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Examining the causal factors influencing organizational survival of retail food businesses during the COVID-19 outbreak

Auyporn Naklamthong^a, Wornchanok Chaiyasoonthorn^{a*} and Singha Chavesuk^a

^aKMITL Business School, King Mongkut's Institute of Technology Ladkrabang

ABSTRACT

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Retail food businesses are important contributors to the economic stability of nations, contributing to the economy in different ways, including providing jobs in the supply chain pipeline. Global events like the pandemic arising from the spread of COVID-19 threatened the aptitude of retail food outlets to operate due to the restrictions put in place to mitigate the spread of the virus. The objective of this research is to investigate the determinants that impact the longevity of organizations in the food retail industry and construct a survival model that accounts for these characteristics considering the COVID-19 pandemic, and examining the roles of variables such as organizational survival, external general environment, corporate governance policy, transformational change management, economic condition, and marketing innovation. The study utilized quantitative methodology, employing a survey questionnaire to gather data from a sample of 360 entrepreneurs. Subsequently, the data was analyzed using statistical analysis and the Structural Equation Model (SEM). The research findings reveal that the external general environment, transformational change management, economic conditions, corporate governance policies, and marketing innovation have statistically significant positive impacts on organizational survival. Consequently, food retail businesses must adapt within the COVID-19 context, under evolving external conditions, to strategize for enhanced competitive capabilities. This includes managing change and economic conditions for survival in a COVID-19 pandemic characterized by rapid economic shifts, human behavioral changes, and adaptive governance policies that align with situations. These findings can be applied to organizational structures, addressing weaknesses and further enhancing organizational strengths to create innovative marketing approaches that align appropriately with current circumstances for organizational survival. An important limitation of the study is that data were collected from only 360 food retailers in Thailand, representing a partial population of the food retail business in Thailand, hence limiting the generalizability of the results beyond the context of the study and other countries.

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1. Introduction

The food industry of Thailand is an industry with high potential for production both for domestic consumption and export. Thailand's steady agricultural production base, which has been in place over the past decades, is the primary reason for the availability of a diverse range of raw materials for processing. The industry benefits from a large, skilled workforce, utilizes modern production technologies, and continuously develops product formats that align with market demands. Furthermore, various industry operators exhibit expertise in production and superior technology utilization compared to many competitor countries within the same region. The industry can rapidly produce goods according to consumer demands and efficiently transform imported raw materials into value-added products. The entire value chain, including the labor force, raw material producers, and related service providers, contributes significantly to the economy, yielding an annual economic value

* Corresponding author

E-mail address wornchanok.ch@kmitl.ac.th (W. Chaiyasoonthorn)

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exceeding THB5 trillion Thai Baht (Jeaheng *et al.*, 2023; Lekuthai, 2007; Polo-Redondo *et al.*, 2011; Sinha & Swain, 2022). Moreover, it contributes in excess of 20% of the GDP within the industrialized subdivision, displaying a consistent growth trend. Thailand emerged as the 11th biggest exporter of food globally in 2020, with a remarkable export value grossing over one trillion Thai Baht in the food business. With the increasing demand for food consumption, technological advancements, and the direction towards Industry 4.0 development, the global food industry is undergoing transformations that enhance efficiency throughout the production chain (Turek *et al.*, 2023). The data above depicts how the COVID pandemic has significantly influenced the retail food business. Hence, business operators have needed to adapt to ensure survival. The National Economic and Social Development Council (NESDC) informs that adaptations include shifting sales to online platforms, aligning products with the prevailing socioeconomic situation, cost reduction, managing cash flows, and maintaining business agility to ensure continued viability (NESDC, 2020; Srinok & Zandi, 2021).

Studies have been conducted to examine the significance of business adaptation for sustainability in the food retail industry. For instance, Parker *et al.* (2002) studied the adaptability of retail organizations and attests to the significant factor cost reduction plays in enabling businesses to operate efficiently. Similarly, Isharyani *et al.* (2024) examined the business adaptation of retail businesses in the era of e-commerce and identified factors like convenience in purchasing and preparedness in distribution channels as influential in the success of modern retail businesses, allowing them to adapt effectively and succeed. Similarly, Vichayanan Khanla (2016) explored the adaptation for the survival of both traditional and modern retail stores, concluding that business owners should adjust to changes in consumer behavior to meet consumer needs and enhance negotiation power with product distributors. Research by Alves *et al.* (2020) investigated the management of crises, ability to adapt, and techniques employed by retail firms in response to COVID-19 pandemic in Macau, discovering that product diversification and exploring new markets contribute to successfully navigating crises for sustained resilience. Arasti (2011) in a similar investigation of retail food enterprises across Romania discovered that a significant decline in customer interests greatly impacts business survival. From studying relevant research on business adaptation for survival, this research identified gaps in the existing literature in Thailand. Previous research primarily focused on medium-sized and small businesses, automotive and textile firms, and examined the satisfaction with customer service as a causal variable leading to operationally favorable outcomes. Bartók *et al.* (2021) recognizes the need for further research is required to examine the causal elements that service organisations must adjust to in order to survive in the food retail industry. This sector is critical to the national economy, especially the time of the COVID pandemic. This study aims to investigate the variables that impact the ability of food retail enterprises in Thailand to survive during the pandemic, to fill the existing gaps, and overcome the constraints. This paper has two aims; the primary objective is to examine the individual, indirect, and cumulative effects of various factors on the viability of food retail enterprises in Thailand during the COVID-19 crisis. These factors include both immediate and indirect influences on organizational survival during the pandemic. Secondly, the paper aims to develop a model of survival factors that impact the organizational resilience of Thai food retail enterprises in crisis situations. This model will provide insights into the key factors contributing to business resilience and survival in the pandemic.

