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DRIVING PERFORMANCE IN RETAIL SMEs: THE ROLES OF ENTREPRENEURIAL ORIENTATION, TOTAL QUALITY MANAGEMENT, AND KNOWLEDGE MANAGEMENT

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ABSTRACT

This study examines the influence of entrepreneurial orientation (EO), total quality management (TQM), and knowledge management (KM) on organizational performance (OP) in small and medium-sized enterprises (SMEs) in Thailand's retail sector. EO, TQM, and KM are highlighted as key internal capabilities and assets that contribute to business success according to the resource-based view (RBV). This quantitative study was conducted on 353 participants using proportional stratified sampling. The participants, comprising owners and senior managers of retail SMEs, including convenience stores, traditional shops, and supermarkets, were surveyed using a structured questionnaire. The instrument model was empirically tested using covariance-based structural equation modeling. This study contributes to theory development by synthesizing EO, TQM, and KM under the RBV framework to explicate performance in the context of retail SMEs. It reports that EO positively influences TQM, KM, and OP; TQM positively affects KM and OP; and KM significantly influences OP. This study shows that EO, TQM, and KM are important for enhancing business performance. It also provides managerial guidelines for SMEs to remain competitive and capable of pivoting with the rapidly evolving retail landscape.

Keywords: entrepreneurial orientation; total quality management; knowledge management; organizational performance

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1. INTRODUCTION

Small and medium-sized enterprises (SMEs) and retail businesses play a crucial role in the global economy by creating employment and innovation and promoting sustainable economic growth. SMEs account for over 90% of businesses worldwide and offer a significant number of jobs, particularly in developing countries, where they are the driving force of the economy and communities. Furthermore, they exert positive environmental impacts on development (International Trade Centre, 2021).

The retail industry involves more than merely selling goods. It changes the way people shop, drives marketplace trends, and creates bonds between producers and end consumers. It stabilizes the economy by connecting supply chains and circulating money (Lu & Xiang, 2020). These industries can grow markets, share revenues fairly, and create new opportunities to fuel sustainable and stable growth.

SMEs and the retail industry are important components of Thailand's economy. They provide jobs, income, and other benefits to communities. Retailers serve as a vital link between producers and customers while SMEs contribute to innovation, local development, and the entry of new entrepreneurs. These components enable the country to deal more effectively with challenges and ensure steady, long-term development. By connecting local businesses to the international market, SMEs enhance Thailand's ability to compete globally (Office of Small and Medium Enterprises Promotion, 2020).

Since the COVID-19 outbreak, the Thai retail industry has not been growing as projected. Efforts to recover are met by limited consumer spending and shifts in buying patterns that prevent the industry from finding its footing. Meanwhile, SMEs have experienced significant hardships, including lower sales, fewer customers, and higher costs. Large companies that have the resources to adapt more easily have fared better. However, the retail recovery has been spotty and sluggish overall. This condition highlights the importance of examining variables or components that can revitalize the performance of organizations and bring stability to the industry and ensure future growth (Trade and Services Statistics Group Economic Statistics Division, 2022). For SMEs, enhancing business productivity is no longer a choice; it is a matter of survival, which is affected by multiple factors.

Entrepreneurial orientation (EO) has received significant attention for its influence on firm performance. EO is a management approach that focuses on processes, decision-making, and activities directed toward the attainment of organizational objectives (Dadzie, Agyapong, & Suglo, 2020). Equally essential is effective knowledge management (KM). Through KM, employee curiosity and learning are nurtured, thereby developing the organization's human capital, knowledge, skills, and experiences needed for success. KM refers to the process of transferring the personal knowledge that one person has gained through their work or experience and is difficult to memorize to an archival knowledge that is easy to recall and be used by others (Sensuse et al., 2015).

