility represents is the dynamic capability of the organization to rapidly or inherently allocates resources in environmental turbulence conditions, and achieve the organizational goal.

Purpose of the Research

The preliminary objective of this research is to investigate the relationship of organizational strategic agility and goal achievement and the specific objective are as follows:

1. to examine the relationship among four dimensions of organizational strategic agility (operational agility, customer alertness agility, competitor awareness agility and strategic business relationship agility) and goal achievement,

2. to examine the relationship between environmental turbulences and organizational strategic agility,

3. to determine the relationship between cloud computing capability and organizational strategic agility,

4. to evaluate the moderating effect of agile culture influences the relationship among environmental turbulences, cloud computing capability and organizational strategic agility.

Research Questions

The key research question is how organizational strategic agility does influences goal achievement, also specifically research questions as follows:

1. What impact organizational strategic agility have on goal achievement?
2. What influence agile culture moderate the relationship between environmental turbulence, cloud computing capability, and organizational strategic agility?

Scope of the Research

According to prior discussion, this research building on the dynamic capability theory which aims to describe the nature and function of organizational strategic agility, this allows organizations to integrate, create, configure resources and capabilities (Baškarada & Koronios, 2018). The organizational strategic agility is conceptualized as multidimensional capabilities, including four dimensions (1) operational agility, (2) customer alertness agility, (3) competitor awareness agility, and (4) strategic business relationship agility. This research implies all previous dimensions can perform organizational strategic agility to keep organizations being at a high level of agility. Thus, organizations can sustain superior performance and strengthen their competitive advantage that reaches to achieve organizational goals in continuous. This research presents the dynamic capability of integration to illustrate the relationship between main variables that emphasize in order to achieve the research questions and objectives. Especially, organizations with highly focused dynamic strategies around operational excellence, customer intimacy, competitor intense, and utilize business relationship, may need to be agile in processes that are keys to the success of the business strategy and organizational goal achievement.

This research employs the contingency theory to understand the nature of organizational strategic agility that should concern its antecedents, which are environmental turbulence and cloud computing capability (Liu et al., 2018a). The contingency theory explains the specific culture such as agile cultures that is fit with encouraging the development of organizational strategic agility (Cleveland &

Cleveland, 2019). Taken together, organizational strategic agility is viewed as the key dynamic capability that it utilized the benefit from external providers with encouraging by cloud computing, forcing from environmental turbulences, and supporting from internal enables for example agile culture agility.

Organizational strategic agility comprises four crucial dimensions; namely, operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility. The consequence of organizational strategic agility is the organizational goal achievement consists of financial goal achievement and strategic goal achievement. This research also investigates the antecedents of organizational strategic agility, while various antecedent factors affect organizational strategic agility. These are environmental turbulences and cloud computing capability. Finally, the supporting role of moderators that influence the relationship of the conceptual model based on internal factors of agile culture. Figure 1 shows the relationships between organizational strategic agility and organizational goal achievement (see Chapter two).

In addition, e-Commerce businesses in Thailand are selected as a group of population to investigation. Moreover, there are 2,134 e-Commerce businesses sector in computer, IT gagged, and software (www.dbd.go.th, accessed January 1, 2021). This research has chosen e-Commerce industry in technology sectors to represent the environmental turbulence, unpredictable customer demand, high competition that force organizations need to provide organizational strategic agility to succeed in goal achievement, also e-Commerce businesses in Thailand are rapidly grown and provide huge income in Thai economics (Department of Business Development, 2020).

Significance of the Research

This research provides new novel knowledge of the agility paradigm by investigating the influence of the organizational strategic agility on goal achievement, through integrating knowledge from two antecedents of cloud computing capability and environmental turbulences. This research also provides new knowledge of applying the contingent factors that are agile culture to understand the importance of specific factors to suit with organizational strategic agility context. Furthermore, this research provides insights that contribute many aspects of theoretical and managerial implications.

Firstly, this research contributes to the theoretical implication by building the new organizational strategic agility construct with dynamic capability theory and proposes four dynamic capabilities underpinning organizational strategic agility which including the four dimensions of agile capabilities: (1) operational agility, (2) customer alertness agility, (3) competitor awareness agility, and (4) strategic business relationship agility.

Secondly, this research contributes to the operational agility in e-Commerce literature which lacking empirical research and this research contributes by integrating operational agility, which is one of the dimensions on the new organizational strategic agility construct which represents the new agile multi-capability.

Thirdly, this research contributes to the contingency theory by applying to build agile culture as a contingent factor for applying into the agile organization of the agile context and e-Commerce business.

Fourthly, this research contributes to the call of research at other countries or cultures outside western countries and developed countries (Li, Lin, Turel, Liu & Luo, 2020). Thus, this research is based on the Thai context where represent a developing and eastern country, which may provide the new novel results on agility paradigm.

Organization of the Dissertation

This research is organized into five chapters. Chapter one demonstrates an overview of the research, purposes of the research, research questions, scope of the research, and organization of the dissertation. Chapter two reviews the relevant on organizational strategic agility, and theories were used in this research to descript the theoretical framework for developing the conceptual model and the relationship among the different variables and the related hypothesis testing. Chapter three descripts empirical examination of the methods including data collection procedure, sample characteristics, the variable measurements of all constructs. Chapter four demonstrates the research results of statistical testing and discussion. Finally, chapter five provides the conclusion, the contribution of theoretical perspective and managerial perspective, the research limitation, and the recommendation for future research directions.

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter illustrates the comprehensive view of the constructs' relation to the conceptual model; this research utilizes dynamic capability and contingency theories to explain the relationship between the organizational strategic agility, its antecedents, consequences, and moderators. Thus, the following section provides the theoretical foundation of dynamic capability and contingency theories that clarify the relationship of all variables and preposition development. Due to various academic disciplines of agility research, this research provides the background of agility, agility category to understand the origin of agility and context for applying and providing a relevant literature review and the details of hypotheses development of all constructs of the conceptual framework, definitions, and previous research on the subject of organizational strategic agility.

Theoretical Foundations

According to previous research on agility literature, this research utilizes the perspective of dynamic capability and contingency theories to understand the nature and relationships among the organizational strategic agility, its antecedents, consequences, moderators. These three theories have synergy to explain and predict all variables and the aforementioned relationships which related to purpose in this research.

Dynamic Capability Theory

Dynamic capabilities' concepts are proposed by Teece, Pisano & Shuen (1997) on their academic paper title: dynamic capabilities and strategic management. This concept extended the view of resource-based theory by organizations dynamic capability which defined as abilities of organization to create, integrate, and configure internal and external competencies and resources to manage a rapid dynamic changing

environment (Teece, Pisano & Shuen, 1997). Further, some organizations where provide dynamic capabilities can reach sustainable competitive advantage that lead to supreme performance as such a goal achievement of organization more than other organizations in dynamic business environment (Teece, 2014; 2019).

Hence, organizations are suggested that they should qualify to dynamic environment and changes through an appropriation in integrating, creating, reconfigure, and alteration in business activities, tangible and intangible resources (Teece, 2018). Later on Wang and Ahmed (2007) clarify dynamic capability concept as a constant behavioral orientation of organization to reconfigure, integrating, and built organization's capabilities and resources for responding to market dynamism that encourage capability development to reach market based performance and financial performance. Therefore, general organizations can adopt or adapt to develop their dynamic capabilities in dynamic environment, and some scholars explain that whatever less dynamic business conditions or not, organization still integrate, create, and reconfigure its capabilities (Teece et al., 2016; Teece, 2018). Nevertheless, there is consensus that dynamic capabilities have an important role in competitive advantage (Argote & Ren, 2012).

Through various organizational types, strategic literature demonstrates various dimensions and micro-foundation of its dynamic capability which it reflects a different strategic perspective (Augier & Teece, 2008; Teece, 2019). Teece (2007) demonstrated three common dimensions that are (1) sensing capability, which occur from organizational processes and individuals' capacities are used to build sensing capability for finding opportunities; (2) seizing capability reflect selecting and decision-making protocols for models of businesses or product architectures, organizational boundaries, and creating or encouraging of employees loyalty; (3) reconfiguration capability is organizational ability to recombine and reconfiguring of resources, structures to maintain growth or fight with changes and environmental dynamism.

The exponential environmental dynamism context needs dynamic capabilities that are complicated, experiential, uneven processes which depend on speedily build new insights to combine, transform, or renew of organizational resources and competencies into capabilities, thus necessary for market dynamism and changes. Baškarada and Koronios (2018) and Teece et al. (2016) found that agility encapsulates

dimensions of dynamic capability including sensing, seizing (responsiveness) and reconfiguration by operating through suitably aligning resources, day-to-day activities, and production to positively respond market demands and winsome renewal of necessary processes and organizational activities. This implies that dynamic capability theory is a suitable perspective to draw agile framework.

Thus, this research develops the conceptual framework on the dynamic capabilities perspective which indicate organizational strategic agility is the key dynamic capability to successfully manage environmental uncertainty (Baškarada & Koronios, 2018; Mandal, 2019; Tallon et al., 2019) and lead to achieve organizational objectives of overall goals with organizational strategic agility though providers: operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility for positively influencing organizational strategic dynamic agility. This research also employs dynamic capabilities perspective to describe the relationship between organizational strategic agility and organizational goal achievement.

Contingency Theory

Contingency theory is an important to management literature because researchers and practitioners are responded to criticisms that the classical theories advocated one best way of managing and organizing (Tosi & Slocum, 1984). The contingency approach was emerged by researchers who found the structure and functions of organizations rely on its interface with the external environment (Dill, 1958; Lawrence & Lorsch, 1967). The research of Dill (1958) indicated that executives operating associated with turbulent environments had more autonomy than those operating associated with constant environments and the research of Lawrence and Lorsch (1967) found that the formality the organizational structure effectiveness was associated with the degree of stability and certainty of the technological environment and market.

Common to all contingency approaches is the proposition that performance is a consequence of the fit between several factors: strategies, structures, culture, technology, and people (Tosi & Slocum, 1984). The conceptual root of the contingency

perspective is that effectiveness at realizing intended strategies depends significantly on a match among strategy, organization, environment, and two basic underlying assumptions of contingency theory. First, it suggests that there is no best approach to operate organizations, but the optimal route of operation is contingent upon the internal and external situation which organizations face. Second, any way of organizing is not equally effective (Balkin & Gomez, 1987; McAdam, Miller & McSorley, 2019).

Contingency theory indicates that organizations need to adapt structures depending on contextual conditions and as such the value of different physical and non-physical assents is partly determined by exogenous contextual (or contingency) variables, generally beyond the control of organizations or managers (McAdam et al., 2019). Contingency theory has confidence in suitable characteristics of organizations would make effective results to organizations that reflect the current situation or it suggests that the different situations require the different approaches to operate and solve the acquiring problems concerned (Darvishmotevali, Altinay & Köseoglu, 2020). Thereafter, the contingency theory explains the suitable structure and management styles of organizations are dependent on contingency factors, and organization should concern situations and the environment surrounding to fits with organizational structure (Darvishmotevali et al., 2020; Taherdangkoo, Mona & Ghasemi, 2019).

Organizations are open systems that hold challenges or gaps every now and then, which organizations need to be adaptable and situational solutions for troubleshooting (Taherdangkoo et al., 2019). Other situational or contingency factors are known as typical contingencies or contingency variables such as strategy, culture and business environment and organizations should improve the set of contingency variables and this process of fit is viewed as an ongoing process that is needed in fast-moving business environments (McAdam et al., 2019).

The contingency theory describes that organizational culture factors clarify the reasons for different organizational systems that fit different organizations differently (Tosi & Slocum, 1984). The organizational culture factors clarify the reasons for different organizational systems that fit different organizations differently because cultural variations affect attitudes, cognitive styles, values, and behavior of employees in organizations (Carvalho, Sampaio, Rebentisch, Carvalho & Saraiva, 2019). If organizational culture finds an excellent fit with the organization's strategy and the

environment then the organization will possibly outperform other organizations that have a lesser degree of fit, and If it fits with neither, then the organization is probably going to be in trouble (Carvalho et al., 2019a; Tosi & Slocum, 1984).

The turbulent business environments such as digital disruption and unpredictable on customers' demand, which create plenty of risks, hence organizations need to provide dynamic capabilities for playing the key role to manage competitive advantage (Teece, 2018). Equally important, Teece et al. (2016) explain that organizational agility as the critical dynamic capability which it also becomes valuable capability in environmental turbulences; organizational effectiveness is achieved by matching organization characteristics of contingencies. The ability of contingency theory provides prior research to predict the result of organizational effectiveness based on the fit factors such as organizational strategic agility, environmental turbulences, and other organizational related factors (Tallon et al., 2019).

Sousa and Voss (2008) point out that different contingent concepts of fit can be useful and should be obviously considered when doing such research and ground on the research of Venkatraman (1989) employs the contingency theory that is operationalized under the moderation concept of fit, which resumes that the differential effect of a predictor variable on an outcome variable depends on the level of another third variable, the moderator. Thus, the contingency theory in this research is used to explain the relationship among the organizational strategic agility, its antecedents, and moderators which indicate that moderating effect of agile culture influences the direction of relationship among organizational strategic agility, its antecedents, and organizational goal achievement. The developed conceptual model of organizational strategic agility, its antecedents, consequents, and moderators are shown on Figure 1 as follows:

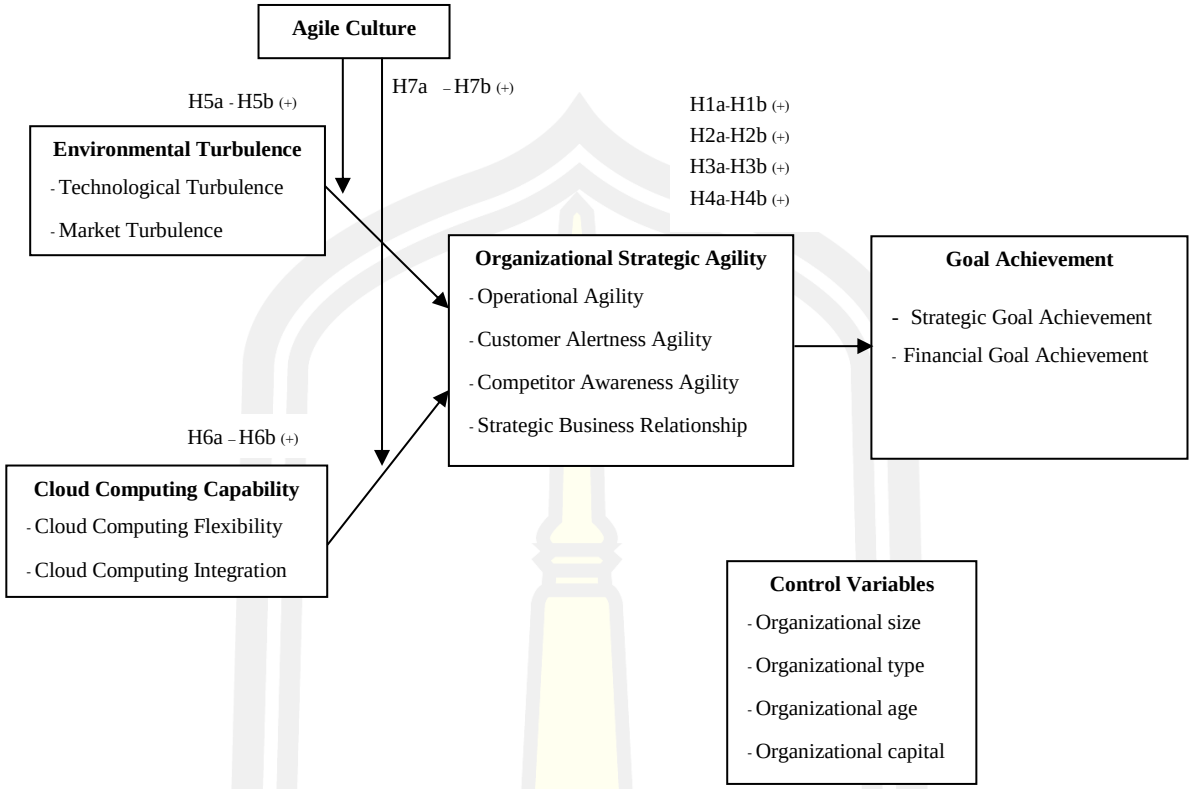


Figure 1 Conceptual Model of Organizational Strategic Agility and Goal Achievement

Relevant Literature Review and Research Hypotheses

In order to provide a fundamental understanding of the agility, this section describes an integrated view of dynamic capability theory, contingency theory, and agility previous research. This research develops for applying agile strategy to organizations; a recent framework demonstrates that organizational strategic agility is the main variable of this research framework, and it acts as the key dynamic capability to positively influence the organizational goal achievement. Moreover, organizational strategic agility is the means by which the so-called capabilities could be obtained and these providers reflect practices, methods, and tools of organizations to use agility as the robust concern for being agile organization. The following sections are going to explain background of agility for understanding the origin of research variables that included all taxonomies in the agility literature and how this research adapts this concept and relevant theories to investigate in Thai's e-Commerce context.

Agility Background

The agile emergence; a signal antecedent was introduced before the 1980s, Toyota Motor Company brought the combination of speed and flexibility applied in the manufacturing of their 30 Toyota plants worldwide that rapidly build a car and offered the freshest models to customers while American carmakers such as Ford Motor, General Motors, and DaimlerChrysler could not provide same organizational capabilities or flexibility in offering the same option (Abdelilah, El Korchi & Balambo, 2018; Adizes, Cudanov & Rodic, 2017; Denning, 2019; Dove, 1991).

The US congress instructed the Department of Defense (DOD) to find antecedents, consequence, and solutions for increasing competitiveness of the USA traditional manufacturing organizations (Aburub, 2015). After that Lehigh University presented officially in the report "the strategic of manufacturing firms in 21st century: the view point of industrial specialists" and the concept of agile institute was descripted as an essential factor to deal with environmental dynamics with responsibility and flexibility (Dove, 1991; Goldman, Nagel & Preiss, 1995).

Organizational agility is expanded to apply and research in other types of organizations and wider academic literature because agility provides organizations with capabilities to deal with the dynamic of environments and markets (Gunsberg, 2018). The various perspectives on agility such as Sambamurthy, Bharadwaj and Grover, (2003) descript agility is organizational ability to search the golden opportunities and seize those competitive market opportunities, and it composed with operational agility, customer agility, and partnering agility. Thereafter the agility research have narrowed down agility to their own business stream or academic discipline such as supply chain agility which apply agile capabilities to get over competition in any uncertain situation, and hence, agility plays a key role in achieving competitive advantage in supply chain businesses (Ahmed, Najmi, Mustafa & Khan, 2019). Melián-Alzola, Fernández-Monroy and Hidalgo-Peñate (2020) introduce hotel agility for hotel and tourism industry to being agile organization with encouraging of agile providers (or enablers) such as information technology to make hotel business responds to changes in the various uncertain and critical situations. Additionally, the most important factors which are every practitioners and academic scholars concern is agile drivers which reflect pressures and changes such as dynamic competitive pressures that this agile drivers

drive organizations need to being agility for running their own administration, in order to maintain competitive advantage or achieve organizational goals (Tallon et al., 2019).

In conclusion, agility originates from the success of the car-manufacturing business in combining speed and flexibility capabilities by the Japanese company (Abdelilah et al., 2018; Denning, 2019). Thereafter, various businesses apply agility to their contexts, and the most business context is the supply chain business, which needs to rapidly respond to changes in market and customer demand (Adizes et al., 2017; Mandal, 2018). Moreover, major agility research has a dominant interest in technology in the way of how organizations spend money in creating technology capability or how organizations can shape their use of human resource to gaining organizational agility (Queiroz, Tallon, Sharma, & Coltman, 2018). Thus, this research sheds light agility on the context of e-Commerce business, where still has fewer research on this business context, especially in an emerging country like Thailand. This research also sheds light on agility in the technology research by focusing on the value creation potential of cloud computing capability which has just occur today new advanced technology that most e-Commerce as a subscript based economy.

Agile Organization

The organizational agility separated it in to four stages of agility maturity that are (1) maturity stage 0 (Non-Agile) which represents none or only rare properties of the agile organization that agile values are mainly unfamiliar, and technological basis is fragmented and unable to support communication processes effectively, also few of employees and managers share capabilities necessary to implement agile values and action; (2) maturity stage 1 (Agility Basics) represents organization where it shares basic properties of organizational agility, agility values and technological prerequisites underscoring agility are partially implemented in some but not the major departments in the organization, also some employees, managers share agile capabilities in the organization that are able to understand and manage change in an appropriate way; (3) maturity stage 2 (Agility Transition) represents organizations manage to disseminate agile values and to establish an appropriate technological basis in most parts of the organization, also many employees and managers share the agility idea and process corresponding capabilities; (4) maturity stage 3 (Agile Organization) represents

organizations manage to build an effectual technological groundwork all over the complete organization, and agile values are shared and accepted completely too (Gunsberg et al., 2018; Wendler, 2014).

This research employs the organizational agility maturity model at the maturity stage one to three where are disrupted by environmental turbulence and advance technology (Gunsberg et al., 2018). This research employs the dynamic capability perspective to descript the agile organization at the mature stage as an organization with dynamic nature to utilize dynamic nature to create a competitive advantage (Goldman et al., 1995; Hamad & Yozgat, 2017; Najrani, 2016). An agile design of the agile organization is a robust proactive strategy that translate to its agile attributes (as organizational behavior) also recognized as agility capabilities with encouraging of agile providers and forces from agile forces (Worley & Lawler, 2010).

Category of Agility

The literature divided agility by the objective of scholars' using and split into two major terms of use. The first group has included three distinct clusters of strategy groups for scholars whose develop a conceptual model to recommend for organizations to implementing agility as an organizational strategy, and commonly divided into three types: (1) agility driver, (2) agility capability (characteristics/ attributes), and (3) agility provider (Zhang & Sharifi, 2000). The second group is to accommodate the term agility definition, and agile dimensions that are commonly used in the literature where applies organizational strategic agility as multidimensional agility capabilities that it can divided into three groups: (1) customer agility, partnering agility, and operational agility; (2) entrepreneurial agility and adaptive agility; (3) market capitalizing agility and operational agility. Moreover, the evident different issue between those two objectives of using agility is; most of the first one has studied is systematic review research or methodology concept, while most of the second one has studied in empirical research. Furthermore, the taxonomies of organizational agility are explained as follows:

The First Category of Organizational Agility

1. Agile Capability (Characteristics/Attribute)

Agility is recognized to be the basic characteristics of the manufacturing supply chain to compete and maintain a competitive advantage in a dynamic business environment by rapidly supplying the unstable demand of customers (Nejatian et al., 2018; Routroy, Bhardwaj, Sharma & Rout, 2018), an agile organization is characterized by its attribute which is well known as the agile capability that given organizations the capacity to rapidly respond to the environmental changes. Some scholars have researching a systematic literature review such as Gligor and Holcomb (2012) demonstrated that the conceptualizing agility includes common elements: responsiveness, change as an opportunity, flexibility, integration, customer enrichment/customization, mobilization of core-competencies, integration, organizational structure, speed, and they also point out that these common elements are the route for achieving agility.

The structured literature review of Fayezi, Zutshi and O'Loughlin (2017) have indicated the six key themes relating to dimensions of organizational agility as follows: quickness, proactiveness, responsiveness, adaptiveness, cooperation, flexibility, and information system/technology which all of them promote the organizational agility to sense and realize changes when organizations handle with their various stakeholders. Hence, organizations, which adopt or adapt a proactive attribute concerning dimensions, can reconfigure resources, re or up-skill labor of organization, then develop new products and services in solution to changes in the business environment (Fayezi et al., 2017; Haro-Domínguez, Ortega-Egea & Tamayo-Torres, 2010; Najrani, 2016).

2. Agility Drivers

Agility drivers refer to changes and pressures which come from the business environment and the turbulent surroundings of organizations (Vázquez-Bustelo, Avella & Fernández, 2007; Zhang & Sharifi, 2000). In the literature, frequent mention of changes and pressures including changes in the market such as growth of niche market, national and international political changes; changes in competition criteria such as increasing pressure on cost, decreasing of new products and services time-to-market; dynamic changes in demand; changes in technology such as the introduction of faster and more efficient production facility; changes in social factors (Appelbaum, Calla,

Desautels & Hasan, 2017a, 2017b; Vázquez-Bustelo et al., 2007; Zhang & Sharifi, 2000).

3. Agile Providers/Enablers

Agility providers/enablers refer to the organizational tools or practices which provide and improve organization's aggressive capabilities to anticipatory, change-oriented, self-initiated organizational behavior in situations (it could be opportunities or threats) that organizational behavior reflects acting in advance of future situations, rather than just waiting to react (Hamad & Yozgat, 2017; Tallon et al., 2019; Vázquez-Bustelo et al., 2007; Zhang & Sharifi, 2000).

The Second Category of Organizational Agility

Major research applies organizational agility with the dimension of specific organizational agility capability as multidimensional agility capabilities to emphasize in their discipline, which is commonly used as follows:

1. Customer Agility, Partnering Agility, and Operational Agility

Major supply chain research employ this group of dimensions to indicate that customer agility represents customer responsiveness is the necessary ability to identify customer needs; operational agility represents the ability to simplify organizational processes such as production or logistic process with speeding up time development; partnering agility represents the ability to manage stakeholders to enhance assets and utilize knowledge such as suppliers' knowledge (Felipe et al., 2019; Liu et al., 2018; Sambamurthy et al., 2003). Furthermore, some scholars modify these three dimensions of organizational agility to emphasize their research disciplines. For example, Nurcholis (2019) adapts dimensions to be responsiveness, operational flexibility, and business relationship for generating a higher magnitude and rate of variety in its sense-response actions vis-à-vis its set of environmental characteristics and competition.

2. Market Capitalizing Agility and Operational Adjustment Agility

These dimension themes are used by researchers who want to achieve or measure organizational agility based on a marketing performance such as level of market share, or to measure the level of organizational agility about the internal process (Cheng, Zhong & Cao, 2020). Further, some scholars put organizational agility more detail on the international marketing such as Asseraf et al. (2019) provided a new

concept of internal marketing agility as the key dynamic capability of the organization to respond rapidly to international market changes and competition.

3. Entrepreneurial Agility and Adaptive Agility

This theme is a term of organizational agility, in which entrepreneurial (offensive) agility represents the ability to proactively predict and seize opportunities of a market that allows organizations to modify its strategies and position with new business approaches to firstly build competitive advantages in competitive conditions, while adaptive (defensive) agility is used when organizations detect and defensively respond to the dynamic market (Chakravarty, Grewal & Sambamurthy, 2013). For example, organizations protect themselves by remaining resilient, mostly in trying to recover from market disruptions more than in response to general changes in internal structures of the organization (Sambamurthy et al., 2003).

Conclusion, organizational Agility is a multidimensional capability that can be performed to a significant degree in a quick and effective procedure, and whenever needed to achieve organizational goals in an unpredictable market environment (Arokodare et al., 2019). According to internal and external circumstances, organizational agility helps organizations achieve organizational goals by reorganizing resources and deploying them to higher field activities that provide sustainable value (Teece et al., 2016).