2. Literature Review

2.1 Organizational survival

Survival is a concept that originates from Darwin's Theory (1859), which explicates the mechanics of natural selection. The concept of survival of the fittest refers to the biological principle that the most adapted people have the highest chances of survival. Bennet and Bennet (2004) attempted to integrate this theory with economics, defining *natural selection* as the struggle for survival. Subsequently, the principle of survival was employed in the 19th century to bolster economic competitiveness. It gave rise to the concept of Social Darwinism, suggesting its use in motivating human diligence or as a justification for war and economic competition. Darwin's theory has been widely employed across various disciplines, including economics, society, science, politics, and more. When creatively applied, it can contribute to a nation's or society's prosperity, but misinterpretation could lead to detrimental effects (Sturges, 1994). For an organization to survive, crucial developmental components should include 1) the ability to analyze and observe situations, 2) strong leadership qualities, 3) the ability to predict growth patterns within an organisation, 4) determined perseverance leading to positive outcomes, 5) establishing efficient means of communication, 6) fostering and accepting evolution as necessary, 7) effective management practices, and 8) fostering innovative thinking for adapting to new changes (Balowe, 2015). In the context of entrepreneurs, survival is highly significant in today's rapidly changing world due to various factors such as market shifts, strategies, and technologies. Many businesses fail to adapt and consequently cease to exist. Hence, this research focuses on recognizing the issues and importance of survival and reviewing related literature and research. Numerous studies have investigated the survival of both medium and small-sized entrepreneurs. Among these, Jovanovic's (1982) research is highly referenced. He identified multiple factors influencing entrepreneurs' survival, encompassing enterprise age, size, education, family background, and research and development capabilities.

2.2 External macro environment

External (environmental) influences have a substantial impact on the outcome of an organisation, either leading to its success or failure. Managers should strive to maintain appropriate alignment between the organization and the environment. All organizations exist within both external and internal environments. The external environment comprises elements not directly

controlled by the organization, which may impact the organization's activities. Gémar *et al.* (2016) stated that entrepreneurs can survive in various environments through effective adaptation. When the environment poses challenges to business operations, entrepreneurs need to adjust strategies to enhance competitiveness. Manning (2018) noted that small-sized entrepreneurs face challenges like product credibility and a lower competitive position than larger counterparts. However, small entrepreneurs might have advantages in some instances, like adaptability, speed, and flexibility, due to their limited workforce. Nilsson (2016) emphasized the importance of adaptation for the survival of small-sized entrepreneurs, who are more vulnerable to external environments than larger ones, especially in financial constraints, capital accessibility, raising capital, efficiencies of scale, tax advantages, raw material procurement, and distribution routes. Santiago (2015) highlighted that effective management of the modern organization and its workforce requires addressing internal and external environments to create a suitable environment supporting job performance and employee satisfaction. Thus, organizations that improve their work environment tend to positively impact employee performance, Moradi *et al.* (2021) investigated how organizational agility influenced the external general environment in terms of business innovation, economic transmission, and operational outcomes. They inferred that resistance to evolution and transformation is a crucial impediment to organizational sustainability. Van Scheers (2011) discussed that a lack of marketing skills negatively affects the success of small businesses. Similarly, Yeoh (2019) stated that the high incidents of failure amongst SMEs can be attributed to different reasons, including governmental support factors. Although government regulations are cited as supportive factors, their actual impact on small-sized business survival during crises is limited.

2.3 Corporate governance policy

Amankwah-Amoah (2016) explains that to create clear organizational practices and transparent communication that can be examined to interact with company personnel, external individuals, customers, and stakeholders, an organization should practice in a clear direction. Similar to Ho *et al.* (2018), the corporate governance system serves as a mechanism that connects various stakeholders, including shareholders, so that all parties can act coherently in the same direction. Therefore, the company should have a fundamental corporate governance structure that considers control, auditing, risk management, balance, policies, charters, and business ethics that cover all levels, from board to management and employees. The agribusiness supply-chain procedure was the subject of research that examined fiscal performance and orientation towards market development (Ho *et al.*, 2018). They discovered that market orientation is a critical framework for profitable competitive advancement, suggesting that competitor and client focus creates added value for the business in the long term. Fernandes *et al.* (2020) investigated market orientation's impact on the attitudes of working women in medium-sized businesses. They concluded that market orientation factors are significant for managers to respond to customer needs, coordinate within the organization, respond to competitors, manage customer data, and evaluate customer satisfaction. Amankwah-Amoah *et al.* (2018) examined entrepreneurship and market orientation's practical impact on the organization, revealing that marketing orientation strategies affect the organizational culture perspective in generating buyer behavior efficiency, dividing marketing orientation into three dimensions; customer focus by emphasizing superior value creation; competitor focus by a perception of their assets and shortcomings when formulating strategies both short- and long-term; and cooperation coordination by utilizing organizational resources to create superior value, similarly to Alves *et al.* (2020), who studied how the pandemic affected operational strategies (closing or reducing working hours), human resource strategies (existing human resource policies), financial strategies (cutting costs), and networking strategies (client relationships), which significantly affected the organizations' ability to efficiently thrive.