Another factor is total quality management (TQM). TQM is less common among some players in Thailand's retail sector than among manufacturers. One reason for this difference is that most

retailers lack sufficient management skills and experience (Krittanathip, Rakkarn, Cha-um, & Timyaingam, 2013). Hence, the implementation of TQM concepts in retail companies must be investigated as the use of TQM leads to better operations, improves ability to adapt to supply and demand changes, and boosts company performance (Awan, Raouf, Ahmad, & Sparks, 2009).

In general, EO, KM, and TQM have been treated separately, and no research has explored the impact of these constructs on organizational performance (OP), especially in the context of retail SMEs in Thailand. To address this gap, the current study focuses on the conjoint effects of EO, TQM, and KM on performance in this industry. In particular, this study investigates how EO influences TQM, KM, and OP and how these variables predict the performance of Thailand's retail SMEs.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. EO

According to the reviewed literature on EO concepts and theories, the traits of an entrepreneur are behavioral patterns associated with organizational activities. EO includes management and decision-making as it pertains to creating a productive and effective organization. Miller (1983) analyzed EO and classified it into three dimensions: proactiveness, risk-taking, and innovativeness. Subsequently, this concept was advanced by Lumpkin and Dess (1996), who created two new dimensions, namely, autonomy and competitive aggressiveness, thereby inflating the number of dimensions to five. They defined EO as an organization's strategy concept and linked it to a form of decision-making (Hughes, Hughes, Hodgkinson, Chang, & Chang, 2022). They also asserted that EO helps organizations deal with change and uncertainty by enabling them to respond rapidly and effectively. Therefore, EO has received considerable attention from researchers and academics. Anderson and Eshima (2013) elaborated that EO is positively related to entrepreneurs and describes their behavior, thoughts, and strategic decisions. The present study employs the model developed by Lumpkin and Dess (1996) as it includes the most significant number of managerial behaviors in an organization. This model has also been widely accepted and used in other studies, such as those by Al-Dhaafri, Al-Swidi, and Yusoff (2016), Nasution, Rafiki, Lubis, and Rossanty (2021). Khan, Roy, and Pervin (2022) investigated small businesses as a catalyst for women to enter and return to entrepreneurship and reported that an entrepreneurial mindset encourages the entry into entrepreneurship and facilitates business success. Kittawat Boonthavee (2021) proved that EO exerts an impact on OP in a broad context, especially in complex and uncertain times. Moreover, the study indicated that EO has a substantial impact on firm performance.

2.2. TQM

Today's market offerings tend to perform similarly, and TQM is often the only way to differentiate an offer in the market from the hearts and minds of customers, ultimately translating to operational action and organizational benefits. TQM is a dedicated approach for an organization to serve customers with high-quality services and products, thus helping organizations grow. It is widely used in many fields, particularly manufacturing. However, studies on TQM in retailing are rare (Krittanathip et al., 2013). The definitions of TQM vary across studies depending on the context.

For instance, Sadikoglu and Olcay (2014) conceptualized TQM as a managerial philosophy focused on persistent perfection. Bon and Mustafa (2013) emphasized the role of people and processes in creating customer satisfaction. Oakland (2012) defined TQM as a system of activities conducted in an organized and systematic manner to achieve quality objectives in an organization. Certainly, the TQM approach seems to vary according to the organizational context. In the current study, the methodology is based on the approach of Santos-Vijande and Alvarez-Gonzalez (2007), who categorized TQM into five themes: leadership, which examines the extent to which an organization's leadership engages in and supports quality improvement efforts; resource, which involves focusing on the best use of resources; process, which involves managing daily activities consistently, with a focus on improving over time; strategy, which reflects in highly effective organizations with clear and quality-focused goals; and people, which involves developing employees such that they have the capability, knowledge, and attitude to perform their work at a high level.