Concept of Organizational Strategic Agility

Previous section provides the fundamental background to understand the emergent of agility and the advantages for goal achievement, example research of agility in various disciplines, and the important of agility and the benefit to being an agile organization, also included research that have examined the strategic management of technology literature to manage with speedily changing business environments have moved the conceptualization of dynamic capabilities conceived in the strategic management literature in the direction of organizational agility (Park, Sawy & Fiss, 2017; Teece et al., 2016). Further, strategic researchers have formally defined dynamic capability as an organization's ability to build, integrate, and reconfigure internal and external competences to address swiftly changing environments (Teece et al., 1997) which ultimately emphasize an organization’s capabilities to efficiently and effectively

manage and address business environmental changes for excellent organizational performance (Teece, 2007, 2018). Consequently, continuous business environmental changes require organizations to create and practice dynamic capabilities that capacitate organizations to maintain and adapt existing (or creating new) organizational capabilities in various aspects for sustainable competitive advantage (Sambamurthy et al., 2003; Worley & Lawler, 2010).

Wang and Ahmed (2007) extended dynamic capabilities advocate very specific activities and objectives that typically depended on the context. Furthermore, strategic researchers have also realized that organizational agility is a manifested type of dynamic capability which this organizational agility emphasizes on and is manifested by encouraging organizational-level strategic tasks of sensing and responding to internal and external organizational events of business environment changes in order to manage threats effectively and efficiently or to convert threats to be opportunities for organizations (Nurcholis, 2019; Teece et al., 2016).

The concept of agility can have multi-dimensions, multidisciplinary that depend on the context of business or research objective, and agility research have been dominate studied in conceptual and empirical research into the field of manufacturing, supply chain, and information technology system (Baškarada & Koronios, 2018; Gunsberg et al., 2018; Wendler, 2016). For example, the manufacturing field defines organizational agility as organizational capabilities to employ for managing rapid changes (Dove, 1991). The information technology field defines organizational agility as the ability of the organization to adapt, respond, and integrate resources to changes and uncertainty (Tallon et al., 2019). The supply chain field defines organizational agility as organization's capability to respond, in association with suppliers and important stakeholders, to market disruptions in a rapid method (Irfan et al., 2019b). There are many definitions of organization agility in the literature as shown in Table 1.

Table 1 Definition and Dimension of Organizational Agility

Authors	Research Type	Definition	Dimension of Agility
Dove (1991)	Conceptual research	A production system with its capabilities to employ for dealing with the market rapid changes.	1. Flexibly 2. Speed
Sambamurthy, Bharadwaj & Grover (2003)	Conceptual research	The speedily redesign ability of organization to its current processes then create new processes with effective timely manner in order to make advantage when the organization faces inconceivable dynamic conditions of business environment.	1. Customer agility 2. Partnering agility 3. Operational agility
Overby, Bharadwaj & Sambamurthy (2006)	Conceptual research	The multidimensional capabilities to be aware of opportunities and threats for making good decisions consistently and to execute at speed.	Overby, Bharadwaj & Sambamurthy (2006)
Worley & Lawler (2010)	Conceptual research	The dynamic organization design capability which sense an organizational need for changes from internal and external sources, then proceed those changes regularly to favor beyond average performance.	-

Table 1 Definition and Dimension of Organizational Agility (Continued)

Authors	Research Type	Definition	Dimension of Agility
Yang & Liu (2012)	Empirical research	A type of dynamic capability that enables the organization to reconfigure, assemble, and integrate resources, information, processes, and technologies that are embedded in different activities within the organization or its subsidiaries.	1. Customer Agility 2. Competitor Agility 3. Supplier Agility
Liu, Yang, Qu & Liu (2016)	Empirical research	The ability of an organization to leverage the assets, knowledge and competencies of suppliers, distributors, contract manufacturers, and logistic providers through alliances, partnerships, and joint ventures.	1. Sensing agility 2. Decision making agility 3. Acting agility
Altay, Gunasekaran, Dubey & Childe (2018)	Empirical research	Ability to respond rapidly and cost-effectively to unpredictable emergencies through improvisation, flexibility, creativity, the level of coordination, collaboration, and communication can be improved.	-

Table 1 Definition and Dimension of Organizational Agility (Continued)

Authors	Research Type	Definition	Dimension of Agility
Baškarada & Koronios (2018)	Conceptual research	The multidimensional capacities for rapid, continuous, systematic evolutionary adaptation to changes that cause gaining and/or maintaining a competitive advantage.	1. Sensing 2. Searching 3. Seizing, 4. Shifting 5. Shaping
Asseraf, Lages & Shoham (2019)	Empirical research	Ability to respond rapidly to changes in its international's markets and competitive conditions.	-
Irfan, Wang & Akhtar (2019)	Empirical research	The organizational capability to respond in joining with suppliers and key stakeholders to market disruptions in a timely way.	-
Nurcholis (2019)	Empirical research	Ability to generate higher magnitude and rate of variety in its sense-response actions vis-à-vis its set of competitors and the characteristics of the environment.	1. Responsiveness 2. Operational Flexibility 3. Business Relationship

Table 1 Definition and Dimension of Organizational Agility (Continued)

Authors	Research Type	Definition	Dimension of Agility
Ridwandono & Subriadi (2019)	Conceptual research	An organization's ability to respond to change and maximize opportunities.	1. Proactiveness 2.Responsiveness 3. Speed 4. Flexibility
Tallon, Queiroz, Coltman & Sharma (2019)	Conceptual research	The ability of the organization to adapt, responds, and integrates resources to changes and uncertainty.	

Conclusion, Table 1 demonstrates that agility reflects multi capabilities to harmonizing speed, alertness, flexibility to the high unpredictable environment via rapidly allocating internal and external resources of the organization (Asseraf et al., 2019; Dove, 1991; Zhou, Mavondo & Saunders, 2019). Moreover, agile capabilities emphasizes on strategic objective for operation, customers, competitors, and business relationships of the organization to use all diverse capabilities under unpredictable changes to maintains long-term success (Altay, Gunasekaran, Dubey & Childe, 2018; Nurcholis, 2019; Park et al., 2017; Yang & Liu, 2012).

Generally, organizations formulate strategies to create agile capabilities for adaptation, responding to the environmental surroundings that strengthen their competitive advantage and encouraging business efficiency like the strategic orient perspective (Miles, Snow, Meyer & Coleman, 1978; Zhou et al., 2019). Thus, organizations that apply agility orientation at all levels of the organization to allow organizations to properly adapt to various disruption in business environmental changes, achieve a goal and enjoy the maximum return (Haro-Domínguez et al., 2010; Najrani, 2016; Nold & Michel, 2016). Consistent with the dynamic capability theory, organizational strategic agility is the capability that demands an inventive capability to build a system characterized by speed and flexibility more than only rearranging old

products and services (Doz, 2020; Teece et al., 2016). Stemming from the dynamic capabilities' lens, agility can be constructed as unique capability of organization in various disruptive environments for organization where need to be the agile organization.

This research provides organizational strategic agility is defined as the multidimensional agility capabilities to sense changes and respond to unpredictability via rapidly allocating resources from inside and outside to reach the organizational goal achievement (Baškarada & Koronios, 2018; Nurcholis, 2019; Teece et al., 2016). Although researchers conceptualized dimensions of agility from different theoretical perspectives, they all indicate some ways about the effectiveness and efficiency of agility in the organizational operation, capture market opportunities, keep an eye on key competitors and utilize business relationships from all stakeholders (Dove, 1991; Irfan, Wang, & Akhtar, 2019a; Nurcholis, 2019a; Tallon et al., 2019) also e-Commerce utilizes agile capabilities for the business management that are valuable and heterogeneous which can provide goal achievement and sustain competitive advantage (Irfan et al., 2019b). This research provides four dimensions of organizational strategic agility by integrating from the previous agility research, the context of e-Commerce, and the dynamic capability perspective; its four dimensions include: (1) operational agility, (2) customer alertness agility, (3) competitor awareness agility, and (4) strategic business relationship agility.

Goal Achievement

The Covid-19 pandemic is a great challenge to e-Commerce industry since 2019, whether due to increasing of the trade war competition from local area and international competitors, unpredictable fickle demand, new regulation involve with Covid-19, or other such factors (Bhatti et al., 2020). In order to achieve business goals, major practitioners and e-Commerce research recommend that every organization should provide their own e-commerce platforms which it has become a key mechanism to support organizations' activities to provide channels for serving products and services during the Covid-19 pandemic (Bhatti et al., 2020; Tran, 2021). The goal is an endpoint toward those organizational activities, and goals are the detailed results organizations desire; in other words, goals are the reason for the existence of an organization

(Durmuşoğlu, Apfelthaler, Nayir, Alvarez, & Mughan, 2012). Organizational goals are the most important targets to be achieved in every organization, and a goal framework gives organizations a direction to move towards the entire year (Adil, Izhar, Torabi, & Bhatti, 2017).

Organizations, which are strategically agile, are learning to operate speedy turnarounds and are able to reorganize and renew their organization without losing momentum and can encourage greatly organizational goal achievement that because organizations set goals by being an agile organization that is what the image of organizations' expect to be in the future (Adil et al., 2017; Doz, 2020; Petrosyan, 2019). Agility literatures point out that organizational goals are the challenges leading to organizational values; it is an outcome of using organizational capabilities, from which this research treats organizational strategic agility as multi-dimension capabilities of organizations (Nejatian et al., 2018a). This research provides organizational strategic agility as the multi-dimension of four agile capabilities included: operational agility, customer alertness agility, competitive awareness agility, and strategic business relationship agility that those four agile capabilities can effectively foresee and utilize e-commerce platforms and related technology, making business activities consistent with organizational goals achievement.

According to the complex nature of organizational performance in organizational goal literature and consequences of organizational strategic agility that leads this research provides multi-dimension of organizational goal achievement to represent the goal achievement of organizations where utilized agility as a strategic orientation (Durmuşoğlu et al., 2012). Thus, the organizational goal achievement refers to vital outcome and accomplishing of organizational strategic agility which the agile organization wants to achieve business goals. Further, this research synthesized dimensions of goal achievement from the previous research included: Durmuşoğlu et al. (2012), Elbashir, Collier and Davern (2008), and Kuo and Chen (2008) to reflect all consequence aspects of organizational strategic agility which included: (1) financial goal achievement is the result of all organizational activities and succeeds financial goal is essential for organization in the long term; (2) strategic goal achievement, apart from financial goal achievement, this aspect reflects the strategic goals of organizations.

The Relationships of Organizational Strategic Agility and Goal Achievement

The section is going to investigate the relationship between organizational strategic agility and goal achievement. Further, the four dimensions of organizational strategic agility include: operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility. The relationships between constructs are shown below:

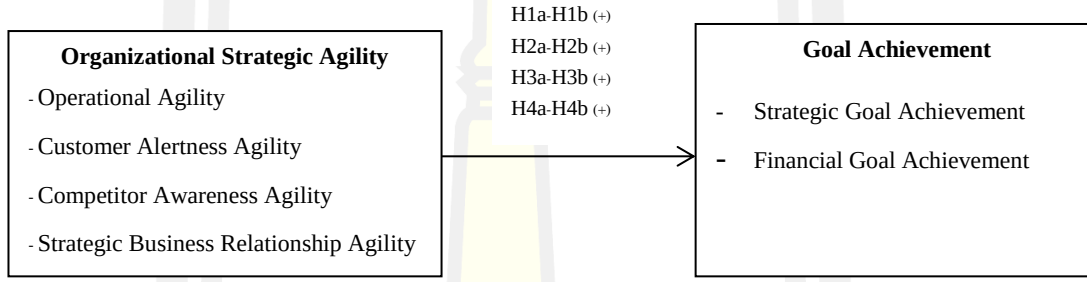


Figure 2 The Relationship of Organizational Strategic Agility and Goal Achievement

Operational Agility

The Internet Century plays a critical disruptive role that determines the landscape in life and business model and global economic systems (Akhtar et al., 2018). Hence, businesses need to find a way to underly this disruption by rapidly executing and scaling administration organizational structures to deal with unpredictable changes (Tallon et al., 2019). However, to become the mature agile stage, organizations need to build a stable backbone that is complemented with dynamic components to deal with unpredictable business changes (Gunsberg et al., 2018).

Thus, this research provides operational agility by employing the dynamic capability theory to understand the nature of dimension and synthesized this dimension from prior operational agility and operational excellence to represent the robustness capable agility. Instead of emphasizing organizational resources as the main aspect of competitive advantage, the dynamic capabilities rather focus on those processes that provide organizations to reconfigure, integrate, and create resources and capabilities to address a rapidly business environment (Eisenhardt & Martin, 2000; Teece et al.,

1997). Thus, operational agility is defined as the capability of continuous processes to make excellent decision-making and resource implementing action via rapid timing, and the operational agility consists of dynamic capabilities including (1) seizing ability to make the effective unbiased decision-making of capability transformation, strategies, and business model; (2) shifty ability to effectively integrate new capabilities with new strategies and business model that allow organizations execute and scale new capabilities to affect the unpredictable business environment (Baškarada & Koronios, 2018; Carvalho et al., 2019).

Nurcholis (2019) examined agile organizations were excellent in providing effective implement a new strategy, a business model, and capabilities that can reach a financial target and marketing target with unique strategic assets and products. Empirical research proves that operational agility positively influences the goal-setting and strategic planning, hence lead organizations to succeed in their strategic goal achievement and financial performance by seizing to make effective decision-making and excellent integrate new strategies and business model in rapidly timing (Felipe et al., 2019; Huang, Pan & Ouyang, 2014; Park et al., 2017).

In conclusion, in rapid and unpredictable changes, operational agility is the necessary capability to reach organizational goal achievement and directed at gaining and/or maintaining a competitive advantage. Moreover, it has been posited that operational agility supports the effective decision-making of e-Commerce businesses to integrate the production, supply, and marketing of products, and fasten the circulation link and expand the chain's value that leads to increasing organizations to success organizational goal achievement (Li et al., 2020). Thus, the hypotheses are proposed as follows:

Hypothesis 1a: Operational agility positively influences strategic goal achievement.

Hypothesis 1b: Operational agility positively influences financial goal achievement.

Customer Alertness Agility

Customer alertness agility is defined as the capability to rapidly sense and respond to unstable customers' needs to build market intelligence (Chatfield & Reddick, 2018; Felipe et al., 2016; Gölgeci, Arslan, Dikova & Gligor, 2019). The business environment is disrupted by various factors such as technical progress, digitalization, diverse society, and politics (Doz, 2020; Teece et al., 2016). Thus, organizations need to build customer alertness capabilities to deal with all disruption which impact to their customers' demand to be unpredictable (Felipe et al., 2016). Taking into account the big slice of customers in disruptive environments, this research employs the dynamic capability perspective to understand the nature and importance of organizations' customer alertness agility.

The dynamic capability theory explains organizations make decisions under unpredictable and bounded rationality in continuous, cause administration to continually reconfigure organization resources existing capabilities within sensing and discerning opportunities and threats from customers (Teece et al., 1997). An organization's ability to sense market changes and take timely actions and offer new solutions so as to seize opportunities to build market intelligence through enhancing, combining, and reconfiguring organizational resources (Teece, 2007). The rapid alertness response capability represents opportunities, where market intelligence can be obtained from customers and organizations could take equal competitive action (Liu, Chan, Yang & Niu, 2018). This reaction is an important parameter that determines an organization's ability to recognize and react to customer-related innovative competitive and opportunities actions (Cai, Huang, Liu, Davison & Liang, 2013; Liu et al., 2018; Teece, 2007).

Even though organizations could increase the agile level to become the agile organization by using their higher-order routines which make changes to substantive capabilities (e.g. quickly alter their capabilities to serve emerging customers), it may or may not provide robust market orientation (Roberts & Grover, 2012). Hence, customer alertness agility focuses on the nature of the dynamic capability to proactive sense and responds to customer-based opportunities in the disruptive business environment.

Yang and Liu (2012) researched on agility found organizations that used this agility as a competitive strategic capability, have better-responding ability for both

known and unpredictable changes, also information about customers provide an advantage for organizations to build progressively in producing products and services with more satisfying and preference to customers, thus lead organizations to enjoy with better profitability. Felipe et al. (2019) also points out that organizations, where need to sustain success within dynamic contexts, organizational agility provides maintaining a good reputation for innovation, excellence, and sustainability.

In conclusion, customer alertness agility, making the customers cooperates in exploration and exploitation of opportunities for gaining market intelligence organizations in an upward short time frame that make customers more satisfy (Hosseini, Khoddami, Moshabaki & Azar, 2011; Mandal, 2018; Nurcholis, 2019). Customer alertness agility supports organizations able to sense and respond quickly to customer-based opportunities that increase organizations achieve goals. Hence, the hypotheses are proposed as follows:

Hypothesis 2a: Customer alertness agility positively influences strategic goal achievement.

Hypothesis 2b: Customer alertness agility positively influences financial goal achievement.

Competitor Awareness Agility

According to technology progressive development and dramatic unpredictable business environments, cause organizations to face hyper-competition and may difficult to sustained competitive advantage (Crick, Crick & Tebbett, 2020). However, the agile organization does not depend on the competitors coming but depends on organization readiness against their competitors nor organizational positioning those competitors cannot be attacked, thus agility literature provides competitor agility to utilize a competitor benefit by creating sensing and discerning abilities from rivals' competitive activities (Yang & Liu, 2012). Hence, competitor awareness agility is defined as the capability to rapidly sense competitors' activities to provide important information for informing organizations to be ready and respond to competitors' activities quickly, and customer awareness agility supports the significant analysis for strategic decision-

making in operational agility of the agile organizations (Lim, 2013; Reddy & Reddy, 2002; Yang & Liu, 2012).

This research employs dynamic capability theory to understand the key function of the competitor awareness agility underlying organizational changes by capture sensing competitors' activities by rapidly collecting competitor information then encourage organizational responding to react competitors' actions immediately (Gligor, Gligor, Holcomb & Bozkurt, 2019; Teece et al., 2016; Yang & Liu, 2012). This research selects the term competitor awareness agility with respect to concerning the current hyper-competitive environment is forcing managers to re-evaluate how organizations react to rapidly changing opportunities and threats and organizations need to rapidly recognize main competitors, new vitals quickly possess competitors' information, and react to competitors' action in a timely manner (Yang & Liu, 2012). Especially, organizations are disrupted with tons of information in the big data era; this competitor awareness agility provides supporting operational agility in learning and interpreting to assess competitors (Hsieh & Hyun, 2018; Lim, 2013; Reddy & Reddy, 2002).

The empirical research of Yang and Liu (2012) found that organizations, that used competitor agility to possess their main competitors' information, they can improve responding ability for unpredictable business changes with better customer satisfaction and increasing profitability. Likewise, Gao, Tang, Wang and Yin (2018) demonstrate that scanning ability reveals important competitors are essential for organizations especially in a hyper-competition, thus dedicated to set up organizational strategies and operating processes to achieve the competitive advantage and increase performance against their competitors.

In conclusion, competitor awareness agility enhances organizational goal achievement by competitor analysis in strategic and marketing management is an evaluation of current weaknesses and strengths and key competitors (Yang & Liu, 2012; Zajac & Bazerman, 1991) such as understanding correctly who key competitors are, what key competitors are offering that make organizations are effectively best positioned to set prices competitively, and promoting products and services in a method that stands out, also assess any threats posed by both new entrants to the market and current competitors. Thus, the hypotheses are proposed as follows:

Hypothesis 3a: Competitor awareness agility positively influences strategic goal achievement.

Hypothesis 3b: Competitor awareness agility positively influences financial goal achievement.

Strategic Business Relationship Agility

Business relationships have long been studied as an important topic in various disciplines such as general management, industrial marketing, supply chain management, and strategic management (Forkmann, Henneberg, & Mitrega, 2018). The disruption of technology and the Internet Of Things cause increasing interdependence between firms seeking to gain access to, for instance, valuable resources, capabilities, and knowledge; this dynamic business environment causes academicians and practitioners to dominate attention to explore approaches, resources, and critical capabilities (Akhtar et al., 2018; Tallon et al., 2019).

Consequently, emerging of the organizational strategic agility is to provide agile capabilities for organizations to deal with that unpredictable business environment where they cannot escape and have to live in (Appelbaum et al., 2017a; 2017b). Similarly, customer agility provides organizations with the ability to sense opportunities from customers, competitor agility deals with rivals' competitive activities, operational agility deal with the making of excellent operational processes, while strategic business relationship deals with cooperation opportunities.

This research integrates the strategic business relationship agility from prior strategic agility research and dynamic capability theory to understand the nature of its key function. Likewise, agility dimensions in previous sections, the strategic business relationship agility employs basic elements of dynamic capabilities as critical tools for including its dynamic capabilities to sense benefit opportunities related to their business relationship for new producing and reconfiguration (Teece et al., 2016). Thus, strategic business relationship agility is defined as the capability of the organization to leverage cooperation opportunities with excellent sensing, then rapidly seizing by utilized those golden opportunities to modify and extend its organizational network to get access to

knowledge, competences, and assets from business relationships whether they own it or not (Sambamurthy et al., 2003; Teece et al., 2016; Vagnoni & Khoddami, 2016).

Organizations, where employ strategic business relationship agility perceive performance progressive in various aspects such as competitive advantage and financial profitability (Nurcholis, 2019). Liu, Yang, Qu & Liu (2016) found that partnering agility facilitate organizations to adapt or modify its extended networks when needed by rapidly identify suitable partners or modify its existing partnerships that increase in profitability, sales growth, and competitive advantage. Similarly to Vagnoni and Khoddami (2016) also found that business relationship support organizations' capability to build multiple channels for resource assessment such as using external data sources of their partners to sense changing development.

In conclusion, strategic business relationship agility enables organizations to adopt or adapt their business relationship when it needs access to assets, competencies, or knowledge that opportunities facilitate organizations to rapidly identify suitable partners or modify the existing business relationships. Especially, relationships of stakeholders are the key success factor of e-Commerce that involves multiple parties with dynamic availability (Altay et al., 2018; Kim, Ferrin & Rao, 2008). The strategic business relationship agility enlarges competitive opportunities via utilizing relationship. Thus, hypotheses are proposed as follows:

Hypothesis 4a: Strategic business relationship agility positively influences strategic goal achievement.

Hypothesis 4b: Strategic business relationship agility positively influences financial goal achievement.

The Relationship among Organizational Strategic Agility, Environmental Turbulence, and Cloud Computing Capability

This section presents the influence of proposed antecedents of organizational strategic agility. This research employs the contingency theory to imply two antecedents which are environmental turbulences and cloud computing capability; the relationships are shown below:

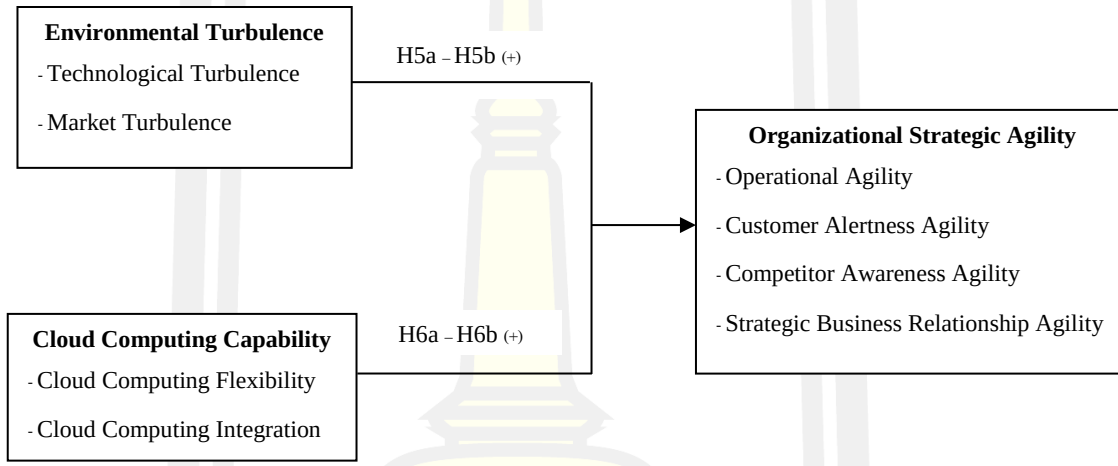


Figure 3 The Relationship among Organizational Strategic Agility, Environmental Turbulence, and Cloud Computing Capability

Environmental turbulence

The contingency theory explains providing the organizational structures with effectiveness that organizations need to concern environmental factors to harmonize with its functions (Tosi & Slocum, 1984). Turbulence refers to uncertainty or hardly to forecast environmental surroundings and environmental turbulences is defined as the rate and instability of the environment, which is the result of changes in customer preference, development of new products, new technology, or the competition (Ashrafi, Zare, Trkman & Afshari, 2019; Coreynen, Matthyssens, Vanderstraeten & Witteloostuijn, 2020; Jaworski & Kohli, 1993). Environmental turbulences increase both an organization's external linkages and the rate of change in those linkages (Haleblian & Finkelstein, 1993).

Due to organizational strategic agility is understood as the dynamic capability which is rarely essential given a certain degree of environmental turbulence that is

mainly triggered by uncertainty changing in the market and advanced technology (Teece et al., 2016). Consistent with the meta-analysis research of Karna, Richter and Riesenkampff (2016) found that technology and market associate with organizations where need to provide dynamic capabilities for sensing and seizing the business environment. Hence, this research decomposes environmental turbulences are technological turbulence and market turbulence (Ashrafi et al., 2019; Jaworski & Kohli, 1993). Technological turbulence is defined as the degree of unpredictable change in a technological environment (Coreynen et al., 2020) and market turbulence is defined as the rate of changes in the composition of customers and their preferences (Ashrafi et al., 2019; Jaworski & Kohli, 1993). Most of the dynamic research shows the potential contingent role of environmental turbulence in technology and market that makes current organizations' capabilities obsolete, requiring the organizational strategic agility to be developed for solving problems (Jones & Knoppen, 2018).

Organizational strategic agility is created for organizations to facilitate them to deal turbulence business environment with strategic dynamic capabilities (Harsch & Festing, 2020; Teece et al., 2016) which are operational agility, alertness customer agility, strategic business relationship agility, and awareness competitor agility to manipulate with the dramatic unpredictable environment (Jones & Knoppen, 2018; Teece et al., 2016). This research harmonizes the dynamic capabilities view with a contingency theory perspective to explain the main associations between organizational strategic agility and environmental turbulences and to concern that turbulent business environment has positively influenced organizations by increasing more their organizational strategic agility to sense and responding with speed and effectiveness (Nurcholis, 2019; Teece et al., 2016). Consistent with Teece et al. (2016) indicate organizational agility by indicates that business firms should doggedly find the way to become an agile organization whatever it costs, keeping turning on the green light; sustenance redundancy at all times, and staying in a constant state of radical transformation.

In conclusion, this research indicates that technology and market turbulence have the significant roles necessary in developing organizational strategic agility which is value to develop and only worth investing when environmental conditions necessitate their existence and regular use-in a highly dynamic environment (Jones & Knoppen, 2018; Karna et al., 2016; Teece et al., 2016) and the hypotheses are proposed as follows:

Hypothesis 5a: Technological turbulence positively influences organizational strategic agility.

Hypothesis 5b: Market turbulence positively influences organizational strategic agility.