2.4 Managing transformational change

Chapman (2002) suggests two organizational transformation models prioritizing scientific investigations and practice. The transformational change model of Burke and Litwin (1992) emphasizes the role of leaders in shaping the behavior of others by operating as role models within the organization. Change in this context refers to alterations in certain areas prompted by interactions with environmental factors, leading to the emergence of new behaviors or changes in employee behavior within the organization. Limerick *et al.* (1994) refer to this type of change as organizational structural adjustment. They view change as a process of altering processes both at the individual and organizational levels. According to them, change is a central task for leaders in today's circumstances, resulting in the term "change leaders," who make internal organizational processes efficient and effective, leading to achieving objectives. This requires a blend of Mechanistic and Organic organizational aspects suitable for the organization's context. The factors that need to be considered in this regard are similar to those of Brandt *et al.* (2019), who describe change management as planning various actions to mitigate change impacts, supporting adaptation and acceptance, and generating new capacities and changes. These involve processes, tools, and techniques in managing human resources to attain desired outcomes from change, such as restructuring work procedures and training employees in new methods. The main point is to aid employees in accepting, adapting, and adjusting work methods, as articulated by Putri *et al.* (2020). Organizational survival necessitates implementing a complicated, systemic process known as change management. Change in organizations must be effectively managed to achieve the desired transformation, a notion similar to Bekmukhambetova's (2021) study, which points out that various companies face the challenge of adapting to the changing daily operations landscape, impacting new business developments. Continuous change is crucial for organizations to align with market demands and the global economic situation. This aligns with Singgih *et al.* (2020), who investigated the influence of job satisfaction on the relationship between efficiency, knowledge management, work environment, and change

leadership. The objective was to assess the influence of knowledge management, work environment, and being a change leader on employee efficacy in the packaging services sector. Change leadership and knowledge management did not have a substantial direct or indirect impact on employee efficiency, according to the research. Likewise, the technological environment significantly affects the outcomes of both direct and indirect change management efforts.

2.5 Economic condition

Economic changes are closely related to society. The economy must face various fluctuations associated with general prosperity and economic downturns. During economic prosperity, most businesses benefit, while a majority experience losses during downturns. Businesses are also impacted by fluctuations in interest rates, wage levels, and the rate of inflation (general price increases). Business owners receive support to expand and take on more risk when economic conditions are favorable, such as low interest rates and increasing demand. Economic conditions refer to the present economic status of a region or nation. These conditions fluctuate periodically as a result of the cycle of economic activity, as economies and businesses experience periods of growth and decline. The economic climate is deemed outstanding when there is growth and is regarded as unfavorable when it is shrinking. Additionally, economic conditions affect the purchasing power of the population. Price determinations vary according to economic conditions. The economy encompasses the entirety of the economic operations within a country that involves the creation, allocation, and utilization of products and services. Businesses are greatly influenced by the economic climate. The degree of customer expenditure has an impact on investment decisions, workforce numbers, and business employment. Economic factors impact businesses in four main aspects: credit access, interest rate changes, and consumer income levels.

2.6 Marketing innovation

Innovation is the acceptance or application of novel ideas within an organization. New ideas or developments must be commercialized or brought to the market through promotion, development, improvement, or creation within processes, products, techniques, and management systems. Generally, innovation refers to an idea's first instance or starting point, wherein organizations share similar goals. The initial objective is to combine two elements, modification, and utilization, to foster organizational innovation. Development based on a holistic resource-based view leads to the emergence of innovative characteristics that influence the efficiency of organizational operations and competitive advantage. Chen's study (2006) found that the process of Open Innovation significantly impacts the deployment of novel products and innovative approaches. In the manufacturing industry, open innovation that emphasizes technical knowledge has a positive relationship with the involvement of producers in formal knowledge exchange activities, creating value for the company. Naidoo's research (2010) emphasizes the importance of group integration in the industry for innovation development, encompassing product and service innovation from lower to higher levels. This helps formulate competitive strategies and increase collaboration in research and development activities. In their study, Hussain *et al.* (2020) discovered a strong correlation between sustainable marketing assets and market efficiency. This study further demonstrates that the establishment of a lasting competitive advantage plays a pivotal role in the correlation between brand and market efficiency. It serves as a mediator in the connection between marketing innovation and market efficiency in specific areas. The results of this study can be utilized to develop successful promotional strategies aimed at attracting clients. Peng *et al.* (2021) investigated the influence of market innovation on company operations under various market environments in China. The study identified two distinct categories of market innovations and developed an exhaustive framework to elucidate the shifting nature of market disruption and its effects on firm operations in various market scenarios. The experimental results show that the favorable influence of market-fueled innovation and excessive emphasis that the product and service may yield less economic returns and stability, particularly in highly competitive markets. Furthermore, adopting a conservation-oriented marketing strategy may reduce companies' profits. Naidoo (2010) studied the impact of organizational context on organizational knowledge, organizational innovation, and marketing. It revealed that developing high-quality new products that cater to diverse customer groups impacts organizational innovation. Business reputation affects the rapid acceptance of marketing innovation within the business.