2.3. KM

KM has been recognized as vital for global organizations as knowledge enhances work efficiency, particularly in an ever-changing environment. Nonaka and Takeuchi (1995) launched KM as an approach to exploit the knowledge of an organization to achieve its purpose. Teece (1998) also mentioned that KM is critical for the development of long-term strategies and enables an organization to remain competitive over time. North and Kumta (2025) explained that KM is an organized effort in which people at all levels—individuals, teams, and organizations—collaborate to produce, share, and employ knowledge to achieve objectives. Dalkir (2013) noted that KM allows efficient resource utilization and enhances performance. In the current study, we adopted KM from a framework with four central activities: creating, storing, sharing, and applying knowledge. These concepts are derived from Nonaka and Takeuchi (1995) whose template has been utilized in various iterations over the past few years. For example, Abbas (2020) applied such template to examine KM practices in Pakistani organizations, and Cordeiro, Oliveira, and Sanchez-Segura (2022) applied it to the service context. Two issues related to knowledge creation can also be found in the work of Alavi and Leidner (2001) on KM systems.

2.4. OP

OP represents a critical dimension of an organization's success in achieving its strategic objectives, particularly in competitive markets. Yamin, Gunasekaran, and Mavondo (1999) argued that OP is a measure of an organization's capability to meet its marketing and financial goals. Similarly, Mahmood, Qadeer, and Ahmad (2015) noted that OP is a standard of success and that OP determines how well an organization achieves its objectives and utilizes resources efficiently. The balanced scorecard (BSC), developed by Kaplan and Norton (1992), is a widely used comprehensive system for an organization's assessment. It includes financial (usually current assets, working capital, or cost) and nonfinancial (customer satisfaction, internal processes, learning, and growth) measures across four balanced dimensions: financial (short- and medium-term financial outcomes), customer (customer satisfaction, channel satisfaction, and customer value), internal process (efficiency, effectiveness, quality, and innovation), and learning and growth (people satisfaction, people growth, and people productivity). In particular, the BSC provides organizations with a structured way to understand how they perform and develop

strategies for growth. Several researchers have used the BSC to measure OP. For example, Kantur (2016) investigated how entrepreneurship characteristics influence OP by focusing on financial and nonfinancial performance measures (e.g., profit, sales growth, and product quality). Al-Dhaafri and Alosani (2020) used the BSC to measure performance, similar to Phusavat and Manaves (2008) in their research on OP in Thailand. The current study also used the BSC framework by Kaplan and Norton (1992).

2.5. EO and TQM

The relationship between EO and TQM has been explored in various organizational contexts. For instance, Sahoo and Yadav (2017) observed similar dynamics in Indian SMEs, while Wahyuni, Sutanto, and Supadi (2021) noted that EO strengthens quality management efforts in Bali's fishing industry. Al-Dhaafri et al. (2016) examined police departments in Dubai and reached similar conclusions. Sawaean and Ali (2020) examined SMEs in Kuwait and found that EO plays an active role in shaping their quality management processes. These studies collectively suggest that EO does not merely support innovation or competitiveness on its own; it may also help build the structures and processes needed for quality management. Therefore, the first hypothesis for this study is formulated as follows:

Hypothesis 1: EO positively influences the TQM of SMEs in Thailand's retail industry.

2.6. EO and KM

The relationship between EO and KM has been studied in various contexts. For example, Adam et al. found that EO positively influences KM in online businesses in Malaysia, while Nasution et al. (2021) reported similar results in Indonesian SME businesses. These show the dimensions of EO (innovativeness, risk-taking, proactiveness, autonomy, and competitive aggressiveness) contributing to KM. Additionally, Madhoushi et al. (2021) studied Iran and found that EO significantly supports KM, as did Khan et al. (2021). In Thailand, Boonthawee et al. (2021) have focused on organic agricultural entrepreneurship and found that EO plays an important role in knowledge acquisition, knowledge sharing, and knowledge application.
All studies indicate that EO contributes to KM and serves as a foundation for efficient knowledge management. Therefore, the second hypothesis is formulated as follows:

Hypothesis 2: EO positively influences the KM of SMEs in Thailand's retail industry.