Cloud Computing Capability

Cloud computing grew as an emerging form of IT outsourcing, which requires organizations to improve sourcing processes, cloud computing has become increasingly popular in both public organizations and private business organizations (Schneider & Sunyaev, 2016). Cloud computing refers to a service model of information technology resources based on the internet which offers by cloud computing including: (1) infrastructure as a service such as pay-per-use; (2) platform as a service for all aspect of software development; (3) software as a service that creates applications through the internet (Coreynen et al., 2020; Liu et al., 2016). Because of disruptive development in business models and environmental turbulence organizations must employ cloud computing to quickly respond to those changes for developing organizational capabilities under fierce competition and maintain a competitive advantage (Liu et al., 2018; Queiroz et al., 2018). The example of cloud computing providers are Google, Amazon, and Microsoft are the big well-known name as cloud providers and the sample of cloud computing such as Google offers client organizations with Google's cloud-based platform; likewise, Microsoft builds Window Azure as cloud operating system (Gao & Sunyaev, 2019).

Cloud computing capability is defined as an upgraded version of traditional information technology infrastructure capability (Liu et al., 2016; 2018). Because cloud computing has its unique advantage, for instance, pay-per-use, resource sharing,

and elasticity and these unique features can be classified into two types: (1) cloud computing flexibility is defined as the degree to which organizations deliver cloud-based information technology solutions rapidly and effectively to facilitate their business (Liu et al., 2018) and (2) cloud computing integration is defined as the degree to which organizations have integrated resources from internal and external information technology included data and information technology applications, based on cloud computing technology (Khayer, Jahan, Hossain & Hossain, 2020; Schneider & Sunyaev, 2016). These two dimensions are proved by the cloud computing research that indicates flexibility and integration are critical for organizations to develop and maintain organizational strategic agility (Liu et al., 2018; Senyo, Addae & Boateng, 2018).

This research integrates the dynamic capabilities view with a contingency theory perspective to argue that the main associations between organizational strategic agility included: operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility and cloud computing capability that cloud computing capability has influence organizations by increasing more their strategic agility to sense and responding with speed and effectiveness (Liu et al., 2016; Teece et al., 2016). Similarly, to the research of Liu et al. (2016) found that the capabilities of cloud infrastructure flexibility and integration have encouraged organizations to operate more agilely by effective strategic decision-making and creating new opportunities with efficient business processes shorter time frame. Thus, cloud computing positively affects to organizational strategic agility by making customer is more satisfied in timely manner. In addition, Khayer et al. (2020) demonstrated that cloud computing acts as a critical player to develop organizational agility by increasing organizational capacities to sense and respond to the unpredictable business environment. Thus, the hypotheses are proposed as follows:

Hypothesis 6a: Cloud computing flexibility positively influences organizational strategic agility.

Hypothesis 6b: Cloud computing integration positively influences organizational strategic agility.

The Moderator Effect of Agile culture on the Relationship of Organizational Strategic Agility and its Antecedents

This section is going to explain the moderating effect of agile culture on the relationship of organizational strategic agility and its antecedents are shown as follow:

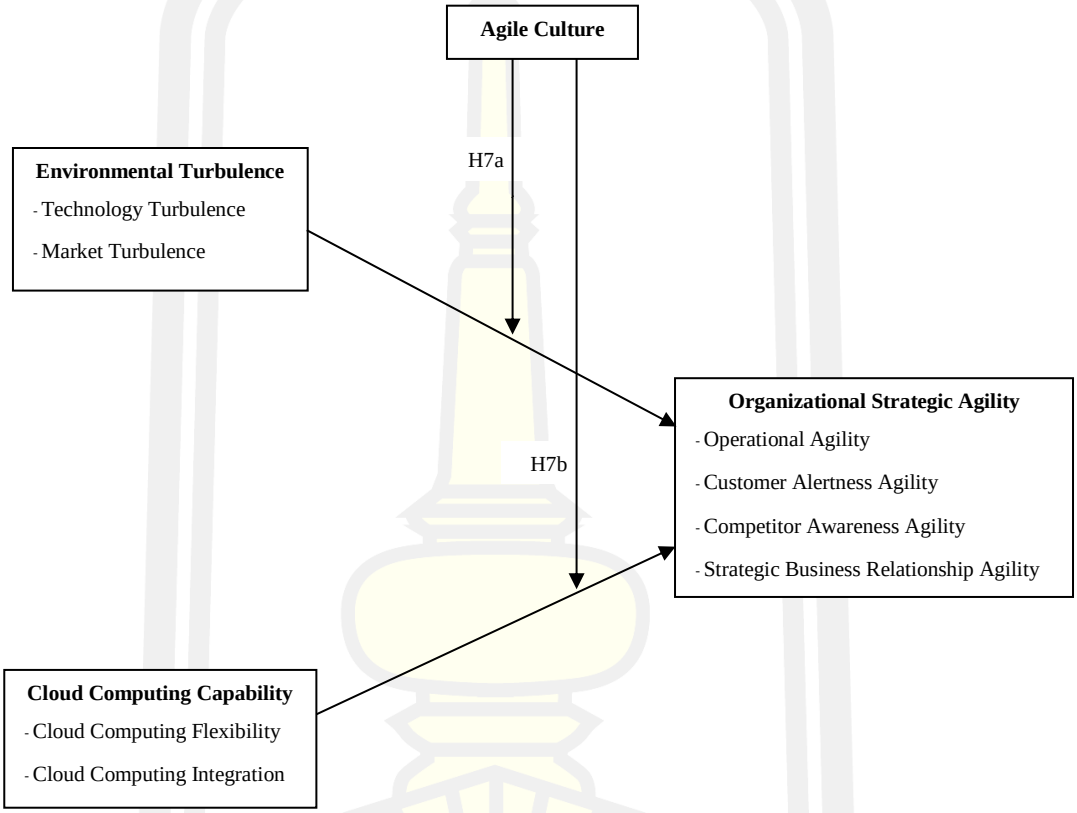


Figure 4 The Moderating Effect of Agile culture on the Relationship of Organizational Strategic Agility and its antecedents

Agile culture

The organizational culture term has been studied since the 1950s (Hofstede, 2003; Ouchi & Wilkins, 1985). Thereafter, the concept of culture was introduced broadly to businesses and the culture was understood as one issue of anthropology (Rousseau, 1997). However, the culture is an interdisciplinary phenomenon with contributions from psychology, sociology, anthropology, and social psychology (Hatch & Zilber, 2012). Organizational culture is commonly described as a complex set of

shared values, symbols, beliefs, and assumptions that demonstrate the organizations' behaviors and norms (Cooke & Rousseau, 1988). It is necessary to manage organizational culture because it influences perceptions of people in organizations and guides the consideration and behavior of them (Cooke & Rousseau, 1988; Hatch & Zilber, 2012). Hofstede, Neuijen, Ohay and Sanders (1990) proposed four main elements of organizational culture have four main elements include: values, rituals, heroes, and symbols. However, some researchers argue that the concept of values is the same as of beliefs and the concept of artefacts includes the symbols (Schein, 1996). There is strong support to these views in a number of more interesting research results such as Homburg and Pflesser (2000) proposed market-oriented organizational culture (a multilayer model) supported in shared basic norms, values, behavior, and artefacts.

Although the culture literature demonstrates various different perspectives over the definition of organizational culture and its elements, the truth most of them are equal in meaning and end up coming together, and clearly proposed organizational culture as a set of guiding principles that will influence every action, behavior, communication, and collaboration among people (Carvalho et al., 2019a). The elements that compose an organizational culture will be the vehicles of that influence, being present at different levels of consciousness in every organization from the visible artifacts and behaviors to the less obvious values and assumptions (Felipe et al., 2016).

Organizational culture can certainty leverage changes in organizations that help organizations build and maintain organizational strategic agility to succeed in its goal achievement (Cheng et al., 2020). The research of organizational culture and agility indicate that organizations will not move toward their agility capabilities unless a culture is created to accelerate the capacity of creating agility in different parts of the organizations (Felipe et al., 2016; Iivari & Iivari, 2011). The agile culture is defined as an organizational culture that is conducive to agility by emphasized collaboration, diversity, encouraging competency, and transparency (Caligiuri & Tarique, 2016). Agile cultures are necessary to agile organizations, where they concern keeping continuous rapidly proactive adopt and adapt its resources, strategies, and processes to manage the business challenges in a highly unpredicted business environment generally demand a major culture change in conventional organizations, together with skillset and mindset shifts at all levels (Gunsberg et al., 2018).

The view of capability embeddedness suggested that the organization's capabilities should be contextually entrenched with the structure, social, and cultural aspects of organizations, Grewal and Slotegraaf (2007) explained why organizations with similar or even the same capabilities may achieve a different level of performance or competitive advantage. Consistent to contingency theory views the suitable organizational culture and management styles are dependent on contingency factors (Taherdangkoo et al., 2019). This research employs the contingency theory perspective to implies that agile culture is the potential contingent role which provides the positive influence effect to the relationship of organizational strategic agility and its antecedents (Jones & Knoppen, 2018). Agile organizations, where they concern keeping continuous rapidly proactive adopt and adapt its resources, strategies, and processes to manage the business challenges in a highly unpredicted business environment generally demand a major culture change in conventional organizations, together with skillset and mindset shifts at all levels (Gunsberg et al., 2018). Organizations can apply agile culture as a tool to harmonized and guide employees' mindsets to concern about being agility. In order to facilitate organizations have effectively manage organizational strategic agility, agile culture should be cultivated in the sense, so that it can motivate organizational strategic agility, facilitate processes and employees that concern and build agility in the organization at all levels (Caligiuri & Tarique, 2016).

In addition, the previous research of Altay et al. (2018) indicates that organizations should find the right combination of strategies, practices, technology and culture which are essential factors to make them agile at all functions for being the agile organization. Similarly, Carvalho et al. (2019) point out that the only way to transform organizations becomes an agile organization is holistic organization understanding is achieved, which mean the necessary support role of agile culture within organizations with all levels are important. Thus, agile culture positively affects the relationship of environmental turbulence, cloud computing capability, and organizational strategic agility by increasing the organizational internal phenomenon of encouragement and brainstorming. This research implies agile culture is the gravity with an invisible force, which shapes all interactions of organizational members to be in the agile track, and the hypotheses are proposed as follows:

Hypothesis 7a: Agile culture positively moderates the relationships between environmental turbulence and organizational strategic agility.

Hypothesis 7b: Agile culture positively moderates the relationships between cloud computing capability and organizational strategic agility.

Summary

Organizational strategic agility is the main concern of this research which focuses on its antecedents and consequence, also examines the moderating effect of agile culture. This research provides the conceptual model by utilizing two theories included: dynamic capability and contingency theories. The dynamic capability theory is used to explain the natural functions of organizational strategic agility and its influencing effect on goal achievement of organizations and the contingency theory is used to explain the basic functions and relationship of organizational strategic agility and its antecedents, this research also uses contingency theory to explain the natural effect of the moderators: agile culture.

Accordingly, the operational definitions of all constructs in this research are shown in Table 2 and 7 hypotheses are postulated and presented the summary of hypothesized relationships as in Table 3. The next chapter describes sample selection and data collection procedure, measurements, methods, and statistical analysis.

Table 2 Operational Definitions

Constructs	Operational definitions	Sources
Organizational strategic agility	The multidimensional agility capabilities to sense changes and respond to unpredictability via rapidly allocating resources from inside and outside to reach the organizational goal achievement.	Baškarada and Koronios (2018); Teece et al. (2016); Worley & Lawler (2010)
Operational agility	The capability of continuous processes to make excellent decision-making and resource implementing action via rapid timing.	Baškarada & Koronios (2018); Carvalho et al. (2019)
Customer alertness agility	The capability to rapidly sense and respond to unstable customers' needs to build market intelligence.	Chatfield & Reddick (2018); Felipe et al. (2016); Gölgeci et al. (2019)
Competitor awareness agility	The capability to rapidly sense competitors' activities to provide important information for informing organizations to be ready and respond to competitors' activities quickly.	Lim (2013); Reddy & Reddy (2002); Yang and Liu (2012)
Strategic business relationship agility	The capability of the organization to leverage cooperation opportunities with excellent sensing, then rapidly seizing by utilized those opportunities to modify and extend its organizational network to get access to knowledge, competences, and assets from business relationships whether they own it or not.	Sambamurthy et al. (2003); Teece et al. (2016); Vagnoni & Khoddami (2016)

Table 2 Operational definitions (Continued)

Constructs	Operational definitions	Sources
Environmental turbulences	The rate and instability of the environment, which is the result of changes in customer preference, development of new products, new technology, or the competition.	Ashrafi et al. (2019); Coreynen et al. (2020)
Technological turbulence	The degree of unpredictable change in production or service technology.	Ashrafi et al. (2019)
Market turbulence	The rate of changes in the composition of customers and their preferences.	Ashrafi et al. (2019); Jaworski & Kohli (1993)
Cloud computing capability	An upgraded version of traditional information technology infrastructure capability.	Liu et al. (2016)
Cloud computing flexibility	The degree to which organizations deliver cloud-based information technology solutions rapidly and effectively to facilitate their business.	Khayer et al. (2020); Schneider & Sunyaev (2016)
Cloud computing integration	The degree to which organizations have integrated resources from internal and external information technology included data and information technology applications, based on cloud computing technology.	Khayer et al. (2020); Schneider & Sunyaev (2016)
Agile culture	An organizational culture that is conducive to agility by emphasized collaboration, diversity, encouraging competency, and transparency.	Caligiuri & Tarique (2016)

Table 2 Operational definitions (Continued)

Constructs	Operational definitions	Sources
Goal achievement	The success in goal achievement of organizations where utilized agility as a strategic orientation included: (1) Financial goal achievement is the result of all organizational activities and succeeds financial goal is essential for organization in the long term. (2) Strategic goal achievement, apart from financial goal achievement, this aspect reflects the strategic goals of organizations.	Durmuşoğlu, Apfelthaler, Nayir, Alvarez & Mughan (2012); Elbashir, Collier & Davern (2008); Kuo & Chen (2008)

Table 3 Summary of Hypothesized Relationships

Hypotheses	Description of Hypothesized Relationships
H1a	Operational agility positively influences strategic goal achievement.
H1b	Operational agility positively influences financial goal achievement.
H2a	Customer alertness agility positively influences strategic goal achievement.
H2b	Customer alertness agility positively influences financial goal achievement.
H3a	Competitor awareness agility positively influences strategic goal achievement.
H3b	Competitor awareness agility positively influences financial goal achievement.
H4a	Strategic business relationship agility positively influences strategic goal achievement.
H4b	Strategic business relationship agility positively influences financial goal achievement.
H5a	Technological turbulence positively influences organizational strategic agility.
H5b	Market turbulence positively influences organizational strategic agility.
H6a	Cloud computing flexibility positively influences organizational strategic agility.
H6b	Cloud computing integration positively influences organizational strategic agility.
H7a	Agile culture positively moderates the relationships between environmental turbulence and organizational strategic agility.
H7b	Agile culture positively moderates the relationships between cloud computing capability and organizational strategic agility.

CHAPTER III

RESEARCH METHODS

The prior chapter demonstrates a comprehensive review of relevant literature to organizational strategic agility, theoretical foundation, antecedents, consequences, moderators, and the hypothesis development. Further, this chapter demonstrates the research methods to clarify understanding of the hypothesis testing processes. Hence, this chapter is organized into four sections as follows. Firstly, the sample selection and data collection procedures, including population and sample, data collection and test of non-response bias are detailed. Secondly, the variable measurements are developed in this research. Thirdly, the instrumental verifications, including the test of validity and reliability, and the statistical analysis are presented. Finally, the table of summary of definitions and operational variables of constructs is included.

Sample Selection and Data Collection Procedures

Population and Sample

Most of the agile research has investigated agility as a strongly manufacturing-biased sector, thus there is less knowledge and empirical investigation on other business sectors (Aburub, 2015). Consequently, this research examines the electronic commerce (e-Commerce) context where the Department of Business Development reports the rising number of e-Commerce business of all business sectors are more than 13,000 in 2019 such as food, clothing, furniture, stationary, beauty, computer, IT gagged, and software etc. All business sectors provide massive income more than 24,797 million; that may come from the number of internet users rise close to 50 million in Thailand (Department of Business Development, 2021). Moreover, the e-Commerce business is in the star stage in recent year and attract massive customers' demand that make e-Commerce business in Thailand must scale up to a higher level by providing more creative activities to attract potential customers, such as social commerce, streaming, social commerce to serve customers with immersive shopping experiences (Electronic Transactions Development Agency, 2021).

Similarly, the technological literature illustrated that the development of high-technology such as The Internet of Things (IoTs) has recently occurred as a critical disruptive technology that not only plays the main player in daily activities but also affects business operations and global economic systems as a whole and e-Commerce the sample of succeeding winner who utilized these golden opportunities to become more popular across the world because of the convenience it brings to online sellers and online customers (Akhtar et al., 2018). On the other hand, those provide the potential doors for competitors across the world may get involve the e-Commerce wars easily.

Moreover, the coming of Chinese online merchants causes the new online war because products from China are also becoming popular in the e-marketplaces, especially online games, technology gadgets, and telecommunications (Li, Xin, Pucik & Wei, 2019). Thus, e-Commerce businesses in Thailand face with rising numbers of competitors; and they may have to put up more attempts for creative ideas on unique products and services to attract the niche market, avoid the mass market, something that could not be found in general product catalogs on the Internet.

Additionally, this research uses Thailand as the context as the emerging market, is an attracting empirical setting, which the concept of dynamic capabilities is applied to investigate the propose framework. Moreover, e-Commerce offers the potential to simultaneously investigate four dimensions of organizational strategic agility, also presents hyper-competition and unpredictable business environment. Thus, e-Commerce needs to provide capabilities to speedily adapt and change in response to rapidly changing environmental conditions, and organizational strategic agility is considered to be one of the most critical capabilities for long-term success and growth (Baškarada & Koronios, 2018).

In addition, the information from Department of Business Development data base is displayed on the website: www.dbd.go.th; there are 2,134 e-Commerce businesses in computer, IT gagged, and software (as of 5/1/2021). The sample size for this research has been calculated according to the formula recommended by Yamane (1967) which is as bellows.

$$n = N/(1+Ne^2)$$

where,

n = size of the sample

N = population

e^2 = probability of error

Therefore, the sample size is:

$$n = 2{,}134/[1 + 2{,}134(0.05)^2]$$

with N = 2,134, e = 0.05 (at the 5% level of significance)

thus, the sample size is 337.

The error probability of this research calculates as five percent (e = .05), while 2,134 is the total number of population (N = 2,134). The calculating has given the sample size 337 businesses are considered sufficient for data analysis. Nevertheless, it is too challenging to get a 100 percent response rate by using the mailed data collection method. Mailed questionnaires as a survey method have considered 20 percent of the response rates are acceptable and satisfactory for subsequent analysis (Baruch & Holtom, 2008). The calculation is given below.

$$n = (337*100)/20$$

$$n = 1{,}685$$

Accordingly, to obtain 337 sample sizes, it is required to mail 1,685 questionnaires. Hence, this research collects data from the list of e-Commerce businesses in Thailand to examine the research hypotheses. The key informant is the administrative position of each e-Commerce business in the computer, IT gagged, and software because they have the most extensive knowledge about capabilities, strategies, culture, leadership, environmental surrounding, and goal achievement of their organizations.

Data Collection

This research uses the mail-questionnaire as the instrument for collecting data because the large-scale data collection in academic literature is extensively-uses questionnaires for data collection (Jahanshahi, Zhang & Brem, 2013). The advantage of questionnaires by attentive planning can yield high-quality usable data, achieve good response rates, and provide anonymity, the latter encouraging more honest and frank answers than for example interviews, and this can help to reduce bias (Marshall, 2005). As discussed, advantage recently, online surveys offer many advantages over traditional surveys, but questionnaires are also disadvantages, especially during the COVID-19 pandemic, many respondents prefer not to accept traditional questionnaire papers that reduce the number of respondent rate.

The nature of e-Commerce businesses, they use the internet for communication and information. Thus, this research uses traditional and electronic questionnaires and there are two forms of sending questionnaires (Jahanshahi et al., 2013). The first part of questionnaires directly distributes to key information by mail (each package of the sent letter comprised a cover letter containing an explanation of the research, a questionnaire, and a postage-prepaid return envelope). The second part is electronic mails are sent via the internet, and QR code via line application (depend on the requirement of the key information).

The total number of questionnaires sent was 1,574 packages mailed (businesses preferred) and 111 electronic mails in early January 2021. In the first stage, the researcher received complete questionnaires in the first two weeks. In the second stage after three weeks, to increase the response rate, the researcher has follow-up through the chat box function on website and electronic mails of e-Commerce businesses that have not yet replied to checked and remind them to complete the questionnaire. The 455 questionnaires were returned, 401 were usable, and 54 were uncompleted and unusable. Therefore, the effective response rate was approximately 23.798 percent which is acceptable as the sample size (Nulty, 2008) and the description of the questionnaire mailing is also indicated in Table 4.

Table 4 Summary of Questionnaire Mailing

Detail	Number
Mailed Questionnaires	1,685
Received Questionnaires	455
Unusable Questionnaires	54
Usable Questionnaires	401
Response Rate of Samples (401/1,685)*100	23.80%

Instrument

The research instrument is the questionnaire that adapts from reviewing the related literature, definitions, and instruments used in previous research. The questionnaire consists of six parts. The first part is the choices through closed-ended questions because its questions are easy for respondents to answer, and easier to code and statistically analyze. Moreover, seven questions of personal information questions are asked about: gender, age, educational level, working experience, average revenues per month, and working position. The second part is asked about the information and details of the organizations including the type of businessperson, type of e-Commerce business, type of e-Commerce by business objective, number of employees, the period of time in operating business, authorized capitals, the total assets of the firm, and average revenues per year. The third part to the fifth part is included 45 questions in order to measure each construct in the research model. Moreover, all items are adapted from previous relevance literature which congruence with definition of each variable. There are designed as a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) and a seven-point Likert scale, ranging from 1(very strongly disagree) to 7 (very strongly agree). The last part is the recommendations and suggestions in organizational strategic agility and others.

Table 5 The Items of 11 Main Constructs

Constructs	Item
Organizational Strategic Agility (OSA)	
Operational Agility (OA)	
OA1	Organization can analyze data for decision making appropriately without delay.
OA2	Organization can quickly adjust plans to respond to uncertain situations.
OA3	When an organization faces unexpected changes that organization can modify plans and work processes in a timely manner.
OA4	When an organization faces necessary needs that organization can scale down or scale up production and service quickly, flexibly.
Customer Alertness Agility (AA)	
AA1	Organization has rapidly recognizing markets changes.
AA2	Organization can identify new market trends/opportunities.
AA3	Organization prepares future plans and demand forecasts related to its customers.
AA4	Organization has the capability to fit time and way of distribution to customers' expectations.
Competitor Awareness Agility (CA)	
CA1	Organization quickly perceives market changes.
CA2	Organization can analyze, assess trends, and new marketing opportunities
CA3	Organization has forecasts and plans to meet the needs of customers in order to plan the organization's future operations.
CA4	Organization has abilities to adjust when and how products and services are delivered to meet customer expectations.
Strategic Business Relationship Agility (RA)	
RA1	Organization can quickly establish new networks with commercial partners to support strategies.
RA2	Organization can quickly collect information of customer and suppliers from partners.
RA3	Organization can take advantage of partner resources such as databases of vendors or knowledge passed on from partners, etc.
RA4	Organization can exploit partners' capabilities to increase the production capacity of goods and services for being quality, cost effectiveness and efficiency.
Environmental Turbulence (ENT)	
Techological Turbulence (TT)	
TT1	Technology in the e-Commerce industry is changing rapidly that forces organizations to adapt rapidly.
TT2	Technological changes provide opportunities for the development in the e-Commerce industry.
TT3	Anticipating future trends in the e-Commerce industry have more trouble and complicated.
TT4	Organization has an idea/concept to develop a lot of new products or services due to technological advancements in the electronic commerce industry.

Table 5 The items of 11 Main Constructs (Continued)

Constructs	Item
Market Turbulence (MT)	
MT1	Demand of customers in the electronic commerce market is changing rapidly.
MT2	Anything that one competitor offers to customers, other competitors can match those same offering readily.
MT3	Laws, regulations, customs, or marketing competition strategies of e-Commerce businesses are changing all the time.
MT4	Competitors who use services to buy - sell products and services through the website or e-Marketplace is increasing.
Cloud Computing Capability (CCC)	
Cloud Computing Flexibility (CF)	
CF1	Cloud computing such as e-mail, Google Drive, Dropbox, Line, Facebook, Microsoft Office 365, Amazon Web Services, or Alibaba Cloud enable enterprise's IT architecture to be able to cope with the greater instantaneous volatility.
CF2	Cloud computing provides a highly flexible of using IT architecture and growing business model for organizations.
CF3	Cloud computing enables organization’s IT architecture to support new business relationships more easily and comfort.
CF4	Cloud computing enables organization’s IT architecture to accommodate changes in business quickly.
Cloud Computing Integration (CI)	
CI1	Cloud computing enable organizations can quickly access and retrieve data for operational planning.
CI2	Cloud computing such as e-mail, Google Drive, Dropbox, Line, Facebook, Microsoft Office 365, Amazon Web Services, or Alibaba Cloud help organization’s employees more easily and comfort to share information with colleagues in organization or related partners.
CI3	Cloud computing such as Line, Google Drive, Microsoft Office 365, Google Workspace, or Microsoft Azure help organizations to integrate applications more easily with other systems.
CI4	Cloud computing such as hardware, software in processing, data storage and various online systems via the internet support organizational activities seamlessly.

Table 5 The items of 11 Main Constructs (Continued)

Constructs	Item
Moderators	
Agile culture (AC)	
AC1	The organization encourages teamwork and personnel participation in keeping up with operation.
AC2	Organization giving respect to and accepting opinions and differences of employees at all levels.
AC3	Organization is constantly supporting the discovery, concept testing, and new ideas of working methods.
AC4	Organization recognizes and encourages the competency development of employees as regularly.
AC5	Organization encourages all personnel to be active and ready to adapt to changes, also provides channels for employees at all levels to express their opinions on organizational policies and decision making.
Organizational Goal Achievement (OGA)	
(Financial Goal Achievement: FA)	
FA1	Organization has increased profits according to the goal setting.
FA2	Organization succeeds to increase more revenues.
FA3	Organization attains sales growth rate according to plan setting.
FA4	Organization prospers in the reduction of lost sales.
(Strategic Goal Achievement: SA)	
SA1	Organization has market share according to plan setting.
SA2	Organization has a unique identity over competitors which giving a competitive advantage.
SA3	Organization is recognized and trusted by stakeholders of its organization.
SA4	Organization has a management that is recognized for its excellent quality.