2.7 Hypotheses development

To understand the dynamics at play in the interactions between an organization and its quest to survive in an emergency, Moradi *et al.* (2021) examined how organizational agility affects the external general environment concerning business innovation patterns and economic outcomes that influence organizational performance. The research found that organizational agility or resistance to change is a significant obstacle to an organization's survival. gathered from 160 Tefaanoran firms engaged in the information technology sector, the study revealed a negative correlation between organizational agility and organizational survival. In addition, Clara Pardo (2017) investigated the application of "resource dependence theory" to pinpoint elements contributing to the bankruptcy of Colombian business entrepreneurs. The research identified crucial failure factors for Colombian entrepreneurs, including financial problems, external environmental factors, and promotion issues. Among the specific sub-issues were problems with inadequate revenue generation to sustain businesses, difficulty in sourcing appropriate capital, and challenges related to business control, legal uncertainties, and the economy. These results complement the work done by Bordonaba-Juste (2011) on franchise system survival, which focused on analyzing organizational failure. However, two outcomes were observed in the market context: organizational failure and franchise discontinuity. The research

concluded that external general environmental factors, such as government policy fluctuations and socioeconomic situations affect the survival and expansion of the structure and organizational entities, leading to proposing the following hypothesis.

H₁: *External general environment significantly and positively influences organizational survival.*

Understanding how organizational survival is linked to favorable government policies, Van Scheers (2011) investigated survival factors of South African SMEs. The research explored how the marketing management skills of SMEs influence failure rates of businesses in the country. They also discovered that high business failure rates in South Africa surely result from SMEs lacking marketing knowledge. They came to the conclusion that small business initiatives suffer in success due to lack of promotional abilities. The main inference is the positive correlation between the deficiency in marketing abilities and business failure across the country. The issue remains to develop business owners' marketing capabilities, as Yeoh (2019) noted that the alarmingly high rate at which small firms fail is attributed to a variety of reasons, including government patronage and incentives. Although governmental regulations are referred to as supportive factors, the actual effect brought on small businesses by government regulations is limited and results in an inability to survive in crises. We investigate this using Hypothesis 2:

H₂: *The external general environment has a major and beneficial effect on corporate governance policies.*

Putri *et al.* (2020) aver that managing change can be a systemic and complicated progression which firms must face up to at some point for survival. Organizational changes must be appropriately managed to achieve the desired objectives of the organization. Besides, complex organizations are also composed of divergent cultures; in this instance, one of the appropriate effective steps for managing changes in organizations is adjusting its structure, mainly by designating change leaders with a leadership format. Similar to the study by Bekmukhambetova (2021), it is noted that many companies must confront changes in their daily operations, which impact the development of modern businesses. Continuous change is crucial for organizations to acclimatize to market requirements and an inclusive commercial situation. The study's findings indicate that, besides considering structural adjustments in management, collaboration with partners and the utilization of vision, plans, time, suitability, inspiration, and financial resources are important for effective change management; this is encapsulated in the following hypothesis:

H₃: *Transformational change management is vital and beneficial for organizational survival.*

Parker *et al.* (2002) stated that the organizational structure's influence on corporate governance affects business oversight and survival. By studying the relationships between corporate governance characteristics and various financial aspects with the likelihood of company survival, using a sample group from past financially troubled companies, 176 research outcomes indicated that companies that changed CEOs externally were more than twice as likely to fail. These findings correlate with Alves *et al.* (2020), who identified the main causes of business failure as the absence of effective corporate oversight, including inadequate human resource management, financial constraints due to lack of funding from financial institutions and lenders, unsuitable economic opportunities, and inadequate laws and regulations, all of which impact organizational survival similarly. These views led to proposing the subsequent hypothesis:

H₄: *Corporate governance policy is significantly and greatly affected by transformational change management.*

Alves *et al.* (2020) studied the use of operational strategies (closing or reducing working hours), human resource strategies (existing human resource policies), financial strategies (measures to reduce cost), and networking strategies (building customer relationships) applied by retail businesses during the 2020 pandemic. These strategies were found to impact organizational survival efficiency significantly. This is consistent with Van Scheers' (2011) study on survival factors for South African small businesses. The research indicated that effective management-focused marketing skills contributed to higher survival rates for medium-sized and small enterprises (SMEs) in South Africa. In retrospect, a positive correlation exists between the deficiency in promotional abilities and failure of South African small firms. The obstacle lies in the development of entrepreneurs' marketing skills. This is consistent with Geroski's (1995) study, which identifies advertising, research, and development variables as factors related to effective business management. Companies that improve marketing efficiency through advertising enhancements can enhance their image, perceived quality, and consumer satisfaction, increasing consumer willingness to pay for their products. Thus, advertising is anticipated to enhance survival opportunities, leading to Hypothesis 5:

H₅: *The corporate governance policy significantly and favorably influences the survival of an organization.*

Pardo and Alfonso (2017) studied the strategies of retail organizations in rural areas at the individual income level and their societal base. These strategies led to the establishment of business standards and the achievement of success. The data indicated that the operational strategies of local retailers in rural communities correlated with the increase in customer income, affecting changes in the community and the local economy. Meanwhile, García-Ramos *et al.* (2017) conducted a study that examined strategic congruence in competitive behavior. We developed a rational, coherent evolutionary model by providing

causal arguments to link the strategic congruence level with organizations' long-term survival. The study found that the most effective changes occurred during periods related to key economic condition factors, such as interest rates. The impact of tax rate changes directly influenced the survival of retail firms. The authors, based on these views, suggested the following hypothesis:

H₆: *The economic conditions significantly and positively impact survival of retail firms.*

Over the course of 2018, Alfrian and Riani conducted research in Jakarta, Indonesia, to investigate the influence of the workplace culture on managerial aspects of changes in the rail transportation sector inside metropolitan regions. They found that the organizational sociocultural workplace settings were influential factors in attitude/motivation, generating inspiration and cognitive stimulation, such as a common purpose, team dedication, effective communication, teamwork, conflict management, and guidelines for creating change and adaptability towards management (Alfrian & Riani, 2018). In their study, Singgih et al. (2020) evaluated how job satisfaction influences the connection underlying managerial change, managing knowledge, the workplace settings, and productivity. The aim was to assess the influence of managerial change, managing knowledge, and work setting on employee efficiency in the packaging business. The investigation determined that both managerial change and management of knowledge did not have a substantial impact on staff productivity, either directly or through indirect ways. Meanwhile, the technical setting (technological environment) significantly affected service outcomes of direct and indirect change management. Furthermore, job satisfaction significantly affected organizational efficiency, contributing to employee readiness to face the era of the Industry 4.0 revolution.

H₇: *The external general environment exerts a significant and beneficial influence on transformational change management.*

Peng et al. (2021) undertook research in China to investigate the impact that marketing innovations have on the success of businesses operating in a variety of market environments. They identified ‘market-driving and market-driven’ as the two classes of marketing innovations; they constructed a framework to explain the complexities of marketing innovations and their effects on company performance within different market environments (Goncharuk, 2012). The experimental results indicated the positive impact of market-driving innovations and an excessive emphasis on current services and products capable of leading to higher profitability and stability in a competitive market context. Furthermore, adopting a conservation-oriented marketing approach reduced companies' profit margins. Using the Turkish automotive supplier business as a case study, Atalay et al. (2013) investigated the connection between innovation and operational efficiency. A significant number of people agreed that innovation is an essential component of a sustainable competitive advantage in an environment that is undergoing fast change. As a result, it led to constant changes in both products and processes, which assisted businesses in surviving and growing at a faster rate, hence improving total efficiency. The primary purpose of this research was to investigate the connection that exists between innovative practices and the maintenance of sustainable operational efficiency. Executives from 113 different companies who are active in the automotive supplier industry in Turkey participated in the study. Data gathered from the questionnaire were analyzed using the statistical package SPSS. The analysis demonstrated that technological innovations such as innovations in product and process innovations significantly and positively impacted company performance. We set out to test this in Hypothesis 8:

H₈: *Marketing innovation significantly and positively influences organizational survival.*

The researchers conducted an extensive literature review, including books, journals, and relevant research studies, to comprehensively explore the factors that impact organizational survival. The intent was to establish a theoretical structure for the current investigation. Conceptually, the research model is visualized in Fig. 1 showing the different variables and how they interact.

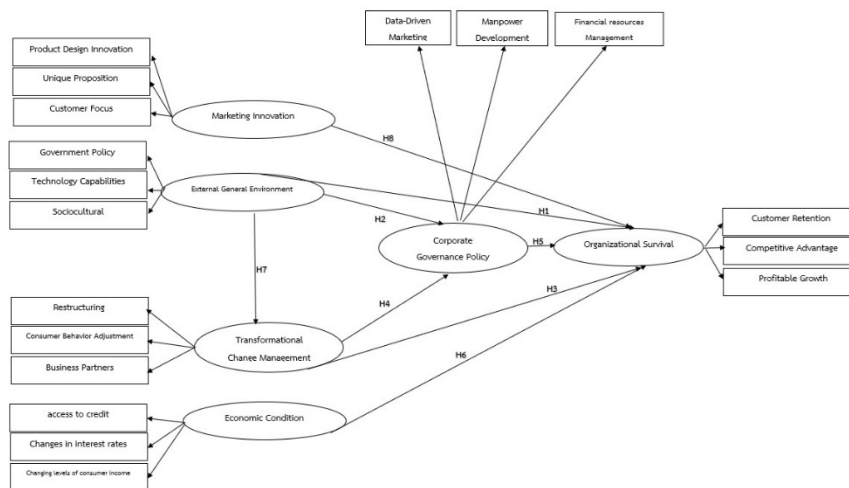


Fig. 1. The conceptual research model (Note: Developed from the literature)

3. Research Methods

The study utilized a quantitative survey research approach to accomplish the research objectives. The population was 17,855 entrepreneurs in the food retail trade in Thailand, as reported by the Department of Business Development, Ministry of Commerce in 2022 (International Trade Administration, 2024). Using the recommendations from Schumacker and Lomax (2012), this study scrutinized 18 empirical or observed variables, thus necessitating a sample size of 360 (20 multiplied by 18, giving 360). The research utilized simple random sampling, formulating a sampling frame to select samples from the population as required randomly. Information was gathered from a representative group and analyzed using statistical analysis, causal relationships, and Structural Equation Model. The study reviewed concepts, theories, books, references, and related research on latent, mediating, and moderating variables. Subsequently, these ideas, theories, and findings were distilled to form the conceptual model and the structural variables affecting the continued operations of Thai organizations in the retail food business amid the pandemic. The design then established research scope, measures, indicators, and questions. The researchers have developed a questionnaire as a research tool using the 5-point Likert-type dimension. The researchers have developed and adapted some of the questions from existing measures used by other scholars and then, derived from an extensive examination of existing literature, organized the study's issues in the context of variables that impact the viability of enterprises in the food retail business in Thailand during COVID-19 restrictions and lockdown effects. The study population and sample sizes were determined, followed by creating a questionnaire and validating its quality per the previously defined research objectives. A preliminary pilot assessment was performed to establish how reliable the measuring tool was. The revised questionnaire was administered to a sample of 30 participants, and the data collected were used for testing and calculating the reliability using a 95% level of Cronbach's Alpha Coefficient. Additionally, the study analyzed the factors influencing the survival of organizations in the food retail business amid the COVID-19 pandemic using AMOS software. Secondary data is collected through literature reviews, academic document searches, articles, journals, and research reports. Primary data is collected directly from the business owners and obtained through questionnaires distributed to businesses in the food retail sector in Thailand, totaling 360 participants. The collected questionnaires were then examined for completeness and accuracy before data analysis. Respondents' data remains confidential and is only summarized in aggregate form.