Measurements

This research is quantitative research which it has an empirical analysis that uses the primary data received by survey questionnaires. Due to all constructs are abstractions, which cannot be directly observed or measured by multiple-items (Churchill, 1979). Moreover, using multiple items provide a more extensive range of the content of a conceptual definition and improvement of reliability. Further, nine variables including technology turbulence, market turbulence, cloud computing flexibility, cloud computing integration, operational agility, customer alertness agility, competitor awareness agility, strategic business relationship agility, and agile culture are derived from the definition and previous literature by a five-point Likert scale ranging from 1 = strangely disagree, to 5 = strongly agree. While the financial goal achievement and strategic goal achievement are derived from the definition and previous literature by a seven-point Likert scale ranging from 1 = very strongly disagree to 7 = very strongly agree. As a result, all operational definitions of each construct which is included: the dependent variable, the independent variables, the moderating variables, and the control variables are as follows:

Dependent Variable

Goal achievement is a vital outcome of organizational operation according to the organizational plan setting in order to reflect consequence capabilities of organizational strategic agility which including (1) financial goal achievement is rising profit, revenues, sales growth, reduction of lost sales, and (2) strategic goal achievement is increasing organization's market share, competitive advantage, trust, and to be recognized in goods quality (Durmuşoğlu et al., 2012; Elbashir et al., 2008; Kuo & Chen, 2008). This research adapts measurement items from research of Durmuşoğlu et al. (2012), Elbashir et al. (2008) and Kuo and Chen (2008) including a four-item scale for financial goal achievement and a four-item scale for strategic goal achievement. This research examines at goal achievement in order to answer the research's first objective which is to figure out how four dimensions of organizational strategic agility (operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility) influence organizational goals.

Independent Variables

This research consists of three independent variables: organizational strategic agility, two antecedents. Besides, organizational strategic agility is a core construct of this research which measured by four attributes: operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility. All variables are descripted as follow:

Operational agility is the capability of dynamic processes to make excellent decision-making and implementation with rapidly timing, thus included the effective unbiased decision-making and the effective integrates new capabilities with new strategies and business model, this construct is adapted from Felipe et al. (2016), Park et al. (2017), and Nurcholis (2019) including a four-item scale.

Customer alertness agility is the strategic dynamic capability to rapidly sense and respond to unstable customers' needs to build market intelligence (Chatfield & Reddick, 2018; Felipe et al., 2016; Gölgeci et al., 2019) included the speed recognizing market changes and ability to identify new market trend, and opportunities; this constructs is adapted from Nurcholis (2019) and Mandal (2018) including a four-item scale.

Competitor awareness agility is the strong dynamic capability to sense competitors' activities and respond to competitors' activities with rapidly time frame (Lim, 2013; Reddy & Reddy, 2002; Yang & Liu, 2012) included the informational process to collects data of competitors with short time frame; this constructs is adapted from Yang and Liu (2012) including a four-item scale.

Strategic business relationship agility is the capability to leverage cooperation opportunities and building new partnership network or stakeholder network by rapidly short time frame (Sambamurthy et al., 2003; Teece et al., 2016; Vagnoni & Khoddami, 2016) included building new network for strategic propose, and the ability to use benefit of business network: this constructs is adapted from Nurcholis (2019) and Altay et al. (2018) including a four-item scale.

Antecedent Variables

The two antecedents of organizational strategic agility comprised of environmental turbulence and cloud computing capability. Besides, all antecedent variables align to its definitions and the prior literature. The measure of each antecedent variable is shown as follow:

Environmental turbulence is an unstable situation that leads to difficulty forecasting, and this variable is measured through (1) technological turbulence related to the effect and rapidity of changes in technology, (2) market turbulence related to the effect and efficiency of competitors' strength, speed, unique, and marketing strategy (Coreynen et al., 2020). Thus, this construct is adapted from Zhou et al. (2019) and Coreynen et al. (2020) including an eight-item scale.

Cloud computing capability is the capacity of deploying mass cloud computing technology quickly, minimizing capital cost directly, and responding rapidly to highly unstable business surroundings, and classified into two types: (1) cloud computing flexibility is the degree to deliver cloud-based information technology solutions rapidly and effectively to facilitate their business, (2) cloud computing integration is the degree to integrated resources from internal and external information technology included data and information technology applications, based on cloud computing technology (Khayer et al., 2020; Schneider & Sunyaev, 2016). Thus, this construct is adapted from Liu et al. (2016) including an eight-item scale.

Moderating Variable

This research applies the contingency theory to explain the moderating effect of agile culture on the relationship between organizational strategic agility and its antecedents, also the moderating effect on the relationship between organizational strategic agility and organizational goal achievement.

Agile culture is an organizational culture that is conductive to agility that construct and facilitate processes of concern and build agility in organizations (Caligiuri & Tarique, 2016; Iivari & Iivari, 2011). Thus, this construct is adapted from Caligiuri and Tarique (2016) including a five-item scale.

Control Variables

Organizational size is the number of employees, which it has been used to control in the prior organizational agility research because the number of employees may provide influence to organizational agility (Lu & Ramamurthy, 2011). Further, organizational size is controlled because organizations with major number of employees have more resources to provide capabilities, which might moderate the relationship between organizational strategic agility and goal achievement (Panda & Rath, 2017). Organizational size is represented as a dummy variable, 0 refers to the total employees of the organization that are less than 51 employees, and 1 refers to the total employees of the organization that are equal to or more than 51 employees.

Organizational age has both positive and negative influences on the competency regarding organizations' technology, movement, and profits deriving from organizational agile operations (Ravichandran, 2018; Zahra, Ireland, Gutierrez & Hitt 2000). The organizational behavior literature indicates that organizational age contributes to various key organizational outcomes such as organizational capabilities, employee turnover, promotion probabilities, and performance (Kalleberg & Leicht, 1991). Organizational age represented by a dummy variable of which 0 means the firm has the period of time registered in the Department of Business Development of Thailand is less than or equal to 5 years, and 1 means the firm has the period of time registered in Department of Business Development of Thailand is more than 5 years.

Organizational capital is the terms of money used by organizations to buy products or to provide activities to the sector of the economy upon, which organizations' operation is based. Further, this financial capital may influence organizational capabilities thus lead to effectively carry out organizational strategies to be splendid goal achievement (Teece et al., 2016). This research controls organizational capital by using the total assets of the organization as a proxy. Organizational capital is represented as a dummy variable, 0 refers to the total assets of the organization that are less than 1,000,001 baht, and 1 refers to the total assets of the firm that are equal to or more than 1,000,001 baht.

Organizational type is the organizational form a business adopts, will affect a multitude of factors, many of which will decide the organization’s future. Aligning organizational goals to business organization type is an important step and

understanding the pros and cons of each type is crucial (Ho, Clarke & Dougherty, 2015). Organizational type represented by a dummy variable of which 0 means organizations which are ordinary person and limited partnership, and 1 means organizations which are company limited and public limited company.

Test of Non-Response Bias

This research used to test of non-response bias to ensure that mail surveys will be not debatable. Due to the test of non-response bias is the approach to protect problems from possible response bias between respondents and non-respondents that a non-response bias is tested by comparing the pattern of answers received between the first four weeks and the last four weeks of every answering returned from respondents, which its separate respondents into two groups: early and late respondents (Af Wåhlberg & Poom, 2015; Armstrong & Overton, 1977). Thus, checking the possible responses from occurring bias problems between respondents and non-respondents by this non-response bias test is used to confirm that non-respondents are not different from all respondents (Armstrong & Overton, 1977).

The test of non-response bias is conducted by using a t-test comparison of the demographic information between the groups of early and late respondents. After that, responses from the first mailing group are used to compare with those received from the second mailing group on the basis of the demographic of firm characteristics. If the t-test result is not a statistically significant difference between early and late respondents, it can be concluded that the non-response bias does not cause a major problem, and the expected result should reveal non-statistically significant differences between them to reject a non-response bias (Af Wåhlberg & Poom, 2015; Armstrong & Overton, 1977).

Consequently, to test non-response bias in this research for all the received questionnaires from 401 samples are divided into essentially two equal groups: the first 201 responses were treated as the early respondents, and the last 200 responses were treated as the late respondents. The results from the data analyzed showed no differences for each variable from both early and late respondents that provide the evidence that there are no statistically significant differences between two groups at a

95% confidence level and non-response bias is not a severe issue in this research, it can be confidently said (Armstrong & Overton, 1977). The detailed results of the non-response bias test are present in table 6.

Table 6 Results of Non-Response Bias Test between Early and Late Respondents

Variables	**Respondent**	**N**	**Mean**	**S.D.**	**t-value**	**p-value**
OA	Early Respondents	201	4.24	.57	.632	.528
	Late Respondents	200	4.23	.56		
AA	Early Respondents	201	4.22	.58	1.810	.072
	Late Respondents	200	4.21	.59		
CA	Early Respondents	201	4.25	.54	1.902	.059
	Late Respondents	200	4.19	.55		
RA	Early Respondents	201	4.22	.63	1.955	.052
	Late Respondents	200	4.12	.62		
TT	Early Respondents	201	4.33	.60	1.910	.058
	Late Respondents	200	4.21	.61		
MT	Early Respondents	201	4.28	.52	-1.135	.258
	Late Respondents	200	4.19	.53		
CF	Early Respondents	201	4.36	.52	.831	.407
	Late Respondents	200	4.26	.53		
CI	Early Respondents	201	4.28	.47	1.910	.058
	Late Respondents	200	4.18	.48		
AC	Early Respondents	201	4.44	.51	.943	.347
	Late Respondents	200	4.33	.52		
FA	Early Respondents	201	5.79	.76	.774	.440
	Late Respondents	200	5.68	.75		
SA	Early Respondents	201	6.11	.74	1.344	.180
	Late Respondents	200	6.05	.75		

N = 401

Methods

In this research, questionnaires are used to collect data which common method variance (CMV) may appear, and CMV generates internal inconsistency by causing a systematic measurement error either to deflate or inflate the relationship among variables, resulting in misleading conclusions (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). This research reduces CMV by following the guidelines of Podsakoff et al. (2003) that protecting the anonymity of respondents and improving the item scale by carefully constructing the measurement items following the theory and constructive measures of past researchers.

Eggers and Kaplan (2013) suggested that questionnaires are sent to academic experts who reviewed the instrument and adjusted it to be a possible scale measure before sending it to the respondents. In addition, following this further, the pre-test method is appropriately conducted to assert the validity and reliability of the questionnaire. Furthermore, in order to reduce common method bias, this research uses Harman's post hoc single-factor analysis to examine for method bias in the data; if common method variance is a serious issue, a factor analysis would generate a single factor accounting for most of the variance (Podsakoff et al., 2003), also confirmatory factor analysis (CFA) is performed to examine a single factor model with all indicators (Curran, West & Finch, 1996; Orcan, 2018).

Validity

Validity is the level that demonstrates the measurement which is used in the questionnaire could correctly and appropriately measure constructs that researchers require (Kimberlin & Winterstein, 2008). To conduct various tests to assess the construct validity and reliability of the instrument, this research provides structural equation modeling (SEM) by conduct a two-phase approach (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). In the first phase, the confirmatory factor analysis (CFA) is used to measure the adequacy of the measurement model that both construct reliability and item reliability are tested. After ensuring that the scale is reliable, the construct validity using convergent and discriminant validity is checked before the measurement model is evaluated and finalized. In the second phase, the structural model is evaluated.

The overall model fit in both measurement and structural models are evaluated using goodness-of-fit indices including χ^2/df ratio, Normed fit index (NFI), relative fit index (RFI), comparative fit index (CFI), incremental fit index (IFI), the root-mean-square error of approximation (RMSA) (Hair et al., 2014; Henseler & Sarstedt, 2013; Mulaik et al., 1989; Schermelleh-Engel, Moosbrugger & Müller, 2003).

Content Validity

Content validity refers to the degree to which the essence of scales containing items that are sufficient to measure what is expected or to be the extent to which the items of scales adequately reflect the interrelated theoretical domains (Lawshe, 1975). Content validity is the degree to which the instrument measures what it is intended to measure (Devriendt et al., 2012). Additionally, the back translation technique is used to translate the measures from the original measures, and to ensure the content, sequence, face validity, and clarity of the measures in the questionnaire by five academics with experience and knowledge of administration will be chosen to pretest as shown in Table 7.

Table 7 Lists of Experts to Ensure Construct Validity

No.	Expert	Institute
1	Assoc. Prof. Dr. Asda Chintakananda	National Institute of Development Administration
2	Assoc. Prof. Dr. Karun Pratoom	Mahasarakham University
3	Assoc. Prof. Dr. Pornlapas Suwannarat	Mahasarakham University
4	Dr. Atthaphon Mumi	Mahasarakham University
5	Asst. Prof. Dr. Srisunun Prasertsang	Roi Et Rajabhat University

From Table 7, overall indexes of IOC (equal 0.91) display the adequacy of content validity based on the opinions of five experts with experience in this area. The overall index of IOC indicates more than .50, thus the content validity is acceptable (D'Agostino et al., 2008).

Construct validity

Construct validity is used to examine the underlying relationships of a large number of items and consider if they can be decreased to a smaller set of factors, also recognizes construct validity as a set of measured items reflecting the latent theoretical construct, and those items are produced to measure (Lawshe, 1975). This research employs convergent validity, discriminant validity, and confirmatory factor analysis (CFA) to prove that all set of research latent theoretical constructs items fit with theoretical background (Devriendt et al., 2012).

Confirmatory Factor Analysis (CFA)

A factor analysis is performed with data collected from questionnaires administered for all variables to prove that each construct measures something different and to assess the importance of factors (Curran, West & Finch, 1996; Orcan, 2018). This research applies CFA to consider in decreasing items or constructs consisted of insisting that the standardized factor loading should be higher than .40 cut-off and statistically significant (DiStefano, Zhu & Mîndrilă, 2009), the t-value or critical ratio is more than 1.96 ($p < .05$), R^2 is greater than .50, the composite reliability (CR) is more than .70 (Hair et al., 2014) and the average variance extracted (AVE) is greater than .50 (Diamantopoulos & Winklhofer, 2001). The result found that all 11 measurement model fits of the research data well and the model fit indices were as follows: absolute fit index (χ^2/df) equals 1.061, root mean square error of approximation (RMSEA) equals 0.012, goodness of fit index (GFI) equals 0.920, comparative fit index (CFI) equals 0.996, normed fit index (NFI) equals 0.941, incremental fit index (IFI) equals 0.996, and relative fit index (RFI) equals 0.924.

Convergent Validity

Convergent validity refers to harmony and the internal consistency of a theoretical concept and a specific concept that is used for measures and instruments of the research and that is the degree to which two measures are designed to measure the same construct concerning convergence whether two measures are highly correlated (Carlson & Herdman, 2012). For convergent validity, this research examines an average variance extracted (AVE) of research data. The results are shown in Table 8.

Table 8 The Average Variance Extracted (AVE) and Construct Reliability (CR) of all constructs.

Constructs	AVE	CR
Operational Agility (OA)	0.611	0.863
Customer Alertness Agility (AA)	0.644	0.879
Competitor Awareness Agility (CA)	0.504	0.801
Strategic Business Relationship Agility (RA)	0.704	0.905
Technological Turbulence (TT)	0.663	0.887
Market Turbulence (MT)	0.588	0.851
Cloud Computing Flexibility (CF)	0.587	0.850
Cloud Computing Integration (CI)	0.476	0.783
Agile Culture (AC)	0.539	0.853
Strategic Goal Achievement (SA)	0.657	0.884
Financial Goal Achievement (FA)	0.637	0.637

Table 8 shows AVE values are between .476 - .704 of all constructs in this research. According to Fornell and Larcker (1981) designate that an AVE value of 0.50 and higher indicates a sufficient degree of convergent validity, meaning that the latent variable (constructs) explains more than half of its indicator's variance. However, Fornell and Larcker (1981) indicate that the cut-off value of AVE 0.40 is acceptable in case CR value is higher than 0.6, the convergent validity of the construct is still adequate. Hence, the AVE of all constructs indicates adequate convergent validity.

Discriminant Validity

Discriminant validity means that the shared between each constructs and its measures are greater than the variance shared among distinct constructs (Compeau, Higgins & Huff, 1999). This research uses two criterions. The first criterion is the Fornell and Larcker (1981) to assess discriminant validity by comparing the square root of the average variance extract (AVE) of each latent constructs' relatives to other constructs. The discriminant validity is assumed if the square root of the average

variance extracted of the same construct, this situation is apparently the case in the correlation matrix and the discriminant validity is confirmed. The second criterion is cross loading that considering the relationship between the weight of the indicators in each latent variable and the weight of the indicators in other latent variables in the research model. The weight of each indicator under the same latent variable should higher than other latent variables (DiStefano et al., 2009). The research result is shown in Table 9. A square root of the average variance extracted in the diagonal is higher than all constructs in their rows and columns that means the latent constructs used for measuring the causal relationships under this research are truly distinct from each other (Fornell & Larcker, 1981).

Table 9 Discriminant Validity by Fornell-Larcker, 1981

Constructs	OA	AA	CA	RA	TT	MT	CF	CI	AC	SA	FA
OA	0.709										
AA	0.540	0.733									
CA	0.512	0.497	0.631								
RA	0.510	0.549	0.502	0.776							
TT	0.481	0.366	0.412	0.398	0.745						
MT	0.448	0.408	0.439	0.407	0.529	0.689					
CF	0.421	0.359	0.444	0.397	0.484	0.493	0.690				
CI	0.396	0.396	0.427	0.415	0.440	0.385	0.367	0.605			
AC	0.375	0.309	0.265	0.322	0.391	0.411	0.398	0.298	0.732		
SA	0.361	0.409	0.312	0.344	0.155	0.199	0.186	0.193	0.121	0.740	
FA	0.414	0.409	0.390	0.448	0.207	0.243	0.262	0.203	0.156	0.545	0.727

Reliability

Reliability refers to level of measurement in the survey, which is true and observed variables do not have any errors that select the degree of internal consistency between the various variables and its method of reliability test is very important to verify the data collection and used instruments (Heale & Twycross, 2015). Moreover, reliability is the degree of consistency or dependability with which the instrument measures the attribute it is designed to measure, so that differences in results come from

differences in respondents, not differences in how the questionnaire was understood. Internal consistency is a form of reliability, referring to the degree to which subparts of the research instrument (Marshall, 2005). This research employs Cronbach's alpha coefficient and composite reliability to asset the reliability of variables.

Cronbach's Alpha Coefficient

Cronbach's alpha coefficient method is one of the most commonly used coefficient methods to assess the reliability of variables and it measures the reliability of the subjects' answers concerning all items of questionnaires (Tavakol & Dennick, 2011). The cut-off value of Cronbach's alpha is .60 while a value of .80 is considered to be good, and internal consistency is proved in the case of the items larger than .07 (Nunnally, 1975; Tavakol & Dennick, 2011).

The Cronbach's alpha coefficients of all variables are shown in Table 10 that range from .782 to .908 which are higher than 0.70 as and it proves the internal consistency of the entire items exists in this research (Nunnally, 1975; Tavakol & Dennick, 2011).

Table 10 Reliability Value

Variables	Items	Cronbach's alpha (α)
Operational Agility (OA)	4	.863
Customer Alertness Agility (AA)	4	.879
Competitor Awareness Agility (CA)	4	.806
Strategic Business Relationship Agility (RA)	4	.904
Technological Turbulence (TT)	4	.885
Market Turbulence (MT)	4	.849
Cloud Computing Flexibility (CF)	4	.850
Cloud Computing Integration (CI)	4	.782
Agile Culture (AC)	5	.908
Strategic Goal Achievement (FA)	4	.883
Financial Goal Achievement (SA)	4	.875

The Research Model

In this research, the research model is a theoretical representation. Thus, prior to any data collection, the researcher specifies the conceptual model is confirmed with sampled data, and factor analysis fundamentally presumes that in a given domain, there is a small number of unobservable latent constructs, also known as common factors, which influence the potentially vast array of observed variables. The purpose of CFA is to statistically test the ability of the hypothesized factor model to reproduce the sampled data (i.e., usually the variance-covariance matrix). In CFA, the researcher specifies a certain number of factors, which are correlated and observed variables measuring each factor (Schumacker & Lomax, (2004).

Following model modification, the next step is to estimate the parameters of the specified model before attaining a specified SEM model. The overall model fit is evaluated by examining the extent to which the theoretical model is supported by the sample data. Several measures of goodness-of-fit indices are used to evaluate the measurement model of this research as suggested by Diamantopoulos and Siguaw (2006), Diamantopoulos and Winklhofer (2001), Hair et al. (2014), Henseler and Sarstedt (2013), Mulaik et al. (1989), Schumacker and Lomax (2004): χ^2/df ratio, Normed fit index (NFI), relative fit index (RFI), comparative fit index (CFI), incremental fit index (IFI), the root-mean-square error of approximation (RMSEA). After achieving an adequate overall fit, the measurement model is further evaluated for its reliability and validity (convergent and discriminant) following the guidelines from previous literature (Diamantopoulos & Siguaw, 2006; Diamantopoulos & Winklhofer, 2001; Fornell & Larcker, 1981).

Statistical Techniques

To answer research questions and testing hypotheses, this research uses several statistical techniques including descriptive and inferential statistics such as mean, standard deviation, correlation analysis, and the structural equation modeling (SEM). The examination of hypothesis testing is separated into two parts. The first part is used structural equation modeling (SEM) to examine the relationships among constructs and measures the predictive power of the model. The second part also employs the structural

equation modeling (SEM) to analyze the moderating effect. A brief description of the main methods in this research is explained in the following:

Univariate Normality Test

Skewness, kurtosis along with the standard error of skewness and the standard error of kurtosis are used to test normality in this research. Nevertheless, skewness is a measurement of how irregular the probability distribution is in relation to a normal distribution. Before testing hypotheses, it must also undergo kurtosis, which is the process to evaluate the combined distribution of data in the tails. According to Blanca, Arnau, López-Montiel, Bono and Bendayan (2013) recommended the terms of absolute values skewness will be considered as highly expressed if it is more than 3. 00. Additionally, Blanca et al., 2013, Cain, Zhang and Yuan (2017) consider the skewness and kurtosis value, which is not more than ±2 is considered within acceptable criteria.

The result of skewness value in this research found that within the range of -0.871 to -0.245 which is not more than ±2 is considered within acceptable criteria (Cain et al., 2017). The range of kurtosis is between -1.000 to .584 which is not more than ±2 is considered within acceptable criteria (Blanca et al., 2013; Cain et al., 2017; Hair et al., 2014) and the results is shown in Table 15.

Variance Inflation Factors (VIF)

Variance Inflation Factors (VIF) is employed to examine the multicollinearity among the independent variables and Pearson's correlation that VIF's is straightly relevant to the tolerance value. Thus, an indication that measures how much the variance of an estimated regression coefficient is enhanced as the result of collinearity. These high VIF values indicate the high degree of multicollinearity among predictors (antecedent variables, independent variables) of all of VIF's values should be less than 5 to be considered that the associations among predictors are not problematic (Rogerson, 2001). This research found that the highest VIF value in all predictors is 3.213 which is not higher than 5. Thus, the results of the VIF value and correlations prove that multicollinearity problems do not occur in this research (Rogerson, 2001).

Structural Equation Modelling (SEM)

In several years, structural equation modeling or popularly known as SEM is the first-generation path modeling widely used by researchers and practitioners nowadays to analyze the interrelationship among variables in a model. SEM is first applied in social sciences which academic research found that SEM is a powerful statistical technique that establishes measurement models and structural models to test the conceptual model, also broadly used for analyzing multivariate data (Hair et al., 2014; 2012; Nusair & Hua, 2010). SEM has been referred to as a hybrid analysis tool with a fundamental advantage to incorporate latent variables into the analysis while accounting for measurement errors in the estimation process (Hair et al., 2014; 2012). Further, SEM is most appropriate when a research deals with multiple latent constructs, with each one of the constructs represented by several observed and measurable variables (Hair et al., 2014).

After the hypothesized measurement and structural models have been tested and finalized, the next step is to identify causal relationships among latent variables by path analysis. Based on theory, SEM specifies that particular latent variables directly or indirectly influence certain other latent variables in the conceptual model (Byrne, 2001), resulting in estimation results that indicate how these latent variables are related. In this research, the overall model fit is assessed using multiple fit indexes and the information concerning the fitness index categories, their level of acceptance, and literature are shown in Table 11.

Table 11 Fit Index and Level of Acceptance

Fit Index	Descriptions	References
CMIN (χ^2) (Chi-square)	p > .05	Diamantopoulos & Siguaw (2006); Henseler & Sarstedt (2013); Mulaik et al. (1989); Schumacker & Lomax (2004)
CMIN/DF (χ^2/df) (Absolute Fit Index)	≤ 2.00 good fit or 2.00 – 5.00 acceptable	Diamantopoulos & Siguaw (2006); Henseler & Sarstedt (2013); Mulaik et al. (1989); Schumacker & Lomax (2004)
RMSEA (Root Mean Square Error of Approximation)	< 0.05 good fit 0.05 – 0.08 acceptable 0.09 – 0.10 poor fit	Schermelleh-Engel et al. (2003); Diamantopoulos & Siguaw (2006)
GFI (Goodness of Fit Index)	> 0.95 good fit 0.90 – 0.95 acceptable	Diamantopoulos & Siguaw (2006); Henseler & Sarstedt (2013); Mulaik et al. (1989); Schumacker & Lomax (2004)
CFI (Comparative Fit Index)	> 0.95 perfect fit 0.90 – 0.95 acceptable	Diamantopoulos & Siguaw (2006); Henseler & Sarstedt (2013); Mulaik et al. (1989); Schumacker & Lomax (2004)
TLI (Tucker-Lewis Index)	> 0.95 good fit 0.90 – 0.95 acceptable	Schumacker & Lomax (2004)
NFI (Normed Fit Index)	≥ 0.90	Diamantopoulos & Siguaw (2006); Henseler & Sarstedt (2013); Mulaik et al. (1989); Schumacker & Lomax (2004)

Furthermore, the structural equation modeling of this conceptual model is separated into two models that are measurement model and structural model which show as follows:

Measurement Model

***Equation 1*: TT** $= (\lambda x_1\ \mathrm{TT})\,(\mathrm{ET}) + \delta_1$

***Equation 2*: MT** $= (\lambda x_2\ \mathrm{MT})\,(\mathrm{ET}) + \delta_2$

***Equation 3*: CF** $= (\lambda x_3\ \mathrm{CF})\,(\mathrm{CC}) + \delta_3$

***Equation 4*: CI** $= (\lambda x_4\ \mathrm{CI})\,(\mathrm{CC}) + \delta_4$

***Equation 5*: FA** $= (\lambda y_5\ \mathrm{FA})\,(\mathrm{GA}) + \varepsilon_1$

***Equation 6*: SA** $= (\lambda y_6\ \mathrm{SA})\,(\mathrm{GA}) + \varepsilon_2$

***Equation 7*: OA** $= (\lambda \mathrm{y}_7\ \mathrm{OA})\,(\mathrm{OSA}) + \varepsilon_3$

***Equation 8*: AA** $= (\lambda \mathrm{y}_8\ \mathrm{AA})\,(\mathrm{OSA}) + \varepsilon_4$

***Equation 9*: CA** $= (\lambda \mathrm{y}_9\ \mathrm{CA})\,(\mathrm{OSA}) + \varepsilon_5$

***Equation 10*: RA** $= (\lambda \mathrm{y}_{10}\ \mathrm{RA})\,(\mathrm{OSA}) + \varepsilon_6$

Structural Model

***Equation 1*: OSA** $= (\gamma_1)\,(\mathrm{ET}) + (\gamma_2)\,(\mathrm{CC}) + \zeta_1$

***Equation 2*: OGA** $= (\beta_1)\,(\mathrm{ET}) + \zeta_2$

Where;

OA = Operational Agility

AA = Customer Alertness Agility

CA = Competitor Awareness Agility

RA = Strategic Business Relationship Agility

FA = Financial Goal Achievement

SA = Strategic Goal Achievement

TT = Technological Turbulence

MT = Market Turbulence

CF = Cloud Computing Flexibility

CI = Cloud Computing Integration

OSA = Organizational Strategic Agility

GA = Goal Achievement

λx = Lambda-X

λy = Lambda-Y

γ = Gamma

β = Beta

δ = Delta

ε = Epsilon

ζ = Zeta

Summary

This chapter summarizes the research methods use in the investigation for this research, form simple selection to data gathering, testing all constructs purposed in the conceptual mode, and answering the research question. To be specific, there are four main parts in this chapter: (1) sample selection and data collection procedures; (2) measurement of variables; (3) verification of the instrument, and (4) statistical techniques. The total list of 2,134 e-Commerce businesses in Thailand is provided by The Department of Business Development. The key respondents completing the questionnaire are the managers or higher-level position involved in administrative.