4. Results

Causal factor analysis by examining the relationships among variables at a single point in time (Hair *et al.*, 2010) and considering statistically significant standardized regression weights ($|t| \geq 1.96$) or Critical Ratio (CR) values, as well as R² values must be equal to or greater than 0.2 as per Lauro and Vinzi (2004) using statistical software. The analysis revealed that the survival factor of the organization (OS) had standardized regression weights ranging from .950 to .861 and R² values ranging from .812 to .726 (see Table 1).

Table 1
Analysis of the relationships of structural equation model factors

Relationship of Factors		Estimate	S.E.	R ²	C.R.	P
TCM	← EGF	.875	.040	.765	17.557	***
CGP	← TCM	.054	.021	1.00	2.376	.017
CGP	← EGF	.964	.035		20.170	***
OS	← TCM	.072	.031	.758	2.869	.004
OS	← CGP	.287	.171		2.258	.024
OS	← EGF	.351	.153		2.289	.022
OS	← EC	.172	.099		2.190	.028
OS	← MI	.024	.014		1.994	.046
CA	← OS	.901	.038	.812	25.787	***
CR	← OS	.950	.053	.726	19.286	***
PG	← OS	.861		.743		
BP	← TCM	.839	.051	.704	21.149	***
CBA	← TCM	.845	.050	.713	21.348	***
RES	← TCM	.814		.663		
MPD	← CGP	.810		.684		
FRM	← CGP	.851	.055	.724	20.924	***
DDM	← CGP	.933	.055	.871	23.283	***
GP	← EGF	.811	.052	.657	18.323	***
TC	← EGF	.824	.046	.679	19.667	***
SO	← EGF	.899		.808		
CLC	← EC	.841	.064	.707	17.857	***
CIR	← EC	.730		.533		
ACC	← EC	.878	.070	.771	16.569	***
CF	← MI	.784		.614		
UP	← MI	.616	.088	.380	9.158	***
PDI	← MI	.716	.092	.513	9.415	***

Note: Statistically significant at ***p < .01 level.

The external general environmental factor (EGF) had standardized regression weights ranging from .899 to .811 and R2 values ranging from .808 to .657. The transformational change management (TCM) factor had standardized regression weights ranging from .845 to .814 and R2 values ranging from .713 to .663. The economic condition factor had standardized regression weights ranging from .878 to .730 and R2 values ranging from .771 to .533. The corporate governance policy factor had standardized regression weights ranging from .933 to .810 and R2 values ranging from .871 to .684. The marketing innovation factor had standardized regression weights ranging from .784 to .616 and R2 values ranging from .614 to .380. Additionally, the examination of the goodness of fit between the evaluation framework and empirical data through accepted standard criteria is presented in Table 2.

Table 2

Analysis of goodness of fit measures

Relevant Statistics	Symbols	Criteria	Value	Interpretation/Results
Relative Chi-square	χ^2/df	$\chi^2/df < 3.00$	2.200	Passed
Goodness of Fit Index	GFI	>.90	.937	Passed
Comparative Fit Index	CFI	>.95	.985	Passed
Normal Fit Index	NFI	>.90	.972	Passed
Standardized Root Mean square Residual	RMR	<.05	.028	Passed
Root Mean Square Error of Approximation	RMSEA	<.08	.058	Passed

Note: Criteria sources: Jöreskog and Sörbom (1989), Kline (1998)

Therefore, no observed variables were removed. Subsequently, after assessing the modification index and making adjustments as recommended by the software, a new analysis was conducted to obtain standardized coefficient values, conduct hypothesis testing, and determine the influence of factors affecting organizational survival. From Table 2, the results of examining the goodness of fit between the conceptual framework and empirical information reveals a model that demonstrates a good fit with the empirical data. The model fit indices are as follows: Chi-square (χ^2) = 220.045, degrees of freedom (df) = 100, CMIN/DF = 2.200, p-value = .000, Goodness of Fit Index (GFI) = .937, Comparative Fit Index (CFI) = .985, Normed Fit Index (NFI) = .972, Root Mean Square Residual (RMR) = .028, and Root Mean Square Error of Approximation (RMSEA) = .058. Thus, it can be concluded that the structural equation model of variables affecting the survival of organizations in the retail food industry in Thailand during the Coronavirus Disease 2019 (COVID-19) pandemic situation is in line with the observed data (Hair *et al.*, 2010; Joreskog & Sorbom, 1989; Jovanovic, 1982; Lomax & Schumacker, 2012). From the results of analyzing the standardized regression coefficients, it is found that organizational survival is positively influenced by factors such as the external general environment, transformational change management, economic conditions, corporate governance policy, and marketing innovations with statistical significance. These factors can explain 76% of the variance in organizational survival ($R^2 = .76$); other factors are on the other side.

Table 3

Hypothesis testing results

Hypotheses	coef.	t-test	TE	DE	IE	Results
H1: OS \leftarrow EGF	.351*	2.289	.704	.351	.353	Supported
H2: CGP \leftarrow EGF	.964**	20.170	1.00	.964	.046	Supported
H3: OS \leftarrow TCM	.072**	2.869	.087	.072	.015	Supported
H4: CGP \leftarrow TCM	.054*	2.376	.054	.054	.000	Supported
H5: OS \leftarrow CGP	.287*	2.258	.287	.278	.000	Supported
H6: OS \leftarrow EC	.172*	2.190	.172	.172	.000	Supported
H7: TCM \leftarrow EGF	.875**	17.557	.875	.875	.000	Supported
H8: OS \leftarrow MI	.024*	1.994	.024	.024	.000	Supported

Note: TE: Total effects; DE: Direct effects; IE: Indirect effects; Coefficient: coef.

* = $p < .05$, ** = $p < .01$

From the analysis examining the goodness of fit between the conceptual framework and empirical data revealed that the equation structure pattern still lacks goodness of fit with the empirical data. Upon considering the standard regression weights of observed or latent variables, it was found that all values were greater than 0.5, following the standard criteria (Fornell & Larcker, 1981). Therefore, no observed variables were removed. Subsequently, after assessing the modification index and making adjustments as recommended by the software, a new analysis was conducted to obtain standardized coefficient values, conduct hypothesis testing, and determine the influence of factors affecting organizational survival. The results of the assessment indicated a circular relationship between the model of the conceptual framework and empirical data (Model fit). From Table 2, the results of examining the goodness of fit between the conceptual framework model and empirical data reveal that the model demonstrates a good fit with the empirical data. The model fit indices are as follows: Chi-square (χ^2) = 220.045, degrees of freedom (df) = 100, CMIN/DF = 2.200, p-value = .000, Goodness of Fit Index (GFI) = .937, Comparative Fit Index (CFI) = .985, Normed Fit Index (NFI) = .972, Root Mean Square Residual (RMR) = .028, and Root Mean Square Error of Approximation (RMSEA) = .058. Thus, it can be concluded that the structural equation model of factors influencing the survival of organizations in the food retail industry in Thailand during the Coronavirus Disease 2019 (COVID-19) pandemic situation agrees with the data from the literature (Hair *et al.*, 2010; Joreskog & Sorbom, 1989; Jovanovic, 1982; Lomax & Schumacker, 2012).

From the results of analyzing the standardized regression coefficients, it is found that organizational survival is positively influenced by factors such as the external general environment, transformational change management, economic conditions, corporate governance policy, and marketing innovations with statistical significance. These factors can explain 76% of the variance in organizational survival ($R^2 = .76$); other factors are on the other side.

4.2 Discussion

Performing data analysis and hypothesis testing as presented in Table 3 in the research context revealed that the external general environment significantly influences the survival of organizations the most (coef. = .351). Organizations need to continually monitor and evaluate various external environmental factors to enhance organizational adaptability. Additionally, analyzing and anticipating competitor behaviors aligns with G emar *et al.* (2016), suggesting that the environment poses challenges for business operations. According to Manning (2018), small-sized entrepreneurs encounter several obstacles but might possess advantages in adaptability, such as agility and flexibility. Moreover, the overall external environment significantly impacts corporate governance policies (coef. = .964), consistent with Santiago (2015), indicating that managing the external environment is crucial for modern organizational management and employee satisfaction. Furthermore, the subsequent factor affecting organizational survival is the influence of corporate governance policy (coef. = .278). This mirrors the idea of Santiago (2015), emphasizing that policies directly influence the organization's benefits and its commitment to developing internal human resources. Similarly, Yeoh (2019) states that governmental support, including regulatory frameworks, contributes to the survival of small businesses. Similarly, economic conditions influence organizational survival (coef. = .172), which is aligned with Nilsson (2016), who identifies adaptability as crucial for small business survival, especially compared to larger counterparts. Transformational change management is the third-ranking factor affecting organizational survival (coef. = .072), coinciding with Alves *et al.* (2020). Effective strategies for managing change, human resources, finances, and networks in the course of the pandemic enhanced organizational survival in retail businesses. The influence of Managing change is also linked to corporate governance policy (coef. = .054), in line with Ho *et al.* (2018), emphasizing that a focus on marketing, customer orientation, and competition contributes to long-term value creation. Amankwah Amoah *et al.* (2018) also find that an entrepreneur-centric focus and marketing emphasis affect cultural perspectives and buyer behavior. The efficient coordination of resources to create value, alongside the overall external general environment (coef. = .875), aligns with Moradi *et al.* (2021). They highlight the significance of adapting to change and innovation. Moreover, Van Scheers (2011) notes that marketing skills and innovation influence small business success. Lastly, marketing innovation (coef. = .024) represents a vital measure for organizational revival, as Fernandes *et al.* (2020) outlined. It is evident that sustainable competition plays a central role in the relationship between brand quality and market efficiency, as Hussain *et al.* (2020) observed. A sustainable competition dynamic acts as an intermediary between market innovation and efficiency. This dynamic can lead to the creation of effective marketing strategies that attract customers.