The valid and reliable questionnaires are the primary instrument of data collection. This chapter provides the measurements of each construct in the model that are rely on the existing related literature. The total IOC indices (equal 0.91) show the content validity adequacy based on the judgments of five experts with knowledge and the equal score is more than. 50, indicating that the content validity is acceptable (D'Agostino et al., 2008). All constructs have AVE values between .476 and .704; the cut-off value of AVE 0.40 is acceptable in case the CR value is more than 0.6; the construct's convergent validity is still satisfactory (Fornell & Larcker, 1981). The CFA is used to prove both construct reliability and item reliability and found that all 11 measurement model fits of the research data well and the model fit indices were as follows: absolute fit index (χ^2/ df) equals 1. 061, root mean square error of approximation (RMSEA) equals 0.012, goodness of fit index (GFI) equals 0.920, comparative fit index (CFI) equals 0. 996, normed fit index (NFI) equals 0. 941, incremental fit index (IFI) equals 0.996, and relative fit index (RFI) equals 0.924. The Cronbach's alpha values are applied to assess the reliability of variables and found that all variables vary from.782 to.908, which is greater than 0.70, indicating that the items in this research have internal consistency. In addition, SEM is used for hypotheses testing of the relation among organizational strategic agility, its antecedents, and consequences. The hypothesis testing findings are disclosed in the next chapter, followed by a discussion and describe response characteristics, descriptive statistics, and other topics.

CHAPTER IV

RESULTS

The prior chapter presented the research methods which include sample selection, data collection procedure to confirm the conceptual framework of this research, also survey research, data analysis, and hypothesis testing are explained. This chapter four illustrates all results of this research acquired from the statistical analysis that performed to determine all hypotheses.

Thus, this research divide chapter four into five parts to present research results and sample profile that all parts included: (1) the abbreviations of all constructs, observed variables and the definitions of statistical symbols; (2) the respondent characteristics; (3) descriptive statistics of all constructs and testing the assumptions of SEM (i.e., univariate normality, correlation tests, variance inflation factors, and tolerance); (4) SEM consisting of the measurement model and the structural model; and (5) hypotheses testing and results.

The Abbreviations of Constructs, Observed Variables, Definitions of Statistical Symbols

This research comprised 11 constructs included: four dimensions of organizational strategic agility (operational agility, customer alertness agility, competitor awareness agility, strategic business relationship agility); two dimensions of environmental turbulence (technological turbulence, market turbulence); two dimensions of cloud computing capability (cloud computing flexibility, cloud computing integration); two dimensions of goal achievement (financial goal achievement, strategic goal achievement); and one construct of agile culture. The abbreviation of all constructs and observed variables are shown in Table 12 and the definitions of statistical symbols are shown in Table 13.

Table 12 The Abbreviations of all Constructs and Observed Variables

Constructs	**Abbreviation**	
	Constructs	Observed Variables
Operational Agility	OA	OA1, OA2, OA3, OA4
Customer Alertness Agility	AA	AA1, AA2, AA3, AA4
Competitor Awareness Agility	CA	CA1, CA2, CA3, CA4
Strategic Business Relationship Agility	RA	RA1, RA2, RA3, RA4
Technological Turbulence	TT	TT1, TT2, TT3, TT4
Market Turbulence	MT	MT1, MT2, MT3, MT4
Cloud Computing Flexibility	CF	CF1, CF2, CF3, CF4
Cloud Computing Integration	CI	CI1, CI2, CI3, CI4
Agile Culture	AC	AC1, AC2, AC3, AC4
Strategic Goal Achievement	SA	SA1, SA2, SA3, SA4
Financial Goal Achievement	FA	FA1, FA2, FA3, FA4

Table 13 The Descriptions of Statistical Symbols

Statistical Symbols	**Descriptions**
α	Coefficient alpha
β	Coefficient
r	Correlation Coefficients
p-value	Level of Marginal Significance
R^2	Squared Factor Loading
S.D.	Standard Deviation
S.E.	Standard Error
t-value	t-statistics
χ^2	Chi-square
$\bar{x}$	Mean

Respondent Characteristics

Demographic Profile of Respondents

The key respondent is the administrative position of e-Commerce business in the computer, IT gagged, software, and e-Marketplace because they have the most extensive knowledge about capabilities, strategies, culture, leadership, environmental surrounding, and goal achievement of their organizations. Based on the collected information, this research can indicate the several key characteristics of the respondents. Major respondents are females of older age and with a reasonably good educational background, and more than half of respondents owned e-Commerce businesses with experience. They preferred to clarify and understand the information in the questionnaire about organizational strategic agility, environmental turbulence, cloud computing capability, agile culture, and organizational goal achievement. The respondent profile of administrators of the tax e-Commerce businesses from 401 organizations in Thailand is demonstrated in Table 14.

Table 14 Demographic Profile of Respondents

Variables	Scale	Frequency	Percentage
Gender	Male	138	34.41
	Female	263	65.59
	Total	401	100.00
Age	Less than 30 years old	106	26.43
	30 - 40 years old	178	44.39
	41 - 50 years old	77	19.20
	More than 50 years	40	9.98
	Total	401	100.00

N = 401

Table 14 Demographic Profile of Respondents (Continued)

Variables	Scale	Frequency	Percentage
Education Level	High School Certificate or Lower	5	1.25
	Vocational Certificate/ Diploma/ High Vocational Certificate	9	2.25
	Bachelor's degree	226	56.36
	Master's degree	143	35.65
	Doctoral degree	18	4.49
	Others	0	0.00
	Total	401	100.00
Working experience	Less than 1 year	5	1.25
	1 - 5 years	217	54.11
	6 - 10 years	94	23.44
	More than 10 years	85	21.20
	Total	401	100.00
Average income per month at present	Less than 25,000 bath	72	17.96
	25,000 – 50,000 bath	128	31.92
	50,001 – 100,000 bath	101	25.19
	More than 100,000 bath	100	24.93
	Total	401	100.00
Working position at present	Owner	238	59.35
	Chairman/President	17	4.24
	General Manager/CEO	127	31.67
	Chief Technology Officer/ e-Commerce	18	4.49
	Others	1	0.25
	Total	401	100.00

N = 401

Table 14 presents the demographic profile of respondents that there are more female (65.59%) than male (34.41%), and the major age of respondents is in the range between 30 to 40 years old (44.49%) and the other age ranges are the group who have age less than 30 years old (26.43%), 41 years old to 50 years old (19.20%), and more than 50 years old (9.98%). The majority of respondents (56.36%) are holders of a bachelor's degree and the other educational level groups are as follows: master's degree (35.65%), the doctoral degree (4.49%), vocational certificate/diploma/high vocational certificate (2.25%), and high school certificate or lower (1.25%). The major respondents have working experiences (54.11%) between one to five years, and the other working experiences are as follows: 6 to 10 years (22.8%), more than 10 years (21.20%), and less than 1 year (13.3%). The major respondents (31.92%) have got income per month in the range between 25,000 - 50,000 bath (31.92%), while the other in the range between 50,001 - 100,000 bath (25.19), more than 100,000 bath (24.93), and fewer than 25,000 bath (17.96%). The major respondents (59.35%) own their e-Commerce businesses while other respondents work in general manager/CEO positions (31.67%), chief technology officer or e-Commerce (4.49%), chairman or president (4.24%), and others (0.25%).

Descriptive Statistics of All Constructs and Testing the Assumptions of SEM (univariate normality, correlation tests, variance inflation factors, and tolerance)

In this part, this research presents descriptive statistics of all variables and constructs. Descriptive statistics explain the characteristics of empirical data in the quantitative term. The normality test is shown to gauge skewness and kurtosis along with the standard error of skewness and kurtosis. Skewness is a measurement of how irregular the probability distribution related to a normal distribution. Kurtosis is a process to assess the integrated distribution of data in the tails and it must also operate before proving a hypothesis. In terms of absolute values, skewness is considered as highly presented if it is greater than 3.00 (Blanca et al., 2013; Cain et al., 2017). Simultaneously, the absolute values of kurtosis greater than 2.00 can be considered as problematic (Cain et al., 2017). Skewness and kurtosis values are used to verify the

univariate normality of operating agility, customer alertness agility, competitor awareness agility, strategic business relationship agility, technology turbulence, market turbulence, cloud computing flexibility, cloud computing integration, financial goal achievement, strategic goal achievement, and one moderator constructs is agile culture. The descriptive of variables and results of the normality test are thoroughly displayed in descriptive statistics part on Table 15.

Table 15 Descriptive of Variables

Constructs	Min.	Max.	Skewness	S.E.Skewness	Kurtosis	S.E.Kurtosis
OA	2.5	5	-0.676	0.122	-0.515	0.243
OA1	2	5	-0.573	0.112	-0.241	0.243
OA2	2	5	-0.556	0.112	-0.199	0.243
OA3	2	5	-0.273	0.112	-0.693	0.243
OA4	2	5	-0.462	0.112	-0.360	0.243
AA	2.5	5	-0.412	0.122	-0.712	0.243
AA1	2	5	-0.436	0.122	-0.474	0.243
AA2	2	5	-0.421	0.122	-0.547	0.243
AA3	2	5	-0.352	0.122	-0.562	0.243
AA4	2	5	-0.461	0.122	-0.540	0.243
CA	2.25	5	-0.800	0.122	-0.378	0.243
CA1	2	5	-0.538	0.122	-0.204	0.243
CA2	2	5	-0.296	0.122	-0.336	0.243
CA3	2	5	-0.566	0.122	-0.364	0.243
CA4	2	5	-0.636	0.122	-0.174	0.243
RA	2.25	5	-0.459	0.122	-0.740	0.243
RA1	2	5	-0.245	0.122	-0.994	0.243
RA2	2	5	-0.364	0.122	-0.643	0.243
RA3	2	5	-0.396	0.122	-0.587	0.243
RA4	2	5	-0.330	0.122	-0.749	0.243

N = 401

Table 15 Descriptive of Variables (Continued)

Constructs	Min.	Max.	Skewness	S.E.Skewness	Kurtosis	S.E.Kurtosis
TT	2.25	5	-0.596	0.122	-0.705	0.243
TT1	2	5	-0.431	0.122	-0.779	0.243
TT2	2	5	-0.358	0.122	-0.887	0.243
TT3	2	5	-0.315	0.122	-0.825	0.243
TT4	2	5	-0.734	0.122	-0.258	0.243
MT	2.5	5	-0.467	0.122	-0.589	0.243
MT1	2	5	-0.363	0.122	-0.774	0.243
MT2	2	5	-0.402	0.122	-0.360	0.243
MT3	2	5	-0.379	0.122	-0.567	0.243
MT4	2	5	-0.364	0.122	-0.496	0.243
CF	2.5	5	-0.397	0.122	-0.580	0.243
CF1	2	5	-0.260	0.122	-0.760	0.243
CF2	2	5	-0.329	0.122	-0.242	0.243
CF3	2	5	-0.368	0.122	-0.480	0.243
CF4	2	5	-0.433	0.122	-0.399	0.243
CI	2.5	5	-0.656	0.122	-0.620	0.243
CI1	2	5	-0.492	0.122	-0.622	0.243
CI2	2	5	-0.335	0.122	-1.000	0.243
CI3	2	5	-0.357	0.122	-0.609	0.243
CI4	2	5	-0.294	0.122	-0.756	0.243
AC	2.8	5	-0.606	0.122	-0.476	0.243
AC 1	2	5	-0.470	0.122	-0.937	0.243
AC 2	2	5	-0.400	0.122	-0.414	0.243
AC 3	2	5	-0.425	0.122	-0.850	0.243
AC 4	2	5	-0.369	0.122	-0.870	0.243
AC 5	2	5	-0.447	0.122	-0.775	0.243

N = 401

Table 15 Descriptive of Variables (Continued)

Constructs	Min.	Max.	Skewness	S.E.Skewness	Kurtosis	S.E.Kurtosis
SA	3	7	-0.616	0.122	-0.120	0.243
SA1	3	7	-0.551	0.122	-0.461	0.243
SA2	3	7	-0.614	0.122	-0.100	0.243
SA3	3	7	-0.610	0.122	-0.028	0.243
SA4	3	7	-0.409	0.122	-0.452	0.243
FA	3	7	-0.871	0.122	0.584	0.243
FA1	2	7	-0.662	0.122	0.011	0.243
FA2	3	7	-0.628	0.122	0.057	0.243
FA3	3	7	-0.795	0.122	0.160	0.243
FA4	4	7	-0.809	0.122	0.017	0.243

N = 401

From Table 15 presents descriptive statistics and shows minimum values, maximum values, skewness values, S.E. skewness values, kurtosis values, and S.E. kurtosis values of all variables in this research. The minimum value of all variables range from two to seven and the maximum value of all variables range from five to seven. To meet the underlying assumption of SEM statistical analysis that variables should have a normal distribution for reliable results of data analysis. Thus, considering skewness values in this research found that within the range of -0.871 to -0.199 which is not more than ±2 are considered within acceptable criteria and kurtosis values range -1.000 to 0.584 which is not more than ±2 is considered within acceptable criteria (Blanca et al., 2013; Cain et al., 2017).

Correlation Analysis, Variance Inflation Factors (VIF's), and Tolerance

The Pearson correlation for bivariate analysis of each variable pair is conducted in this research that correlation analysis results illustrate a multicollinearity problem and examine the relationship among variables. Thus, the correlation matrix illustrates the correlations among 11 constructs which present the relative strength and direction of a linear relationship among constructs in a correlation matrix. This research tests VIF and tolerance values which represents the proportion of variance in predictor variables that are not shared or related to the other predictor variables and a number of rules or criteria have been recommended to indicate when VIF values or tolerance values are considered to be very high to the extent that it may bias the regression results (Lavery, Acharya, Sivo, & Xu, 2019; Rogerson, 2001; York, 2012).

In addition, to confirm no multicollinearity problem, variance inflation factor (VIF), tolerance value, and condition index of constructs were examined. Results are shown in Table 16.

Table 16 Correlation Matrix of All Constructs

Constructs	OA	AA	CA	RA	TT	MT	CF	CI	AC	SA	FA
OA	1.000										
AA	.733**	1.000									
CA	.708**	.700**	1.000								
RA	.714**	.740**	.698**	1.000							
TT	.693**	.603**	.638**	.627**	1.000						
MT	.667**	.638**	.653**	.635**	.731**	1.00					
CF	.648**	.598**	.661**	.629**	.696**	.703**	1.00				
CI	.628**	.627**	.650**	.643**	.662**	.620**	.607**	1.00			
AC	.609**	.554**	.499**	.563**	.624**	.642**	.630**	.545**	1.00		
SA	.601**	.638**	.557**	.587**	.393**	.442**	.431**	.436**	.501**	1.00	
FA	.641**	.635**	.618**	.666**	.448**	.488**	.507**	.446**	.567**	.744**	1.00
VIFs	3.213	2.996	2.902	2.947	3.001	2.954	2.709	2.326	2.114	-	-
Tolerance	.311	.334	.345	.339	.333	.339	.369	.430	.473	-	-

Note: ** Correlation is significant at the .01 level (2-tailed)

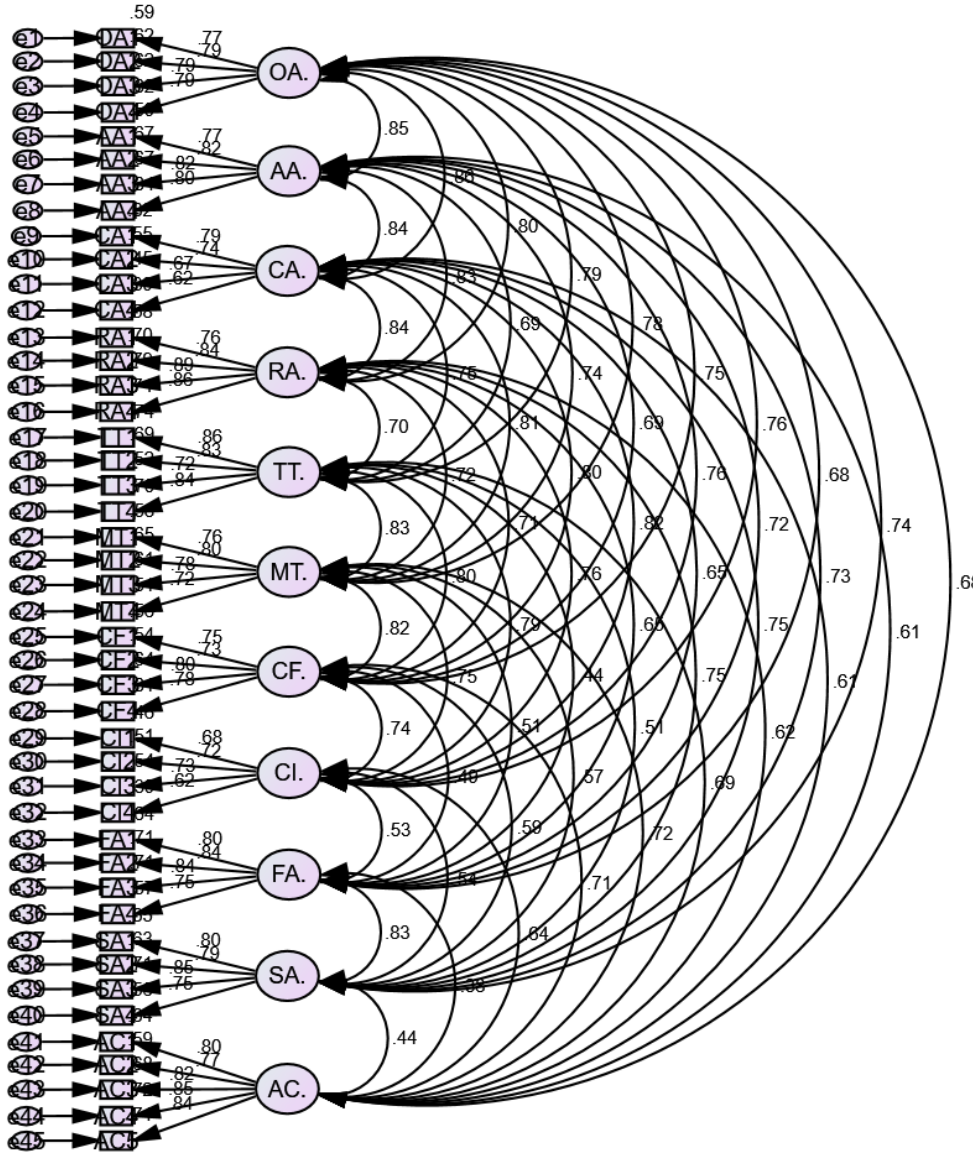
From Table 16, the bivariate correlation procedure is subject to a two-tailed test and provides the significance at the .01 level ($p < .01$). In this research, the correlation matrix displays the relationship between the two variables ($r = .393$ to .744, $p < .01$), which each pair of relations is lower than .80 (Hair et al., 2014, 2012). According to Rogerson, (2001), multicollinearity is not a problem in this research because all predictors have VIF values less than 5 and tolerance values for all predictors range from 0.425 to .837, indicating higher values than the threshold of 0.20 (Kim, 2019; Lavery et al., 2019; Rogerson, 2001).

Measurement of Model Assessment

Investigation of Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis purposed to confirm that each of the questions measured the construct as designed which demonstrated examining the validity of constructs in the research model. Moreover, CFA allows this research to investigate hypotheses that relationship among observed variables and their underlying latent factor(s) construct (s) exists. Figure 5 presents all items load highly and significantly on the constructs are designed to measure.

Figure 5 illustrates that CFA is conducted for all variables in this research and its results suggest that this measurement model fits the data well by indicating fit indices as follow: absolute fit index (χ^2/ df) equals 1.061, root mean square error of approximation (RMSEA) equals 0.012, goodness of fit index (GFI) equals 0.920, comparative fit index (CFI) equals 0.996, normed fit index (NFI) equals 0.941, incremental fit index (IFI) equals 0.996, and relative fit index (RFI) equals 0.924.



χ^2 = 812.580, DF = 766, p = .118

CMIN/DF = 1.061, GFI = 0.920, CFI = 0.996,

NFI = 0.941, IFI = 0.996, RFI = 0.924, RMSEA = 0.012

Figure 5 Confirmatory Factor Analysis

The results of the factor loading, squared multiple correlations, composite reliability, and average variance extracted (AVE) for verifying the construct validity of all variables are presented in Table 17.

Table 17 Factor Loading, Squared Multiple Correlations, Composite Reliability, and Average Variance Extracted

Item	Factor Loading			R^2	CR	AVE
	Loading	S.E.	t-value			
OA:					.870	.626
OA1	0.762	-	-	.580		
OA2	0.811	.062	16.873***	.657		
OA3	0.780	.059	16.418***	.608		
OA4	0.810	.061	16.850***	.655		
AA:					.870	.626
AA1	0.731	-	-	.534		
AA2	0.793	.055	18.960***	.628		
AA3	0.830	.068	16.373***	.689		
AA4	0.807	.067	15.894***	.651		
CA:					.786	.483
CA1	0.798	-	-	.637		
CA2	0.742	.052	16.215***	.551		
CA3	0.645	.058	13.651***	.416		
CA4	0.573	.057	11.887***	.328		
RA:					.906	.708
RA1	0.776	-	-	.602		
RA2	0.829	.057	18.682***	.687		
RA3	0.898	.061	18.583***	.807		
RA4	0.859	.060	18.319***	.739		

Note: *** significance level at 0.001

Table 17 Factor Loading, Squared Multiple Correlations, Composite Reliability, and Average Variance Extracted (Continued)

Item	Factor Loading			R^2	CR	AVE
	Loading	S.E.	t-value			
TT:					.872	.632
TT1	0.816	-	-	.665		
TT2	0.770	.042	22.237***	.592		
TT3	0.725	.057	15.933***	.525		
TT4	0.862	.061	20.028***	.743		
MT:					.854	.593
MT1	0.770	-	-	.594		
MT2	0.799	.063	16.548***	.638		
MT3	0.783	.063	16.184***	.613		
MT4	0.727	.066	14.116***	.528		
CF:					.826	.542
CF1	0.728	-	-	.529		
CF2	0.711	.062	15.898***	.506		
CF3	0.756	.074	14.225***	.572		
CF4	0.749	.077	14.021***	.561		
CI:					.790	.486
CI1	0.673	-	-	.453		
CI2	0.736	.087	12.627***	.542		
CI3	0.730	.086	12.866***	.533		
CI4	0.645	.085	11.265***	.416		
AC:					.901	.646
AC1	0.818	-	-	.670		
AC2	0.780	.051	17.883***	.608		
AC3	0.815	.051	18.842***	.664		
AC4	0.798	.052	17.845***	.636		
AC5	0.808	.053	18.528***	.625		

Note: *** significance level at 0.001

Table 17 Factor Loading, Squared Multiple Correlations, Composite Reliability, and Average Variance Extracted (Continued)

Item	Factor Loading			R^2	CR	AVE
	Loading	S.E.	t-value			
FA:					.879	.646
FA1	0.778	-	-	.605		
FA2	0.828	.052	20.008***	.686		
FA3	0.852	.061	17.809***	.726		
FA4	0.754	.063	15.401***	.569		
SA:					.898	.573
SA1	0.776	-	-	.603		
SA2	0.759	.044	18.739***	.575		
SA3	0.843	.051	17.382***	.711		
SA4	0.732	.050	14.622***	.535		

Note: *** significance level at 0.001

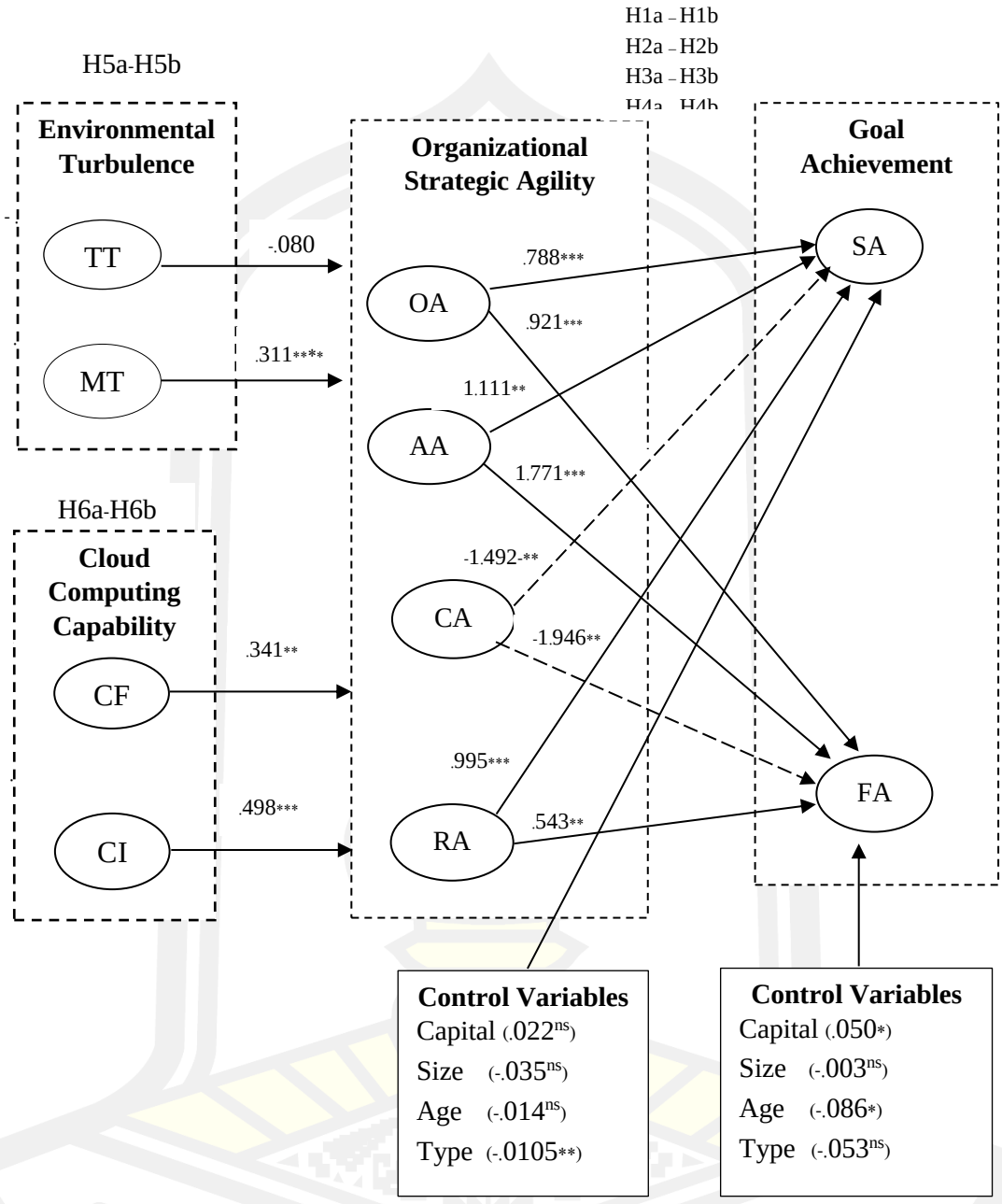
Table 17 presents all constructs that have AVE values ranging from .476 to .704 and CR values are more than 0.6 which the cut-off value of AVE 0.40 is acceptable in case the CR value is more than 0.6 (Fornell & Larcker, 1981). Thus, the construct's convergent validity is still sufficient convergent validity. Factor loadings are numerical values that indicate the strength and direction of a factor on a measured variable and results from the CFA also helped determine whether any questions should be removed and reanalyze to consider only the significant factors and Curran, West and Finch (1996) and Orcan (2018) suggest that factor loading of research items could be used to prove the content validity of the measurement model. There are factor loading for all 45 items are in the range from 0.573 to 0.898 which is a higher value than 0.40 that is acceptable (Curran, West & Finch, 1996; Orcan, 2018). Thus, results prove that the indicator adequate indicator reliability in 45 items.

The Structural Model

The structural model is the process of the second stage of the SEM following the measurement model stage. After the measurement model has presented the links between the latent variables and the observed measures by the confirmatory factor analysis (CFA) model, the structural model depicts the links among the latent variables themselves. The measurement model and the structural model are two components of the full latent variable model.

The full model means allowing for the specification of the regression structure among the latent variables. Accordingly, the researcher able to set a hypothesis in this model that indicates the effect of one latent construct on another in the modeling of causal direction. Ordinarily, the stage of estimating the model's parameter and examining the structural relationships among hypothesized constructs occurs in this stage.

Hypotheses Testing and Results of Main Effect



χ^2 = 765.512, DF = .724, p = .267 CMIN/DF = 1.032, GFI = 0.923, CFI = 0.998,

NFI = 0.940, IFI = 0.998, RFI = 0.924, TLI = 0.997, RMSEA = 0.009

Note: * is significant level at .05/ ** is significant level at .01/ *** is significant level at .001

——▶ is supported

- - - -▶ is not supported

Figure 6 The Structural Model of Main Effect

The results of the model fit evaluation of operational agility, customer alertness agility, competitor awareness agility, strategic business relationship agility, technological turbulence, market turbulence, cloud computing flexibility, and cloud computing integration based on goal achievement framework are displayed the testing goodness-of-fit indices for the structural model in Table 11. The value of CMIN/DF equals 1.032 which is lower than 2.00. The values of other goodness of fit indexes are higher than .90 (i.e., GFI = 0.923, CFI = 0.998, NFI = 0.940, IFI = 0.998, RFI = 0.924, TLI = 0.997) including RMSEA value equals 0.009 which is lower than .05. Thus, it can be proving that there is a large goodness of fit between observed data and estimated model. The summary of the relationships in the preliminary structural model with the results of parameter estimation and test of significance (p-value) is shown in Table 18.

Table 18 Standardized Structural Equation Parameter Estimates and t-value

Hypotheses	**Expected Sign**	**Standardized Coefficients (β)**	**S.E.**	**t-value**	**p-value**	**Hypotheses Results**
H1a: OA → SA	+	.788	.228	3.464***	.000	Supported
H1b: OA → FA	+	.921	.236	3.903***	.000	Supported
H2a: AA → SA	+	1.111	.404	2.746**	.006	Supported
H2b: AA → FA	+	1.771	.494	3.585***	.000	Supported
H3a: CA → SA	+	-1.492	.552	-2.704**	.007	Not Supported
H3b: CA → FA	+	-1.946	.601	-3.237**	.001	Not Supported
H4a: RA → SA	+	.995	.204	4.879***	.000	Supported
H4b: RA → FA	+	.543	.189	2.873**	.004	Supported
H5a: TT → OSA	+	-.080	.103	-.769	.442	Not Supported
H5b: MT → OSA	+	.311	.096	3.238**	.001	Supported
H6a: CF → OSA	+	.341	.114	2.998**	.003	Supported
H6b: CI → OSA	+	.498	.080	6.219***	.000	Supported

Note: OA is operational agility; AA Customer alertness agility; CA is competitor business relationship agility; RA is strategic business relationship agility, TT is technology turbulence, MT is market turbulence, CF is cloud computing flexibility, CI is cloud computing integration, FA is financial goal achievement, and SA is strategic goal achievement.

*** significance level at .001,

** significance level at .01,

* significance level at .05

From Table 18 presents examining hypotheses results of main effect of research model. The hypothesis testing is explained in detail as the following:

Hypothesis 1, operational agility is likely to contribute financial goal achievement and strategic goal achievement. Therefore, the conclusions of hypotheses are explained as follow. ***Hypothesis 1a:*** Operational agility positively influences strategic goal achievement with a standardized coefficient (β = 0.788, t-value = 3.464, and p = .000). ***Hypothesis 1b:*** Operational agility positively influences financial goal achievement with a standardized coefficient (β = 0.921, t-value = 3.903, and p = .000). *Thus, hypothesis 1 is supported.*

Hypothesis 2, customer alertness agility is likely to contribute financial goal achievement and strategic goal achievement. Therefore, the conclusions of hypotheses are explained as follow. ***Hypothesis 2a:*** Customer alertness agility positively influences strategic goal achievement with a standardized coefficient (β= 1.111, t-value = 2.746, and p = .006). ***Hypothesis 2b:*** Customer alertness agility positively influences financial goal achievement with a standardized coefficient (β = 1.771, t-value = 3.585, and p = .000). *Thus, hypothesis 2 is supported.*

Hypothesis 3, competitor awareness agility is likely to negative contribute financial goal achievement and strategic goal achievement. Therefore, the conclusions of hypotheses are explained as follow. ***Hypothesis 3a:*** Competitor awareness agility negatively influences strategic goal achievement with a standardized coefficient (β=-1.492, t-value = -2.704, and p = .007). ***Hypothesis 3b:*** Competitor awareness agility negatively influences financial goal achievement with a standardized coefficient (β = -1.946, t-value = -3.237, and p = .001). *Thus, hypothesis 3 is not supported*.

Hypothesis 4, strategic business relationship agility is likely to contribute financial goal achievement and strategic goal achievement. Therefore, the conclusions of hypotheses are explained as follow. ***Hypothesis 4a:*** Strategic business relationship agility positively influences strategic goal achievement with a standardized coefficient (β = 0.995, t-value = 4.879, and p = .000). ***Hypothesis 4b:*** Strategic business relationship agility positively influences financial goal achievement with a standardized coefficient (β = 0.543, t-value = 2.873, and p = .004). *Thus, hypothesis 4 is supported.*

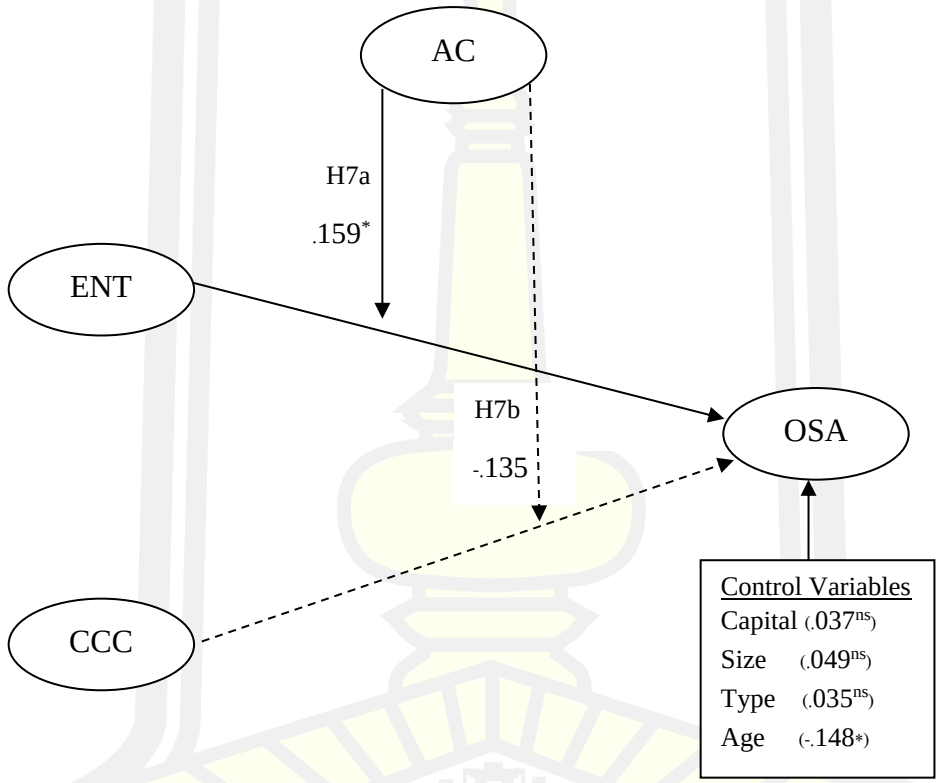
Hypothesis 5, market turbulence is likely to contribute organizational strategic agility. While technological turbulence is less likely to contribute organizational strategic agility. Therefore, the conclusions of hypotheses are explained as follow. ***Hypothesis 5a:*** Technological turbulence does not have significant positively influences on organizational strategic agility with a standardized coefficient ($\beta = -0.080$, t-value $= -0.769$, and $p = .442$). ***Hypothesis 5b:*** Market turbulence positively influences organizational strategic agility with a standardized coefficient ($\beta = 0.311$, t-value = 3.238, and $p = .001$). *Thus, hypothesis 5 is not supported.*

Hypothesis 6, cloud computing flexibility and cloud computing integration are likely to contribute organizational strategic agility. Therefore, the conclusions of hypotheses are explained as follow. ***Hypothesis 6a:*** Cloud computing flexibility positively influences organizational strategic agility with a standardized coefficient ($\beta = 0.341$, t-value = 2.998, and $p = .003$). ***Hypothesis 6b:*** Cloud computing integration positively influences organizational strategic agility with a standardized coefficient ($\beta = 0.498$, t-value = 6.219, and p = 000). *Thus, hypothesis 6 is supported.*

In addition, after presenting the main effect of this research model included: influencing of four dimensions of organizational strategic agility on two dimensions of goal achievement; influencing of two dimensions of environmental turbulence on organizational strategic agility; and influencing of two dimensions of cloud computing capability on organizational strategic agility. The next part presents the hypotheses results of moderating effect of agile culture on the relationship among organizational strategic agility and its antecedents which are environmental turbulence and cloud computing capability.

Hypotheses Testing and Results of Moderating Effect of Agile Culture on the Relationship of Organizational Strategic Agility and its Antecedents

This research has examined the moderating effect of agile culture on the relationship among organizational strategic agility (OSA), environmental turbulence (ENT), and cloud computing capability (CCC) that all moderating results are shown in Table 19 and Figures 7 as follows.



$\chi^2 = 44.713$, DF = 42, p = .359, CMIN/DF = 1.065, GFI = 0.923, CFI = 0.984, AGFI = 0.961, NFI = 0.988, IFI = 0.999, RFI = 0.974, TLI = 0.998, RMSEA = 0.013

Note: * is significant level at .05
——→ is supported
- - - -→ is not supported

Figure 7 Results of Moderating Effects of Agile Culture on the Relationship among Environmental Turbulence, Cloud Computing Capability and Organizational Strategic Agility.

Table 19 Results of Moderating Effect of Agile Culture on the Relationship among Environmental Turbulence, Cloud Computing Capability and Organizational Strategic Agility

Relationship Path	Standardized Coefficients (β)	S.E.	t-value	p-value
Main Effect				
ENT → OSA	1.424	.619	2.299*	.021
CCC → OSA	-.537	.686	-.784	.433
Interaction Effect				
ENT*AC → OSA	.159	.069	2.304*	.021
CCC*AC → OSA	-.135	.071	-1.919	.055

Note: OSA is organizational strategic agility; AC is agile culture; ENT is environmental turbulence, CCC is cloud computing capability

* is significance level at .05

From Table 19 presents examining results of two hypotheses of moderating effect of research model. One hypothesis is supported while another hypothesis is not supported, and hypothesis test is explained in detail as the following:

Hypothesis 7, agile culture is likely positively moderates the relationship among environmental turbulence, cloud computing capability, and organizational strategic agility. Therefore, the conclusions of hypotheses are explained as follows. ***Hypothesis 7a:*** The relationship between environmental turbulence and organizational strategic agility has positively moderate by agile culture with a standardized coefficient ($\beta = 0.159$, t-value = 2.304, and p = .021). ***Hypothesis 7b:*** Agile culture does not significant positively moderates the relationship between cloud computing capability and organizational strategic agility with a standardized coefficient ($\beta = -0.135$, t-value = -1.919, and p = .055). *Hypothesis 7a is supported while hypothesis 7b in not supported. Thus, hypothesis 7 is not supported.*

Summary

This chapter four presents the result analysis of research data which collect from 401 respondents in e-Commerce business in Thailand. This chapter is separated into five parts: (1) the respondent characteristics are more females (65.59%) than males and the major age of respondents is in the range between 30 to 40 years old (44.49%). Most respondents are holders of a bachelor's degree (56.36%) and they have working experiences between one to five years (54.11%). The major respondents have got income per month in the range between 25,000 - 50,000 bath (31.92%) and own their e-Commerce businesses (59.35%); (2) descriptive statistics of all constructs include Mean ($\bar{x}$), Standard Deviation (S.D.), and minimum and maximum of data; (3) this part explains the structural equation modeling analysis (SEM) into two steps: the first part represent the CFA found the absolute fit index (χ^2/df) equals 1.061, root mean square error of approximation (RMSEA) equals 0.012, goodness of fit index (GFI) equals 0.920, comparative fit index (CFI) equals 0.996, normed fit index (NFI) equals 0.941, incremental fit index (IFI) equals 0.996, and relative fit index (RFI) equals 0.924, and the structural model for hypothesis testing is displayed; (4) the assumptions of the structural equation model by univariate normality analysis and correlation analysis. Skewness and kurtosis of constructs do not exceed the criteria that present to be distribution normality and the correlation of constructs is lower than .80 which has not multicollinearity problem; (5) testing the assumptions of SEM that found the value of CMIN□DF equals 1.032 which is lower than 2.00. The values of other goodness of fit indexes are higher than .90 (i.e., GFI = 0.923, CFI = 0.998, NFI = 0.940, IFI = 0.998, RFI = 0.924, TLI = 0.997) including RMSEA value equals 0.009 which is lower than .05. Thus, it can be proving that there is a large goodness of fit between observed data and estimated model.

The hypotheses testing and results that this part describes the hypotheses testing and results into two subparts consisting of main hypotheses testing and moderating effect testing. The results of the main hypotheses testing present that hypothesis 1a-b, hypothesis 2a-b, hypothesis 4a-b, hypothesis 5b, hypothesis 6a-b are supported, while hypothesis 3a-b and hypothesis 5a are not supported. The results of the moderator effect of agility culture on the relationship of organizational strategic

agility and its antecedents found that hypothesis 7a is supported, while hypothesis 7b is not supported and Table 20 provides a summary of the results of hypotheses testing.

Table 20 Summary of Hypotheses Testing Results

Hypotheses	**Description of Hypothesized Relationships**	**Results**
H_{1a}	Operational agility positively influences strategic goal achievement.	Supported
H_{1b}	Operational agility positively influences financial goal achievement.	Supported
H_{2a}	Customer alertness agility positively influences strategic goal achievement.	Supported
H_{2b}	Customer alertness agility positively influences financial goal achievement.	Supported
H_{3a}	Competitor awareness agility positively influences strategic goal achievement.	*Not Supported*
H_{3b}	Competitor awareness agility positively influences financial goal achievement.	*Not Supported*
H_{4a}	Strategic business relationship agility positively influences strategic goal achievement.	Supported
H_{4b}	Strategic business relationship agility positively influences financial goal achievement.	Supported
H_{5a}	Technological turbulence positive influences organizational strategic agility	*Not Supported*
H_{5b}	Market turbulence positively influences organizational strategic agility	Supported
H_{6a}	Cloud computing flexibility positively influences organizational strategic agility	Supported
H_{6b}	Cloud computing integration positively influences organizational strategic agility	Supported
H_{7a}	Agile culture positively moderates the relationships between environmental turbulence and organizational strategic agility	Supported
H_{7b}	Agile culture positively moderates the relationships between cloud computing capability and organizational strategic agility	*Not Supported*

CHAPTER V

DISCUSSION AND CONCLUSION

The previous chapter displays respondent characteristics, and e-Commerce business characteristics in Thailand, descriptive statistics, test the validity of each variable, and the results of hypotheses testing. Thus, this chapter five intends to discuss based on the results of all hypotheses which are empirically tested by SEM statistics including the results of the exploration in the e-Commerce context. Additionally, the theoretical and managerial implications, limitations, and suggestions for additional research are discussed. Finally, the conclusion encompasses an overall of this research.

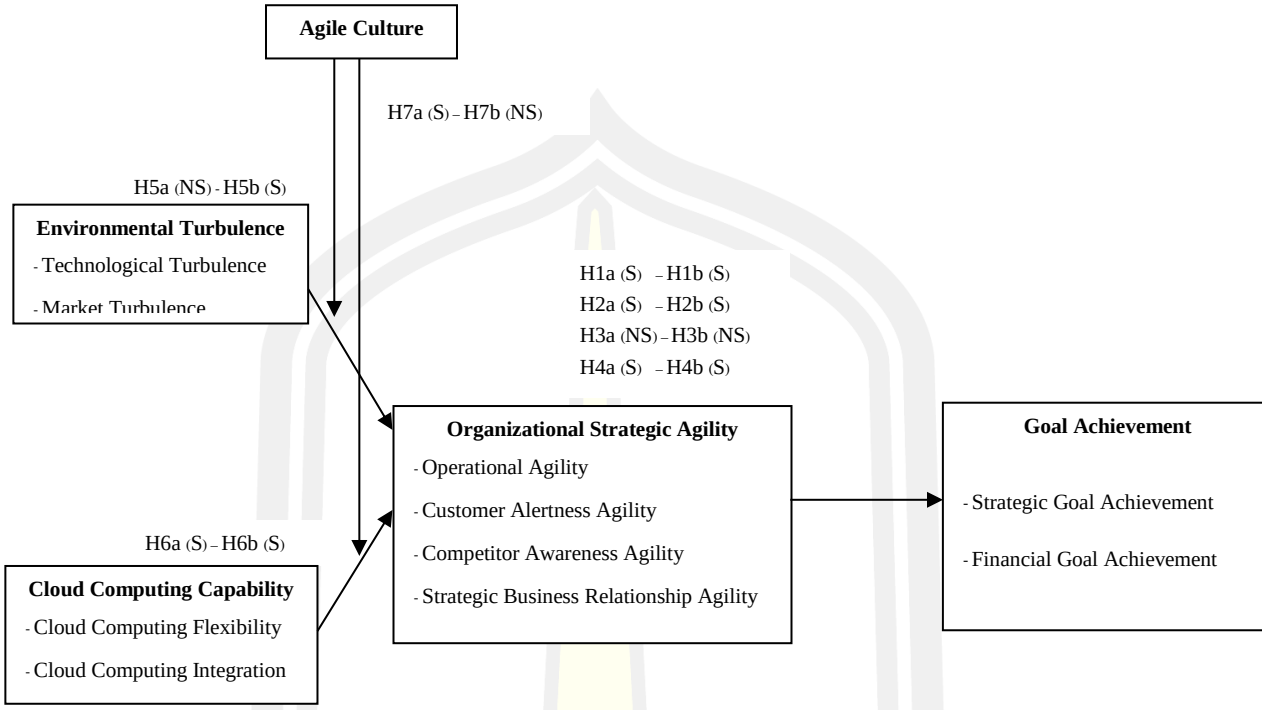
This concluding chapter consists of the influencing effect of organizational strategic agility on organizational goal achievement. Moreover, to provide more specific knowledge on external factors those also affect the way to operate organizational strategic agility. Thus, this research has investigated environmental turbulence and cloud computing capability with the lens of antecedent variables. Additionally, contributing more specific knowledge on the cultural perspective in organizational strategic agility this research also applies agile culture with the lens of moderating variable.

This research examines e-Commerce business in Thailand where it is the rising star business and the population and sample is chosen from the database of the Department of Business Development which name list displayed on the website. There are two specific research questions are as follows:

1) What impact does organizational strategic agility have on organizational goal achievement? 2) What influence does agile culture moderate the relationship between environmental turbulence, cloud computing capability, and organizational strategic agility? Both questions are being explained with the results and conclusion in table 21 and hypothesis summaries of the results are shown on figure 8

Table 21 Summary of the Results and Conclusions in All Hypothesis Testing

Research Question	Hypotheses	Results	Conclusions
1. What impact does organizational strategic agility have on organizational goal achievement?	$H_{1a} - H_{1b}$ $H_{2a} - H_{2b}$ $H_{3a} - H_{3b}$ $H_{4a} - H_{4b}$	There are three dimensions of organizational strategic agility include operational agility, customer alertness agility, competitor awareness agility, and strategic business relationship agility have a significant positive influence on financial goal achievement and strategic goal achievement. While only one dimension which is competitor awareness agility has a significant negative influence on financial goal achievement and strategic goal achievement.	Supported $H_{1a} - H_{1b}$ $H_{2a} - H_{2b}$ $H_{4a} - H_{4b}$ Not Supported ($H_{3a} - H_{3b}$)
2. What influence does agile culture moderate the relationship between environmental turbulence, cloud computing capability, and organizational strategic agility?	$H_{5a} - H_{5b}$ $H_{6a} - H_{6b}$ $H_{7a} - H_{7b}$	There are two dimensions of cloud computing capability include cloud computing flexibility, cloud computing integration have a significant positive influence on organizational strategic agility. Moreover, only one dimension of environmental turbulence which is market turbulence has a significant positive influence on organizational strategic agility while technology turbulence has no significant influence on organizational agility. Moreover, agile culture only has a significant positively moderates the relationships between environmental turbulence and organizational strategic agility. While agile culture has no significant moderates the relationships between cloud computing capability and organizational strategic agility.	Supported H_{5b} $H_{6a} - H_{6b}$ $H_{7a} - H_{7b}$ Not Supported ($H_{3a} - H_{3b}$)



Note: (S) = Supported

(NS) = Not Supported

Figure 8 The summary of Hypothesis Testing

Discussions

The Impact of Organizational Strategic Agility on Goal Achievement

Operational Agility

The results from the hypothesis testing found that operational agility has a significant positively influences on goal achievement in both strategic and financial achievement ***(H1a – H1b).*** This consistent with the research of Teece et al. (2016) and Li et al. (2020) explain that organization can allocate their resources via organizational agility to reach the goal achievement. Both academics and the research results prove that to succeed in both financial and strategic goal achievement. Moreover, this research results consistent with researches of Nurcholis (2019) and Felipe et al. (2016) in the way that operational agility help organization to make an appropriate decision and action plans to adapt and reconfigure their organizations to changing conditions in a rapid manner, also consistent with Park et al. (2017) by proving that operational agility encourages organizations to quickly integrate strategies and business plans which positively influence organizational goal setting.

Thus, this means that operational agility provides organizational capabilities for seizing the excellent unbiased decision-making of transformational capabilities, strategies, and business models. Further, e-Commerce businesses should have operational agility to shift effectively allocates capabilities and resources to react the unpredictable situation without delay.

Customer Alertness Agility

The hypothesis testing found that customer alertness agility has a significant positively influences on goal achievement in both strategic and financial achievement ***(H2a – H2b).*** This consistent with research of Hosseini et al. (2011) suggest customer alertness agility makes organizations can rapidly sense and respond to unstable customer demand. Similar to Felipe et al. (2019) recommends that in order to achieve both financial and strategic goal achievement, the organization should provide organizational strategic agility to sustain success within the dynamic business context. Yang and Liu (2012) also recommended that organizations should use customer alertness agility as a competitive strategic capability to better respond to unstable

customer demand or information consuming of customers that make satisfying for customers and lead to get more chance to sell products/ services. Additionally, this research results consistent with research of Nurcholis (2019) and Mandal (2018) by empirical examination found that customer alertness agility boosts organizations rapidly recognize, identify new market trends, changes, and novel opportunities.

Therefore, customer alertness agility provides organizations with the agile capability about sensing the opportunities and threats of their customers and markets. This signifies that organizations can prepare new market plans and forecast demand and requirements relate to updated customers' needs in time. Thus, as results prove that customer alertness agility help organizations to reach goal achievement in both the financial goal such as attaining sales growth rate and strategic goal setting such as achieve in market share.

Strategic Business Relationship Agility

The result of hypothesis testing has indicated that strategic business relationship agility has a significant positively influences on goal achievement in both strategic and financial goal achievement ***(H4a - H4b).*** These results are consistent with Nurcholis (2019) and Liu et al. (2016) who suggested that organizations should use the business relationship as a strategy to take advantage such as sharing knowledge or customer information to increase competitive advantage in both financial and strategic goal achievement. The recommendation resembles Vagnoni and Khoddami (2016) whose recommended businesses should use their relationship with others to create multiple channels for resource assessment to contribute their organizational capability. Moreover, this research results also consistent with Altay et al. (2018) by proving that business relationship agility is the key agile capability of organizations to reach their overall performance and goal setting. Especially, Kim et al. (2008) suggest that the e-Commerce business context should concern stakeholders' relationship as the key success factor to support competitive opportunities.

Thus, this research results prove that strategic business relationship agility supports organizations able to utilize their partnerships' capability and resources for supporting organizations to reach their goal achievement in financial and strategic goal setting.

Competitor Awareness Agility

According to the high rise of development in technology for operating a new business that makes organizations cannot avoid hyper-competition in the market (Crick et al., 2020). Thus, most academics and practitioners recommend organizations provide competitive awareness agility to rapidly sense and respond to competitors' activities (Lim, 2013; Reddy & Reddy, 2002).

The results from the hypothesis testing in this research found that competitive awareness agility has a significant negative influence on organizational goal achievement in both strategic and financial goal achievement ***(H3a – H3b)***. This research results have shown an inverse variation of the relationship between competitor awareness agility and organizational strategic agility which conversely opposite Yang and Liu (2012) found organizations that respond immediately to the action of their competitors will rise ability to unpredictable competition in the market.

However, most of the organizational strategic agility research has chosen developed countries in the mature state of the market that may cause this research in a developing country (early stage of e-Commerce business) results to appear different from the previous literature. To win over competitors in the e-Commerce industry, many e-Commerce in early-stage high-momentum organizations focus on discounting, budget-conscious shopping, and distributions. Hence, those organizations need to invest huge money for their discounting promotions and access to all possible e-Marketplace and social media in the customer shopping journey that attracts customers and keeps customers spending habits for shopping that make other competitors are difficult to insert. Additionally, more evidence from this research is those control variables such as the capital of the organization have a significant positive influence on strategic goal achievement which proves that organizations still spend money for fighting with their competitors. However, this research results provide some good news to new organizations or have limited capital to spend also have others way around. The result found that organizational age negative influence on strategic goal achievement, and organizational type also negative influence on financial goal achievement. Hence, those organizations also have a chance to succeed with little money in both strategic and financial goal achievement if they can provide sufficiency agile capabilities in operation, customer, and business relations. Thus, the inverse

variation phenomena might happen when organizations wanted to win over competitors by burning their money strategically. This consistent with Haryanti and Subriadi (2021) explain money burning phenomena are causes of decreasing financial performance and strategic goals still not succeed until they win over competition.