4.3 Theoretical contributions

In this instance, the study of organizational survival has provided benefits to entrepreneurs in the retail food business. It has enabled the utilization of influential factors for adaptation to the COVID-19 situation, developed from empirical data, to establish preliminary strategic guidelines for enhancing competitive capabilities and survival of organizations in the food retail business. This includes aspects of business management that can adjust for survival during the COVID-19 pandemic, which has rapidly impacted and transformed economic conditions. These findings can be applied to organizational structures, improving weaknesses and advancing the organization's existing strengths to align with the changes in the current situation. Furthermore, educational institutions and various scholars can employ the causal relationship data of influential factors affecting the survival of organizations in the food retail business amidst the COVID-19 pandemic for educational, instructional, and research purposes.

4.4 Managerial implications

The findings of this study can be utilized for both theoretical and practical advantages in the field of management. Entrepreneurs in the retail food business can utilize the influential factors for adaptation to the COVID-19 situation, developed from perceptual data, to establish preliminary strategic guidelines to enhance competitive capabilities and organizational survival in the food retail business. Additionally, the research can evaluate the efficiency and effectiveness of organizations in resource allocation resulting from the complexity associated with adhering to environmental concepts/theories in operation. Moreover, it can employ data on the causal relationship format of factors influencing organizational survival in the food retail business during the COVID-19 pandemic as a case study for the Thai food retail industry, applicable to academic and industrial sectors. For example, technological advancements in production enhancement and the incorporation of technology for communication or accessing target customer groups can be planned by organizations to align technology requirements perpetually. Business management strategies that can adapt for survival during the COVID-19 pandemic era, with rapid economic impacts and changes, can be employed to structure organizations, improve weaknesses, and further develop the organization's existing strengths in accordance with the current situation's transformations.

4.5 Future research directions and study limitations

Research in the context of disease outbreak situations may pose challenges to operations. Researchers can conveniently integrate online platforms to assist. Furthermore, studying comparisons in various diverse industries is advisable to analyze the significance and production requirements of goods and the diversity of products an organization can handle in response to changes and consumer perceptions of product differentiation. Additionally, comparing the attitude factors of entrepreneurs in different food industry formats toward negative and positive organizational survival is necessary. Alternatively, alternative analysis methods using different software programs for comparative analysis might be employed to assess and generate model fit comparisons. Other programs like LISREL, M-plus, or PLS-Graph should be employed. One of the study's limitations is that data were collected from only 360 entrepreneurs in the Thailand food retail business; this represents a partial population of the food retail business in Thailand, hence limiting the generalizability of the results beyond the context of the study and other countries. There was also a limitation arising from using self-reported survey questionnaires, which introduced the possibility of response bias, where respondents may fill the questionnaires with socially desirable responses instead of accurate responses, which is the objective for the data gathering procedure. This can affect the study data reliability. Another limitation is the use of cross-sectional model, where data is collected at a specific reference point; this approach does not take into account changes that occur over time, which was observed during the pandemic as health advisories were revised and updated when more data is available, and health authorities understand the virus better. Longitudinal studies are suggested to mitigate this limitation in future studies.

5. Conclusions

This study examines the factors that impact the survival of food retail organizations in Thailand amid the COVID-19 pandemic. It also aims to develop a framework that identifies the key factors influencing the survival of food retail businesses in Thailand during this challenging period. This study reviewed relevant literature and developed a conceptual framework for the research, including constructing a questionnaire as a data collection tool, data analysis, and testing research hypotheses using statistical analysis, causal relationships, and Structural Equation Model (SEM). The study examined concepts, theories, books, references, and related research concerning latent variables, mediating variables, and outcome variables. The research findings reveal that retail businesses were significantly impacted by the pandemic. Ultimately, business modification and acclimatization under these circumstances is crucial for survival. Effective adaptations include transitioning to sales using online platforms, adjusting products and services to fit the situation, cost reduction, overseeing cash flows, and maintaining business resilience. Business survival in various environments relies on efficient adaptations and change management, especially during challenging economic conditions. Additionally, financial aspects, access to capital, and adherence to regulatory policies supporting organizations play roles. Seeking innovative marketing strategies suitable for crisis situations is also essential. Thus, entrepreneurs must adapt and enhance competitive strategies to ensure organizational survival.

5.1 Recommendations

Based on the study findings and the ensuing discussion emanating from the results, the authors offer the following recommendations; business operators in the retail food industry can utilize influential factors for adaptation in the COVID-19 situation developed from empirical data to formulate preliminary strategic guidelines to enhance competitive capability and organizational survival within the food retails business. Additionally, considering the effectiveness level and organizational performance in resource procurement and management, resulting from intricacies related to adhering to environmental context ideas/theories in operations. Educational institutions and various scholars can apply relationship-oriented causal factor data influencing the survival of organizations within the Thai food retail business industry amidst the pandemic situation as a case study across academic and industrial sectors. For instance, by utilizing technology for production augmentation, organizations can continually plan for contemporary technology usage requirements and incorporate technology for communication or accessing target customer groups. Business management aspects that can adapt for survival in the COVID-19 pandemic era, characterized by rapid impacts and changes in economic conditions, can be applied to organizational structures. This includes addressing weaknesses, enhancing existing strengths, and further developing the organization's strength.

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