Moreover, this research found that the positive influences of organizational capital, and the negative influence of organizational age on strategic goal achievement. These two factors might cause the capability of the competitive awareness agility to play a negative role in strategic goal achievement. Especially, in the time of the Covid-19 pandemic, shutting down economic and social activities placed a financial burden on all sectors and this crisis is also likely to have long-lasting effects on e-Commerce to the old businesses in small and medium-size more than large businesses. Thus, the negative influence of competitive agility on organizational goals achievement can happen in this research because more than half of respondents are small and medium-sized businesses. This is consistent with Corredera-Catalán, di Pietro and Trujillo-Ponce (2021) which indicated that small and medium-sized businesses have been hit harder by the COVID-19 crisis than larger businesses, and that the financial difficulties have a consequence of different factors such as low capital diversification, low levels of capitalization (more sensitive to market volatility), unclear financial statements insufficient management capacity.

In addition, this research uses the dynamic capability theory as the lens to form organizational strategic agility which may have a contingent effect on dynamic capabilities and organizational performance (Schilke, 2014; Wilden, Gudergan, Nielsen, & Lings, 2013) that results in competitor awareness agility has a different effect from most prior researches.

The Relationship among Organizational Strategic Agility, Environmental Turbulence, and Cloud Computing Capability

Environmental Turbulence

The results from the hypothesis testing found that technological turbulence has no significant positive influence on organizational strategic agility ***(H5a)*** while market turbulence has a significant positive influence on organizational strategic agility ***(H5b).***

Although technological turbulence has no significant impact on organizational strategic agility but the meta-analysis research of Karna, Richter and Riesenkampff (2016) indicates that the technology and market associate with organizations where need to provide organizational strategic agility for sensing and seizing the unpredictable business environment. This research result of technology turbulence contradicts the previous finding from Jones and Knoppen (2018) indicate that organizational strategic agility is more important in environmental turbulence. Moreover, this research results contradict the research of Coreynen et al. (2020) indicates technological turbulence is positively associated with an organization's level of strategic capabilities.

The main reason for the different findings is that this research is investigated e-Commerce businesses in developing countries (Thailand) where technology turbulence does not rapidly change. Additionally, Zhou et al. (2019) explain that not all e-Commerce businesses in developing countries can convert the benefit of technology turbulence to be the opportunity for creating organizational strategic agility.

Cloud Computing Capability

The results from the hypothesis testing found that two dimensions of cloud computing capability include cloud computing flexibility and cloud computing integration have significant positive influences organizational strategic agility ***(H6a – H6b).*** These results are consistent with the research of Liu et al. (2016) who indicate that organizational strategic agility is encouraged effectively by the capabilities of cloud computing flexibility and cloud computing integration. Similar to the research of Khayer et al. (2020) who point out the key role of cloud computing capability to create organizational strategic agility which helps organizations to be able to cope with the greater instantaneous volatility or easier integrating applications with their own organizational operation.

In conclusion, this research result means that cloud computing flexibility and cloud computing integration represent the key role to influence organizations perform organizational strategic agility to sense and respond to the unpredictable business environment and unstable customers' product preferences.

The Moderator Effect of Agile Culture on the Relationship of Organizational Strategic Agility and its Antecedents

Agile Culture on the Relationship of Organizational Strategic Agility and Environmental Turbulence

The results from the hypothesis testing found that agile culture has a significant positively moderates the relationship between environmental turbulence and organizational strategic agility ***(H7a).*** Consistent with Taherdangkoo et al. (2019) who uses contingency theory as the lens indicate that organizations should build their own culture to match management styles which this research result proves that agile culture is matched with the agile organization. Moreover, this research result also consistent with Caligiuri and Tarique (2016) points out that agile culture makes the organizational climate motivate employees to keep proactive and concentrated in working. Gunsberg et al. (2018) also point out the challenge of hyper- competitive in the business environment that makes a huge number of organizations to be more agile.

Thus, organizations demand a suitable culture for encouraging their employees to keep continuously rapidly proactive behavior that also contributes to organizations have more agile capabilities. This research results prove that agile culture makes the gravity with invisible supporting to make organization becoming more agility.

Agile Culture on the Relationship of Organization and Cloud Computing Capability

On the other hand, the results from the hypothesis testing found that agile culture has no significant positively moderates the relationship between cloud computing capability and organizational strategic agility ***(H7b).*** The finding of the moderating role of agile culture shows that these research results contradict previous research from Gunsberg et al. (2018) and Sanatigar et al. (2017) who recommend organizations should build agile culture as a tool to harmonized and lead employees' attitude to be agility in mind. Additionally, Caligiuri and Tarique (2016) imply that being agile; organizations should conduct an agile culture to encourage organizations to effectively conduct their organizational strategic agility.

However, according to the research of Appelbaum et al. (2017b) indicate that implementing agility leads to large changes at all organizational levels because agility approaches tend to be people-centric which is not only leaders' transition-driven, but every employee needs to understand the reason behind it. Changing towards the agile organization by applying agile culture can be stimulated by developing supportive infrastructure, shaping group norms through new incentives, changing the context to change the habits, and relaxing or removing old rules and controls, ensuring organizational leaders demonstrate relevant cultural attributes, and encouraging employees to care intensely about strategic agility objective (Carvalho et al., 2019; Metwally, Palomino, Metwally & Gartzia, 2019).

Thus, the finding of this research prove that agile culture does not significantly positively moderate the relationship between cloud computing capability and organizational strategic agility which illustrated that applying agile culture is not always easy. There are several reasons behind the evidence such as Appelbaum et al. (2017b) and Metwally et al. (2019) indicate that organizations will work harder to applying agility if their employees face too much pressure and they are not ready to change. Moreover, changing from old cultural or environmental surroundings should take time, descript good reasons for changing, and organizations should recognize what degree of change is possible (Carvalho at al., 2019). It can be seen from organizational age in this research which negative influence on organizational strategic agility that means organizations with a long history should take a long time to transit from their ole culture to be agile organizations.

Theoretical and Managerial Contribution

Theoretical Contribution

This research has been improving the challenge of the agility literature by the lenses of dynamic capability and contingency theories to investigating the influence of organizational strategic agility on organizational goal achievement with antecedent variables, and moderating effects as present in Figure 1. This organizational strategic agility is firstly examined in order to clarify into its concept which will be useful for

further research. The following are some theoretical additions to the literature on organizational agility that this research suggests:

Firstly, the novel fundamental theoretical contribution is to conceptualize organizational strategic agility as a multidimensional construct with the lens of dynamic capability theory allows this research to create organizational strategic agility as the key dynamic capability with the new four dimensions include including (1) operational agility, (2) customer alertness agility, (3) competitor awareness agility, and (4) strategic business relationship agility. All four dimensions cover an organization's main strategic agilities, such as measuring and tracking overall organizational capabilities for strategic objectives and action plans, allocating internal and external resources, supporting good decision-making, setting performance targets, and rewarding results in both financial and strategic goal achievement. Based on the dynamic capability theory, which states that the organization's goals are dependent on organizational strategic agility capabilities, the empirical evidence of this research confirms that the four dimensions of organizational strategic agility are important organizational capabilities that enhance organizational success.

Secondly, the empirical evidence of this research provides alternative finding of competitive awareness agility which this capability results in a negative influence on both strategic and financial goal achievement of organizations. This inverse variation contributes to the dynamic capability theory by explaining more detail on dynamic capability can have a different effect on organizational performance from most prior research in agility literature and in e-Commerce business contexts.

Thirdly, the findings indicated that cloud computing competence is a necessary antecedent via the usage of cloud computing capability, based on a dynamic capability view. Organizations may quickly adapt advanced technology to fit business operations by forming immediate connections with business partners via a fast deployment approach, and combining, recombining, and creating new business processes. Cloud computing capability also enables organizations to quickly reconfigure and integrate core operations processes, business networks, and relationships in previously impractical ways, allowing them to respond to changing market and customer information and build value chain collaboration with customers and partners.

Fourthly, this research extends the contingency theory by utilizing the contingency lens to apply the agile culture in the moderating role on the relationship among environmental turbulence, cloud computing capability, and organizational strategic agility. The contingent role of an agile culture is context-dependent, not all organizations can succeed in applying agile culture. There are some conditions that organizations need to concern such as the timing of transition-driven, the degree of change, and the capability to align organizational structure. The results from developing countries (Thailand) which contradicts prior major research from other continents. The results prove that agile culture plays the contingent role which has a positive role in the relationship between environmental turbulence and organizational strategic agility while agile culture cannot play a moderating role in the relationship between cloud computing capability and organizational strategic agility.

Managerial Contributions

This research provides the managerial contributions approach to be productive for e-Commerce businesses or any organizations where interesting to apply agile capabilities for their organizations as follows:

Firstly, this research highlights the importance of organizational strategic agility in today's unpredictable business environment. By strengthening organizational strategic agility, the organization could respond better to a dynamic business environment. Managers could synergize all detected information to further understand the unpredictable in customers' needs or preferences, environmental turbulences, and utilizing cloud computing from providers outside their organizations. Managers can utilize the operational agility is the capability to build the continuous operation that leads an organization seizing excellent decision-making to implement or transform the organizational operation via rapid timing. This operational agility allows the organization to excellent integrates the necessary capability to encourage organizations to succeed in organizational goal achievement. Organizations can create strategic business relationship agility by making a network with partnerships, collect information, and exploit partnership resources to support their own organization.

Secondly, managers or marketing managers can apply customer alertness agility is the capability that makes organizations can sense customers' needs then respond to customers at the desired timing. By this customer alertness agility, organizations cloud rapidly recognizes the market changes and identifies opportunities in market trends. Organizations should be carefully critical thinking when need to apply competitive awareness agility. The risk has come from various businesses' contexts and competitive strategy which depend on each organization. This research shows that competitor awareness agility makes a negative influence on both financial and strategic goal achievement in e-Commerce business context in Thailand.

Thirdly, Managers or technology directors should be concerned about the rapid deployment of advanced technology architecture in cloud computing. This capability of using cloud computing can free an organization's strategic agility to modify and develop new technology applications to accommodate organizational activities requirements. Organizations could build cloud computing capability by making the organization's IT architecture to be able to cope with the greater instantaneous volatility with highly scalable. Moreover, organizations should integrate cloud computing in all business processes that support organizations could retrieve data and share data at any time. However, managers can create an agile culture with concerning open-minded and accepting of employees' diversity in order to accommodate the usage of cloud computing technology in the rapid market environment.

Fourthly, this research conducts at the e-Commerce market, which has grown to over 13,000 enterprises and generates a significant amount of revenue. As a result, e- Commerce companies must be able to quickly adapt and change in reaction to constantly changing external conditions, and organizational strategic agility is regarded as one of the most important competencies for long-term success and growth.

Fifthly, during the COVID-19 pandemic, the government has a crucial role in the development and consolidation of mutual guarantee systems and providing loan systems for businesses when needed. Credit guarantee schemes have become an important instrument of choice for policymakers to increase access to lending, especially for constrained groups such as small and medium-sized businesses.

Lastly, scholars or research directors of each organization can utilize questionnaires from this research to conduct future research. This research provides several items to create questionnaires that cover a wider variety of information for an operational definition and increase validity and reliability. From the definition and previous literature, 11 variables are derived, including technology turbulence, market turbulence, cloud computing flexibility, cloud computing integration, operational agility, customer alertness agility, competitor awareness agility, strategic business relationship agility, agile culture, strategic goal achievement, and financial goal achievement.

Limitations and Future Research Directions

This research has some limitations as follows:

Firstly, this research conducted during the COVID-19 pandemic which affected to return rate of questionnaires. Many respondents refuse to answer the traditional paper questionnaires but prefer QR codes or e-Mails. Moreover, Thai government regulates rules or policies such as shut down in some areas that make organizations need to close and move to other locations which causes researchers not to communicate with them.

Secondly, a cross-sectional study is the research design of this research. Even though findings are matching with theoretical logic, the research design is unable to declare the causal relationships determined in the hypotheses. Future research can apply this issue in the longitudinal design.

Thirdly, there are some constructs that results not support but it still shown the interesting point to investigate in future research can finding clear answers such as competitor awareness agility, and agile culture.

Fourthly, the data were examined a population as e-Commerce in Thailand. Thus, future research can test the research model in other contexts of organizations, including can target different cultural or country contexts to validate the results of a broader spectrum of cultures.

Summary

This chapter explains the conclusions, discussion, theoretical and managerial contribution, limitations, and future research directions. The results of the influencing of organizational strategic agility on organizational goal achievement framework are discussed. Theoretical and managerial contributions for academics and practitioners in agile literature and e-Commerce businesses are revealed. Finally, the research recognizes the limitations of the research and suggests different issues in competitive awareness agility on organizational goal achievement. Future research may should different populations to compare with the current research that increases credibility and verify the generalization ability of this research.

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APPENDIX

APPENDIX A

Cover Letter and Questionnaire: English Version

Questionnaire for the Ph.D. Dissertation Research entitled

"Organizational Strategic Agility and Goal Achievement: An Empirical Study in Thailand"

Directions

This research is a part of the doctoral dissertation of Ms. Sunanvadee Palasak at the Mahasarakham Business School, Mahasarakham University, Thailand. The objective of this research is to investigate the relationships between organizational strategic agility and organizational goal achievement of Thai e-Commerce.

Your answer will be kept as confidentiality, and your information will not be shared with any outside party without your permission. If you have any questions with respect to this research, please contact me directly.

If you want a summary of this research, please indicate your e-mail address or attach your business card with this questionnaire. The summary will be sent to you as soon as the analysis is completed.

Do you want a summary of the results?

( ) Yes e-mail _____

( ) No -

Thank you for your time answering all questions. I hope that your answer will provide the valuable information for my dissertation.

Sincerely yours,

(Ms. Sunanvadee Palasak)
Ph.D. Student, Mahasarakham Business School
Mahasarakham University, Thailand

Contact Info:

Mobile phone: 088-086-4092

e-mail: Sunanvadeeph.d@gmail.com

Part 1 Demographic data of the manager or owner of e-Commerce

1. Gender
   - ❑ Male
   - ❑ Female
2. Age
   - ❑ Less than 30 years old
   - ❑ 30 – 40 years old
   - ❑ 41 – 50 years old
   - ❑ More than 50 years old
3. Educational background
   - ❑ High School Certificate or lower
   - ❑ Vocational Certificate / Diploma/High Vocational Certificate
   - ❑ Bachelor's degree
   - ❑ Master's degrees
   - ❑ Doctoral Degrees
   - ❑ Other (Please specify)……
4. Working experiences
   - ❑ Less than 1 year
   - ❑ 1- 5 years
   - ❑ 6 -10 years
   - ❑ More than 10 years
5. Average income per month at present
   - ❑ Less than 25,000 baht
   - ❑ 25,000 - 50,000 baht
   - ❑ 50,001 - 100,000 baht
   - ❑ More than 100,000 baht
6. Working position at present
   - ❑ Owner
   - ❑ Chief Executive Officer/ Managing Director/ General Manager
   - ❑ Other (Please specify)……

Part 2 General data about e-Commerce in Thailand

1. Type of the business
   - ❑ Ordinary person
   - ❑ Limited partnership
   - ❑ Company limited
   - ❑ Public limited company
   - ❑ Other (Please specify)……
2. Number of employees in the business…… employees
   (Included full time, temporary, and administrative employees)

3. Type of e-Commerce (can choose more than 1 item as appropriate)
   - ❑ Business to Customer (B2C)
   - ❑ Business to Business (B2B)
   - ❑ Business to Government (B2G)
   - ❑ other (Please specify)……
4. Type of e-Commerce by objective (can choose more than 1 item as appropriate)
   - ❑ Wholesale
   - ❑ Retail
   - ❑ e-Commerce Solution Providers
     - ❑ Web Hosting
     - ❑ Domain name
     - ❑ e-Marketplace
   - ❑ Other (Please specify)……
5. The period of time in operating business
   - ❑ Less than 1 year
   - ❑ 1- 5 years
   - ❑ 6 -10 years
   - ❑ More than 10 years
6. Authorized capital
   - ❑ Less than 500,000 baht
   - ❑ 500,000 – 1,000,000 baht
   - ❑ 1,000,001 – 10,000,000,000 baht
   - ❑ More than 10,000,000,000 baht
7. The total assets of the firm
   - ❑ Less than 1,000,000 baht
   - ❑ 1,000,000 – 25,000,000 baht
   - ❑ 25,000,001 – 50,000,000 baht
   - ❑ 50,000,001 – 75,000,000 baht
   - ❑ 75,000,001 – 100,000,000 baht
   - ❑ More than 100,000,000 baht
8. Average revenues per year (baht)
   - ❑ Less than 1,000,000 baht
   - ❑ 1,000,000 – 25,000,000 baht
   - ❑ 25,000,001 – 50,000,000 baht
   - ❑ 50,000,001 – 75,000,000 baht
   - ❑ 75,000,001 – 100,000,000 baht
   - ❑ More than 100,000,000 baht

<u>Section 3</u> Opinions in organizational strategic agility

Organizational Strategic Agility	Opinion Levels				
	Strongly Agree **5**	**Agree** **4**	**Not Sure** **3**	**Disagree** **2**	**Strongly Disagree** **1**
Operational Agility (OA)					
1. Organization can analyze data for decision making appropriately without delay.	5	4	3	2	1
2. Organization can quickly adjust plans to respond to uncertain situations.	5	4	3	2	1
3. When an organization faces unexpected changes that organization can modify plans and work processes in a timely manner.	5	4	3	2	1
4. When an organization faces necessary needs that organization can scale down or scale up production and service quickly, flexibly.	5	4	3	2	1
Customer Alertness Agility (AA)					
5. Organization has rapidly recognizing markets changes.	5	4	3	2	1
6. Organization can identify new market trends/opportunities.	5	4	3	2	1
7. Organization prepares future plans and demand forecasts related to its customers.	5	4	3	2	1
8. Organization has the capability to fit time and way of distribution to customers' expectations.	5	4	3	2	1
Competitor Awareness Agility (CA)					
9. Organization quickly perceives market changes.	5	4	3	2	1
10. Organization can analyze, assess trends, and new marketing opportunities.	5	4	3	2	1
11. Organization has forecasts and plans to meet the needs of customers in order to plan the organization's future operations.	5	4	3	2	1
12. Organization has abilities to adjust when and how products and services are delivered to meet customer expectations.	5	4	3	2	1

Organizational Strategic Agility	Opinion Levels				
	Strongly Agree 5	**Agree 4**	**Not Sure 3**	**Disagree 2**	**Strongly Disagree 1**
Strategic Business Relationship Agility (RA)					
13. Organization can quickly establish new networks with commercial partners to support strategies.	5	4	3	2	1
14. Organization can quickly collect information of customer and suppliers from partners.	5	4	3	2	1
15. Organization can take advantage of partner resources such as databases of vendors or knowledge passed on from partners, etc.	5	4	3	2	1
16. Organization can exploit partners' capabilities to increase the production capacity of goods and services for being quality, cost effectiveness and efficiency.	5	4	3	2	1

Section 4 Opinions in Factors that Influence to Organizational Strategic Agility

Factors that Influence to Organizational Strategic Agility	Opinion Levels				
	Strongly Agree 5	**Agree 4**	**Not Sure 3**	**Disagree 2**	**Strongly Disagree 1**
Environmental Turbulence (ENT)					
Technological Turbulence (TT)					
17. Technology in the e-Commerce industry is changing rapidly that forces organizations to adapt rapidly.	5	4	3	2	1
18. Technological changes provide opportunities for the development in the e-Commerce industry.	5	4	3	2	1
19. Anticipating future trends in the e-Commerce industry have more trouble and complicated.	5	4	3	2	1
20. Organization has an idea/concept to develop a lot of new products or services due to technological advancements in the electronic commerce industry.	5	4	3	2	1

Factors that Influence to Organizational Strategic Agility	Opinion Levels				
	Strongly Agree 5	**Agree 4**	**Not Sure 3**	**Disagree 2**	**Strongly Disagree 1**
Market Turbulence (MT)					
21. Demand of customers in the electronic commerce market is changing rapidly.	5	4	3	2	1
22. Anything that one competitor offers to customers, other competitors can match those same offering readily.	5	4	3	2	1
23. Laws, regulations, customs, or marketing competition strategies of e-Commerce businesses are changing all the time.	5	4	3	2	1
24. Competitors who use services to buy - sell products and services through the website or e-Marketplace is increasing.	5	4	3	2	1
Cloud Computing Capability (CCC)					
Cloud Computing Flexibility (CF)					
25. Cloud computing such as e-mail, Google Drive, Dropbox, Line, Facebook, Microsoft Office 365, Amazon Web Services, or Alibaba Cloud enable enterprise's IT architecture to be able to cope with the greater instantaneous volatility.	5	4	3	2	1
26. Cloud computing provides a highly flexible of using IT architecture and growing business model for organizations.	5	4	3	2	1
27. Cloud computing enables organization's IT architecture to support new business relationships more easily and comfort.	5	4	3	2	1
28. Cloud computing enables organization's IT architecture to accommodate changes in business quickly.	5	4	3	2	1
Cloud Computing Integration (CI)					
29. Cloud computing enable organizations can quickly access and retrieve data for operational planning.	5	4	3	2	1
30. Cloud computing such as e-mail, Google Drive, Dropbox, Line, Facebook, Microsoft Office 365, Amazon Web Services, or Alibaba Cloud help organization's employees more easily and comfort to share information with colleagues in organization or related partners.	5	4	3	2	1

Factors that Influence to Organizational Strategic Agility	Opinion Levels				
	Strongly Agree 5	**Agree 4**	**Not Sure 3**	**Disagree 2**	**Strongly Disagree 1**
31. Cloud computing such as Line, Google Drive, Microsoft Office 365, Google Workspace, or Microsoft Azure help organizations to integrate applications more easily with other systems.	5	4	3	2	1
32. Cloud computing such as hardware, software in processing, data storage and various online systems via the internet support organizational activities seamlessly.	5	4	3	2	1
Agile Culture (AC)					
33. The organization encourages teamwork and personnel participation in keeping up with operation.	5	4	3	2	1
34. Organization giving respect to and accepting opinions and differences of employees at all levels.	5	4	3	2	1
35. Organization is constantly supporting the discovery, concept testing, and new ideas of working methods.	5	4	3	2	1
36. Organization recognizes and encourages the competency development of employees as regularly.	5	4	3	2	1
37. Organization encourages all personnel to be active and ready to adapt to changes, also provides channels for employees at all levels to express their opinions on organizational policies and decision making.	5	4	3	2	1

Section 5 Opinions in Goal Achievement

Goal Achievement	Opinion Levels				
	Strongly Agree 5	**Agree 4**	**Not Sure 3**	**Disagree 2**	**Strongly Disagree 1**
Financial Goal Achievement (FA)					
38. Organization has increased profits according to the goal setting.	5	4	3	2	1
39. Organization succeeds to increase more revenues.	5	4	3	2	1
40. Organization attains sales growth rate according to plan setting.	5	4	3	2	1
41. Organization prospers in the reduction of lost sales.	5	4	3	2	1
Strategic Goal Achievement (SA)					
42. Organization has market share according to plan setting.	5	4	3	2	1
43. Organization has a unique identity over competitors which giving a competitive advantage.	5	4	3	2	1
44. Organization is recognized and trusted by stakeholders of its organization.	5	4	3	2	1
45. Organization has a management that is recognized for its excellent quality.	5	4	3	2	1

Section 6: Recommendation and suggestions in organizational strategic agility and others

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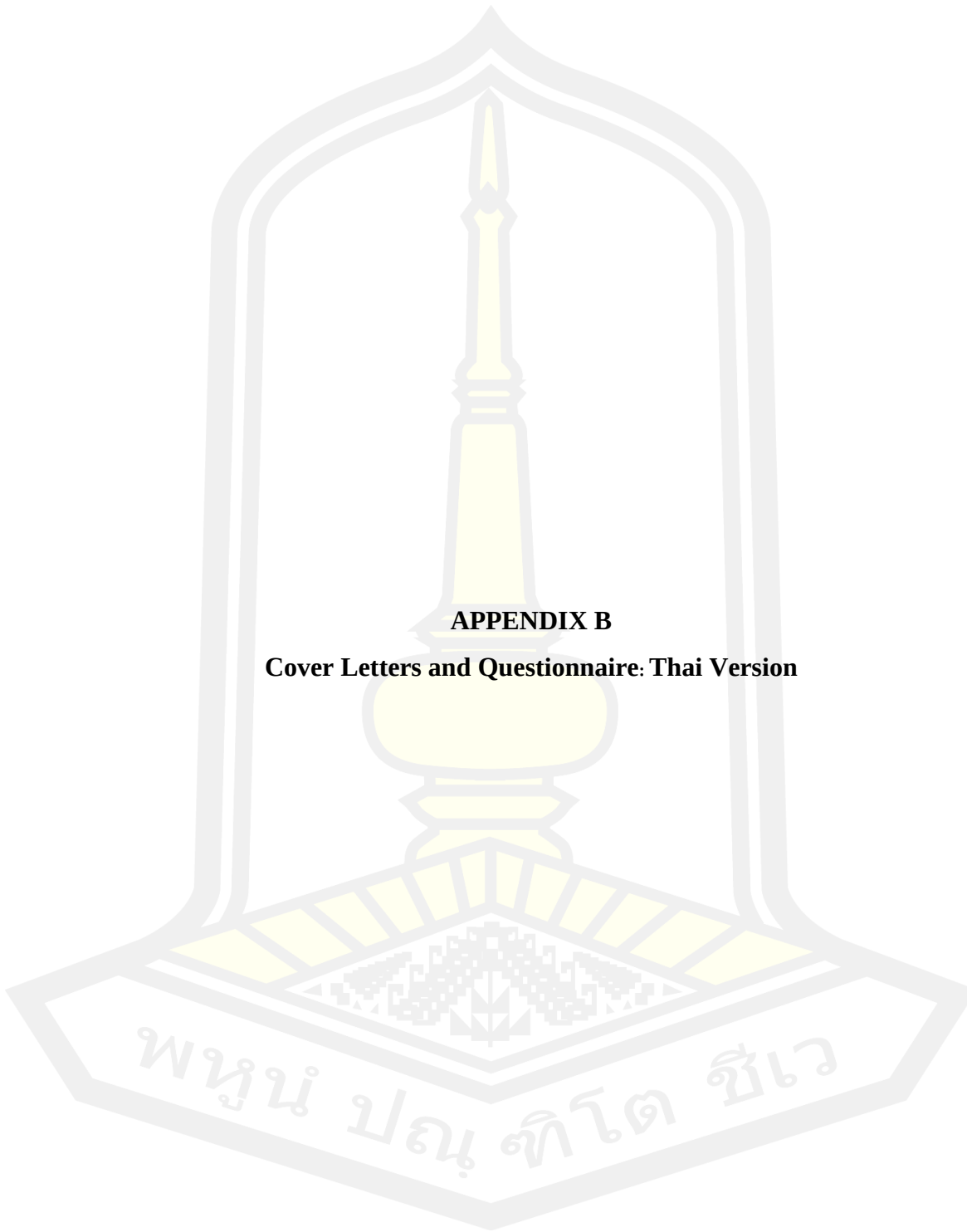
Thank you very much for taking time to complete this questionnaire. Please fold the questionnaire, enclose it in the envelope provided, and return to the specific address.



APPENDIX B

Cover Letters and Questionnaire: Thai Version

ที่ อว 0605.10/ ๑๙

คณะการบัญชีและการจัดการ
มหาวิทยาลัยมหาสารคาม
ตำบลขามเรียง อำเภอกันทรวิชัย
จังหวัดมหาสารคาม
44150

๖ มกราคม 2564

เรื่อง ขอความอนุเคราะห์กรอกแบบสอบถาม

เรียน ประธานเจ้าหน้าที่บริหาร/กรรมการผู้จัดการ/ผู้จัดการทั่วไป/ผู้จัดการการตลาด/
ผู้จัดการสายงานเทคโนโลยีสารสนเทศ

ด้วย นางสาวสุนันวดี พละศักดิ์ รหัสนิสิต 600109161005 นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด) สาขาวิชาการจัดการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย : การศึกษาเชิงประจักษ์ในประเทศ" ซึ่งเป็นส่วนหนึ่งของการทำวิทยานิพนธ์หลักสูตรปรัชญาดุษฎีบัณฑิตและการศึกษาในครั้งนี้ ดังนั้น เพื่อให้การจัดทำวิทยานิพนธ์เป็นไปด้วยความเรียบร้อยและบรรลุวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ให้ นางสาวสุนันวดี พละศักดิ์ ศึกษาและเก็บรวบรวมในรายละเอียดตามแบบสอบถามที่แนบมาพร้อมนี้

คณะฯ หวังเป็นอย่างยิ่งว่า คงจะได้รับความอนุเคราะห์จากท่านด้วยดี และขอขอบคุณมา ณ โอกาสนี้

ขอแสดงความนับถือ

(อาจารย์ ดร.ชลธิชา ธรรมวิญญ)
คณบดีคณะการบัญชีและการจัดการ
มหาวิทยาลัยมหาสารคาม

ฝ่ายวิชาการและประกันคุณภาพระดับบัณฑิตศึกษา
คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม
โทรศัพท์ 0-4375-4333 ต่อ 5630
โทรสาร 0-4375-4422

แบบสอบถามเพื่อการวิจัย

เรื่อง ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย:

การศึกษาเชิงประจักษ์ในประเทศไทย

คำชี้แจง

การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาเรื่อง “ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย” เพื่อใช้เป็นข้อมูลในการจัดทำวิทยานิพนธ์ในระดับปริญญาเอกของผู้วิจัยในหลักสูตรปรัชญาดุษฎีบัณฑิต สาขาวิชาการจัดการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม โทรศัพท์ 043-754333

ข้าพเจ้าใครขอความอนุเคราะห์จากท่านผู้ตอบแบบสอบถามโปรดตอบแบบสอบถามชุดนี้และกรุณาพับใส่ซองจดหมายติดแสตมป์ที่แนบมานี้ส่งคืนตามที่อยู่ที่ระบุไว้ของผู้วิจัย โดยรายละเอียดของแบบสอบถามประกอบด้วยส่วนคำถาม 6 ตอน ดังนี้

ตอนที่ 1 ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

ตอนที่ 2 ข้อมูลทั่วไปของธุรกิจพาณิชย์อิเล็กทรอนิกส์

ตอนที่ 3 ความคิดเห็นเกี่ยวกับความคล่องตัวเชิงกลยุทธ์ขององค์กร

ตอนที่ 4 ความคิดเห็นเกี่ยวกับความสำเร็จตามเป้าหมายขององค์กร

ตอนที่ 5 ความคิดเห็นเกี่ยวกับปัจจัยที่ส่งผลต่อความคล่องตัวเชิงกลยุทธ์ขององค์กร

ตอนที่ 6 ข้อคิดเห็นและข้อเสนอแนะ

คำตอบของท่านจะถูกเก็บรักษาเป็นความลับและจะไม่มีการใช้ข้อมูลใดๆ ที่เปิดเผยเกี่ยวกับตัวท่านในการรายงานข้อมูล รวมทั้งจะไม่มีการร่วมใช้ข้อมูลดังกล่าวกับบุคคลภายนอกอื่นใดโดยไม่ได้รับอนุญาตจากท่าน

อนึ่งหากท่านมีข้อสงสัยประการใดเกี่ยวกับแบบสอบถามโปรดติดต่อผู้วิจัย นางสาวสุนันวดี พละศักดิ์ โทรศัพท์ 088-086-4092 หรือ e-mail: sunanvadeeph.d@gmail.com และหากท่านมีความประสงค์ที่จะขอรับรายงานสรุปเกี่ยวกับการศึกษาวิจัยในครั้งนี้ โปรดแจ้งความประสงค์และโปรดระบุ e-mail address ของท่านตามที่ระบุไว้ด้านล่าง มาพร้อมกับแบบสอบถามชุดนี้

( ) ต้องการ ระบุ e-mail .....

( ) ไม่ต้องการ

ข้าพเจ้าขอขอบพระคุณท่านที่ได้กรุณาเสียสละเวลาในการให้ข้อมูลที่เป็นประโยชน์อย่างยิ่งต่อการศึกษาวิจัย มา ณ โอกาสนี้

(นางสาวสุนันวดี พละศักดิ์)

นิสิตปริญญาเอก สาขาวิชาการจัดการ

คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม

ตอนที่ 1 ข้อมูลทั่วไปของผู้บริหารหรือเจ้าของธุรกิจพาณิชย์อิเล็กทรอนิกส์

1. เพศ

❑ ชาย ❑ หญิง

2. อายุ

❑ น้อยกว่า 30 ปี ❑ 30 - 40 ปี

❑ น้อยกว่า 41 - 50 ปี ❑ มากกว่า 50 ปี

3. ระดับการศึกษา

❑ มัธยมศึกษาหรือต่ำกว่า ❑ ปวช./ปวส./อนุปริญญา

❑ ปริญญาตรี ❑ ปริญญาโท

❑ ปริญญาเอก ❑ อื่นๆ โปรดระบุ.....

4. ประสบการณ์การทำงานในธุรกิจพาณิชย์อิเล็กทรอนิกส์

❑ น้อยกว่า 1 ปี ❑ 1- 5 ปี

❑ 6 -10 ปี ❑ มากกว่า 10 ปี

5. รายได้เฉลี่ยต่อเดือน

❑ น้อยกว่า 25,000 บาท ❑ 25,000 - 50,000 บาท

❑ 50,001 - 100,000 บาท ❑ มากกว่า 100,000 บาท

6. ตำแหน่งงานปัจจุบัน

❑ เจ้าของธุรกิจ

❑ ประธานเจ้าหน้าที่บริหาร/กรรมการผู้จัดการ/ผู้จัดการทั่วไป

❑ อื่นๆ โปรดระบุ .....

ตอนที่ 2 ข้อมูลทั่วไปของธุรกิจพาณิชย์อิเล็กทรอนิกส์

1. ประเภทของการประกอบธุรกิจ

❑ กิจการเจ้าของคนเดียว ❑ ห้างหุ้นส่วนสามัญ/ห้างหุ้นส่วนจำกัด

❑ บริษัทจำกัด ❑ บริษัทมหาชนจำกัด

❑ อื่นๆ โปรดระบุ .....

2. จำนวนพนักงานในปัจจุบันทั้งหมด.....คน

(รวมผู้บริหาร พนักงานเต็มเวลา และพนักงานรับจ้างชั่วคราว)

3. ประเภทของธุรกิจพาณิชย์อิเล็กทรอนิกส์ตามประเภทของคู่ค้า **(สามารถเลือกได้มากกว่า 1 ข้อ)**

❑ การซื้อขายระหว่างธุรกิจกับผู้บริโภค (B2C) ❑ การซื้อขายระหว่างธุรกิจกับธุรกิจ (B2B)

❑ การซื้อขายระหว่างธุรกิจกับรัฐบาล (B2G) ❑ อื่นๆ โปรดระบุ .....

4. ประเภทของธุรกิจพาณิชย์อิเล็กทรอนิกส์ตามวัตถุประสงค์ทางธุรกิจ **(สามารถเลือกได้มากกว่า 1 ข้อ)**

❑ ขายปลีกสินค้าและบริการทางอินเทอร์เน็ต

❑ ขายส่งสินค้าและบริการทางอินเทอร์เน็ต

❑ ผู้ให้บริการเกี่ยวกับการประกอบธุรกิจพาณิชย์อิเล็กทรอนิกส์

- ❑ ให้เช่าพื้นที่ของเครื่องคอมพิวเตอร์แม่ข่าย (Web Hosting)
- ❑ ให้บริการจดทะเบียนโดเมนเนม (Domain name)
- ❑ ให้บริการตลาดกลางพาณิชย์ออนไลน์ (e-Marketplace)

❑ อื่นๆ โปรดระบุ .....

5. ระยะเวลาในการดำเนินธุรกิจ

❑ น้อยกว่า 1 ปี ❑ 1- 5 ปี

❑ 6 -10 ปี ❑ มากกว่า 10 ปี

6. ทุนจดทะเบียนของธุรกิจ

❑ น้อยกว่า 500,000 บาท ❑ 500,000 – 1,000,000 บาท

❑ 1,000,001 – 10,000,000 บาท ❑ มากกว่า 10,000,000 บาท

7. สินทรัพย์รวมของธุรกิจ (รวมอสังหาริมทรัพย์)

❑ น้อยกว่า 1,000,000 บาท ❑ 1,000,000 – 25,000,000 บาท

❑ 25,000,001 – 50,000,000 บาท ❑ 50,000,001 – 75,000,000 บาท

❑ 75,000,001 – 100,000,000 บาท ❑ มากกว่า 100,000,000 บาท

8. รายได้ของธุรกิจเฉลี่ยต่อปี

❑ น้อยกว่า 1,000,000 บาท ❑ 1,000,000 – 25,000,000 บาท

❑ 25,000,001 – 50,000,000 บาท ❑ 50,000,001 – 75,000,000 บาท

❑ 75,000,001 – 100,000,000 บาท ❑ มากกว่า 100,000,000 บาท

<u>ตอนที่ 3</u> ความคิดเห็นเกี่ยวกับความคล่องตัวเชิงกลยุทธ์ขององค์กร

ความคล่องตัวเชิงกลยุทธ์ขององค์กร (Organizational Strategic Agility)	ระดับความคิดเห็น มากที่สุด ⟷ น้อยที่สุด				
	5	4	3	2	1
ความคล่องตัวในการดำเนินงาน (Operational Agility: OA)					
1. องค์กรสามารถวิเคราะห์ข้อมูลเพื่อใช้ในการตัดสินใจได้อย่างเหมาะสม รวดเร็ว	5	4	3	2	1
2. องค์กรสามารถปรับแผนได้อย่างรวดเร็วเพื่อตอบสนองต่อสถานการณ์ที่ไม่แน่นอน	5	4	3	2	1
3. เมื่อต้องเผชิญกับการเปลี่ยนแปลงที่ไม่คาดคิดไว้ก่อน องค์กรสามารถปรับเปลี่ยนแผนและกระบวนการทำงานได้อย่างทันท่วงที	5	4	3	2	1
4. เมื่อมีความจำเป็น องค์กรสามารถปรับลดหรือขยายขนาดการผลิตและการให้บริการได้อย่างรวดเร็ว ยืดหยุ่น	5	4	3	2	1
ความคล่องตัวในการตื่นตัวต่อลูกค้า (Customer Alertness Agility: AA)					
5. องค์กรรับรู้การเปลี่ยนแปลงของตลาดอย่างรวดเร็ว	5	4	3	2	1
6. องค์กรสามารถวิเคราะห์และประเมินแนวโน้ม โอกาสทางการตลาดใหม่ๆ ได้	5	4	3	2	1
7. องค์กรมีการคาดการณ์และเตรียมแผนงานเพื่อตอบสนองความต้องการของลูกค้าเพื่อวางกลยุทธ์การดำเนินงานขององค์กรในอนาคต	5	4	3	2	1
8. องค์กรมีความสามารถในการปรับเวลาและวิธีการจัดส่งสินค้าและบริการได้ตรงตามความคาดหวังของลูกค้า	5	4	3	2	1
ความคล่องตัวในการรับรู้ต่อคู่แข่ง (Competitor Awareness Agility: CA)					
9. องค์กรรับรู้อย่างรวดเร็วถึงการเปลี่ยนแปลงและการดำเนินธุรกิจของคู่แข่งหลักหรือคู่แข่งใหม่	5	4	3	2	1
10. องค์กรมีแหล่งข้อมูลและวิธีการที่เป็นระบบแบบแผนเพื่อประมวลผลเกี่ยวกับคู่แข่งหลักอย่างรวดเร็ว	5	4	3	2	1
11. องค์กรให้ความสนใจสิ่งที่คู่แข่งให้ความสำคัญตลอดเวลา เช่น ข้อมูลหรือกลยุทธ์ของคู่แข่ง	5	4	3	2	1
12. องค์กรมีการตอบสนองทันทีต่อการเปลี่ยนแปลงวิธีการผลิต การบริการ และการตลาดของคู่แข่ง	5	4	3	2	1
ความคล่องตัวด้านความสัมพันธ์ทางธุรกิจเชิงกลยุทธ์ (Strategic Business Relationship Agility: RA)					
13. องค์กรสามารถสร้างเครือข่ายใหม่กับพันธมิตรทางการค้าได้อย่างรวดเร็วเพื่อสนับสนุนกลยุทธ์ขององค์กร	5	4	3	2	1

ความคล่องตัวเชิงกลยุทธ์ขององค์กร (Organizational Strategic Agility)	ระดับความคิดเห็น มากที่สุด ⟷ น้อยที่สุด				
	5	4	3	2	1
14. องค์กรสามารถรวบรวมข้อมูลลูกค้า และผู้จัดจำหน่ายปัจจัยการผลิตจากพันธมิตรได้อย่างรวดเร็ว	5	4	3	2	1
15. องค์กรสามารถใช้ประโยชน์จากทรัพยากรของพันธมิตร เช่น ฐานข้อมูลผู้ขายปัจจัยการผลิต หรือ องค์ความรู้ที่ส่งต่อจากพันธมิตร เป็นต้น	5	4	3	2	1
16. องค์กรสามารถใช้ประโยชน์จากขีดความสามารถของพันธมิตรเพื่อเพิ่มศักยภาพทางการผลิตสินค้าและบริการให้มีคุณภาพ คุ้มค้า และมีประสิทธิภาพ	5	4	3	2	1

<u>ตอนที่ 4</u> ความคิดเห็นเกี่ยวกับปัจจัยที่ส่งผลต่อความคล่องตัวเชิงกลยุทธ์ขององค์กร

ปัจจัยที่ส่งผลต่อความคล่องตัวเชิงกลยุทธ์ขององค์กร Factors that Influence to Organizational Strategic Agility	ระดับความคิดเห็น มากที่สุด ⟷ น้อยที่สุด				
	5	4	3	2	1
ความแปรปรวนของสภาพแวดล้อม (Environmental Turbulence)					
ความแปรปรวนทางเทคโนโลยี (Technological Turbulence: TT)					
17. เทคโนโลยีในอุตสาหกรรมพาณิชย์อิเล็กทรอนิกส์มีเปลี่ยนแปลงอย่างรวดเร็ว ทำให้องค์กรต่างๆ ต้องปรับตัวอย่างรวดเร็ว	5	4	3	2	1
18. การเปลี่ยนแปลงทางเทคโนโลยีทำให้เกิดโอกาสในการพัฒนาอุตสาหกรรมพาณิชย์อิเล็กทรอนิกส์	5	4	3	2	1
19. การคาดการณ์ถึงแนวโน้มอุตสาหกรรมพาณิชย์อิเล็กทรอนิกส์ในอนาคตนั้น มีความยุ่งยาก ซับซ้อนมากขึ้น	5	4	3	2	1
20. องค์กรมีไอเดีย/แนวคิด ในการพัฒนาผลิตภัณฑ์หรือบริการใหม่ๆ เกิดขึ้นมากมายจากความก้าวหน้าทางเทคโนโลยีในอุตสาหกรรมพาณิชย์อิเล็กทรอนิกส์	5	4	3	2	1
ความแปรปรวนทางการตลาด (Market Turbulence: MT)					
21. ความต้องการของลูกค้าในตลาดพาณิชย์อิเล็กทรอนิกส์ (e-Commerce) มีการเปลี่ยนแปลงอย่างรวดเร็ว	5	4	3	2	1
22. อะไรก็ตามที่คู่แข่งรายหนึ่งเสนอให้กับลูกค้าได้นั้น บริษัทคู่แข่งอื่นๆ ก็สามารถยื่นข้อเสนอเดียวกันแข่งได้อย่างรวดเร็ว	5	4	3	2	1
23. กฎหมาย ระเบียบ ธรรมเนียมปฏิบัติ หรือกลยุทธ์การแข่งขันด้านการตลาดของธุรกิจพาณิชย์อิเล็กทรอนิกส์ มีการเปลี่ยนแปลงอยู่ตลอดเวลา	5	4	3	2	1

ปัจจัยที่ส่งผลต่อความคล่องตัวเชิงกลยุทธ์ขององค์กร Factors that Influence to Organizational Strategic Agility	ระดับความคิดเห็น มากที่สุด ⟷ น้อยที่สุด 5	4	3	2	1
24. คู่แข่งที่ใช้บริการซื้อ-ขายสินค้าและบริการผ่านเว็บไซต์หรือตลาดกลางออนไลน์ (e-Marketplace) มีจำนวนมากขึ้น	5	4	3	2	1
ความสามารถด้านคลาวด์คอมพิวติ้ง(Cloud Computing Capability)					
ความยืดหยุ่นด้านคลาวด์คอมพิวติ้ง (Cloud Computing Flexibility: CF)					
25. บริการคลาวด์ทำให้รูปแบบการใช้เทคโนโลยีสารสนเทศขององค์กรสามารถรับมือกับความผันผวนได้ในทันที	5	4	3	2	1
26. บริการคลาวด์ทำให้รูปแบบการใช้เทคโนโลยีสารสนเทศขององค์กรมีความยืดหยุ่นและเติบโตทางธุรกิจสูง	5	4	3	2	1
27. บริการคลาวด์คอมพิวติ้งทำให้รูปแบบการใช้เทคโนโลยีสารสนเทศขององค์กรสามารถรองรับความสัมพันธ์ทางธุรกิจใหม่ๆ ได้ง่ายและสะดวกรวดเร็วมากขึ้น	5	4	3	2	1
28. บริการคลาวด์ทำให้รูปแบบการใช้เทคโนโลยีสารสนเทศขององค์กรรองรับการเปลี่ยนแปลงทางธุรกิจได้อย่างรวดเร็ว	5	4	3	2	1
การบูรณาการด้านคลาวด์คอมพิวติ้ง (Cloud Computing Integration: CI)					
29. บริการคลาวด์สามารถทำให้องค์กรสามารถเข้าถึงและดึงข้อมูลนำมาใช้ในการวางแผนการดำเนินงานได้อย่างรวดเร็ว	5	4	3	2	1
30. บริการคลาวด์ช่วยองค์กรแบ่งปันข้อมูลกันกับผู้ร่วมงานภายในองค์กรหรือพันธมิตรองค์กรที่เกี่ยวข้องต่างๆ ได้ง่ายและสะดวกขึ้น	5	4	3	2	1
31. บริการคลาวด์ช่วยสนับสนุนองค์กรในการรวมเอาแอปพลิเคชันเข้ากับระบบอื่นได้ ง่ายขึ้น	5	4	3	2	1
32. บริการคลาวด์ เช่น ฮาร์ดแวร์และซอฟต์แวร์ที่ใช้ในการประมวลผล การจัดเก็บข้อมูล และระบบออนไลน์ต่างๆ ผ่านอินเตอร์เน็ต ช่วยรองรับกิจกรรมขององค์กรให้มีความราบรื่น	5	4	3	2	1
วัฒนธรรมความคล่องตัว (Agile Culture: AC)					
33. องค์กรสนับสนุนการทำงานเป็นทีมและให้บุคลากรมีส่วนร่วมในการปรับวิธีการปฏิบัติงานให้ทันสมัยอยู่เสมอ	5	4	3	2	1
34. องค์กรให้ความเคารพ ยอมรับความคิดเห็นและความแตกต่างของพนักงานแต่ละบุคคลทุกระดับ	5	4	3	2	1

ปัจจัยที่ส่งผลต่อความคล่องตัวเชิงกลยุทธ์ขององค์กร Factors that Influence to Organizational Strategic Agility	ระดับความคิดเห็น มากที่สุด ⟷ น้อยที่สุด 5 4 3 2 1				
35. องค์กรสนับสนุนการค้นพบ ทดสอบแนวคิด และวิธีการทำงานใหม่ๆ อยู่ตลอดเวลา	5	4	3	2	1
36. องค์กรตระหนักและสนับสนุนการพัฒนาความสามารถของพนักงานอย่างสม่ำเสมอ	5	4	3	2	1
37. องค์กรสนับสนุนให้บุคลากรทุกคนมีความกระตือรือร้นพร้อมปรับตัวให้ทันต่อการเปลี่ยนแปลง และมีช่องทางให้พนักงานทุกระดับได้เข้าไปแสดงความคิดเห็นต่างต่อนโยบายองค์กร และการตัดสินใจของฝ่ายบริหาร	5	4	3	2	1

<u>ตอนที่ 5</u> ความคิดเห็นเกี่ยวกับความสำเร็จตามเป้าหมายขององค์กร

ความสำเร็จตามเป้าหมายขององค์กร (Organizational Goal Achievement)	ระดับความคิดเห็น มากที่สุด ⟷ น้อยที่สุด 7 6 5 4 3 2 1						
ความสำเร็จของเป้าหมายทางการเงิน (Financial Goal Achievement: FA) ในช่วง 1 ปีผ่านมา							
38. องค์กรมีกำไรเพิ่มขึ้นตามเป้าหมายที่กำหนดไว้	7	6	5	4	3	2	1
39. องค์กรประสบผลสำเร็จในการสร้างรายได้เพิ่มขึ้น	7	6	5	4	3	2	1
40. องค์กรมีอัตราการเติบโตของยอดขายตามที่วางแผนไว้	7	6	5	4	3	2	1
41. องค์กรประสบผลสำเร็จในการยับยั้งยอดขายที่ลดลง	7	6	5	4	3	2	1
ความสำเร็จของเป้าหมายเชิงกลยุทธ์ (Strategic Goal Achievement: SA) ในช่วง 1 ปีที่ผ่านมา							
42. องค์กรมีส่วนแบ่งทางการตลาดเป็นไปตามแผนที่กำหนดไว้	7	6	5	4	3	2	1
43. องค์กรมีความโดดเด่นเป็นเอกลักษณ์เหนือคู่แข่งขันทำให้ได้เปรียบทางการแข่งขัน	7	6	5	4	3	2	1
44. องค์กรได้รับการยอมรับและเชื่อมั่นจากผู้มีส่วนเกี่ยวข้องต่างๆ ขององค์กร	7	6	5	4	3	2	1
45. องค์กรมีการบริหารจัดการที่ได้รับการยอมรับว่ามีคุณภาพดีเลิศ	7	6	5	4	3	2	1

ตอนที่ 6: ข้อคิดเห็นและข้อเสนอแนะเกี่ยวกับความคล่องตัวเชิงกลยุทธ์ขององค์กร และอื่นๆ

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ขอขอบพระคุณที่ท่านสละเวลาตอบแบบสอบถามทุกข้อ โปรดพับแบบสอบถามนี้และนำใส่ซ

พร้อมทั้งส่งคืนผู้วิจัยตามที่อยู่ที่ระบุไว้

APPENDIX C

Letters to Experts

ที่ อว 0605.10/192

คณะการบัญชีและการจัดการ
มหาวิทยาลัยมหาสารคาม
ตำบลขามเรียง อำเภอกันทรวิชัย
จังหวัดมหาสารคาม
44150

31 สิงหาคม 2563

เรื่อง ขอความอนุเคราะห์เป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน รองศาสตราจารย์ ดร.อัษฎา จินตกานนท์

ด้วย นางสาวสุนันวดี พละศักดิ์ รหัสนิสิต 60010961005 นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการจัดการ ระบบในเวลาราชการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย" ซึ่งเป็น ส่วนหนึ่งของการศึกษาตามหลักสูตรบริหารธุรกิจมหาบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะ เพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามแบบสอบถามที่แนบมาพร้อมนี้

คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม หวังเป็นอย่างยิ่งว่าคงได้รับความอนุเคราะห์จากท่านด้วยดี และขอขอบคุณมา ณ โอกาสนี้ด้วย

ขอแสดงความนับถือ

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โทรศัพท์ 0-4375-4333 ต่อ 3431
โทรสาร 0-4375-4422

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ที่ อว 0605.10/4115 **วันที่** 31 สิงหาคม 2563

เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน รองศาสตราจารย์ ดร.พรลภัส สุวรรณรัตน์

ด้วย นางสาวสุนันวดี พละศักดิ์ รหัสนิสิต 60010961005 นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการจัดการ ระบบในเวลาราชการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย" ซึ่งเป็น ส่วนหนึ่งของการศึกษาตามหลักสูตรบริหารธุรกิจมหาบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามแบบสอบถามที่แนบมาพร้อมนี้

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ที่ อว 0605.10/ **วันที่** 31 สิงหาคม 2563

เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน อาจารย์ ดร.อรรถพล หมู่มี

ด้วย นางสาวสุนันวดี พละศักดิ์ รหัสนิสิต 60010961005 นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการจัดการ ระบบในเวลาราชการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย" ซึ่งเป็น ส่วนหนึ่งของการศึกษาตามหลักสูตรบริหารธุรกิจมหาบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามแบบสอบถามที่แนบมาพร้อมนี้

จึงเรียนมาเพื่อโปรดพิจารณา

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ที่ อว 0605.10/1114 **วันที่** 31 สิงหาคม 2563
เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน รองศาสตราจารย์ ดร.การุณย์ ประทุม

ด้วย นางสาวสุนันวดี พละศักดิ์ รหัสนิสิต 60010961005 นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการจัดการ ระบบในเวลาราชการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย" ซึ่งเป็น ส่วนหนึ่งของการศึกษาตามหลักสูตรบริหารธุรกิจมหาบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามแบบสอบถามที่แนบมาพร้อมนี้

จึงเรียนมาเพื่อโปรดพิจารณา

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ที่ อว 0605.10/๑๑๑๖ **วันที่** ๓๑ สิงหาคม 2563
เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

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ด้วย นางสาวสุนันวดี พละศักดิ์ รหัสนิสิต 60010961005 นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการจัดการ ระบบในเวลาราชการ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ความคล่องตัวเชิงกลยุทธ์ขององค์กรและความสำเร็จตามเป้าหมาย: การศึกษาเชิงประจักษ์ในประเทศไทย" ซึ่งเป็น ส่วนหนึ่งของการศึกษาตามหลักสูตรบริหารธุรกิจมหาบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามแบบสอบถามที่แนบมาพร้อมนี้

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BIOGRAPHY

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