2.7. EO and OP

Several studies support that EO has a positive influence on OP. For example, Kusa et al. (2023) studied interior business entrepreneurs in Poland, Kantur (2016) in Turkey, and Prima Lita et al. (2020) in Indonesia. Meanwhile, Al-Dhaafri and Alosani (2020) in Dubai and Chen and Wu (2014) in China apply this concept, even though they found a conflict in the competitive aggressiveness dimension. According to the literature review, we can conclude that EO has a positive influence on OP in many business sectors, suggesting that enhancing EO can lead to improved OP. Therefore, the following hypothesis is proposed:

Hypothesis 3: EO positively influences the OP of SMEs in Thailand's retail industry.

2.8. TQM and OP

Many studies show that TQM positively influences OP in various sectors. Santos-Vijande and Alvarez-Gonzalez (2007) studied in Spain. Acquah et al. (2022) reported that the dimension of TQM (leadership, knowledge management, training, and strategic planning) plays a vital role in enhancing OP in medical centers in Ghana. Sadikoglu and Oclay (2014) found the same benefit of TQM. Singh et al. (2018) also found that SMEs in India that adopt the TQM approach have better firm performance. In Vietnam, Panuwatwanich and Nguyen (2017) studied construction businesses and found that TQM is an important element in achieving better performance. Therefore, the fourth hypothesis is formulated as follows:

Hypothesis 4: TQM positively influences the OP of SMEs in Thailand's retail industry.

2.9. TQM and KM

Several studies have pointed out that TQM positively influences KM in different industries. For example, Abbas and Kumari found that TQM has a positive influence on KM in businesses of different sizes in the United Kingdom. Qasrawi et al. (2017) reported that TQM enhances knowledge acquisition, knowledge sharing, and knowledge application in Jordan. Loke et al. (2012) found that TQM enhanced ISO-certified businesses in Pakistan. Based on these findings, the following hypothesis is proposed:

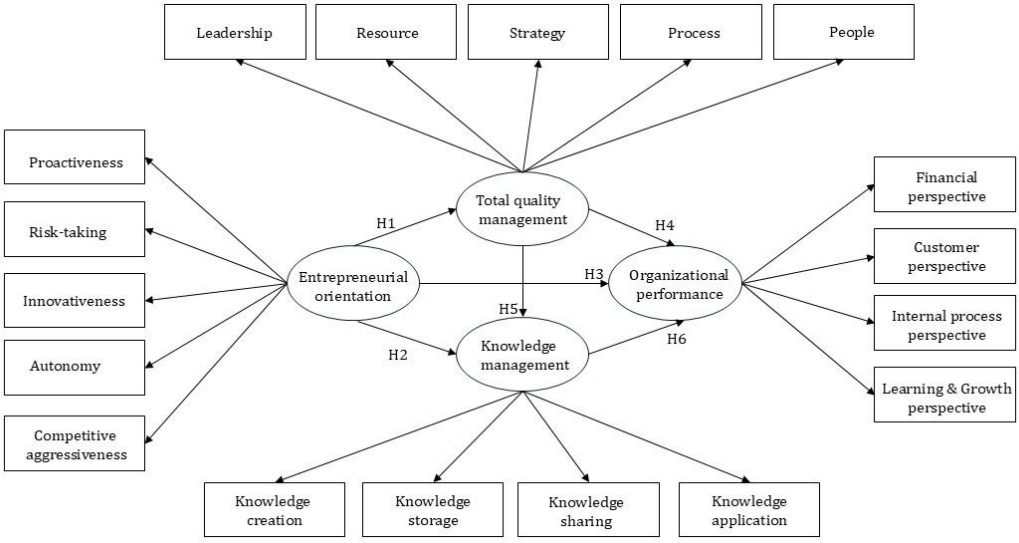
Hypothesis 5: TQM positively influences the KM of SMEs in Thailand's retail industry.

2.10. KM and OP

Many studies support the notion that KM positively influences OP, which enables the organization to leverage knowledge to advantage its strategy through informed decision-making, the generation of innovative ideas, and overall efficient performance. For example, Payal et al. (2019) reported that adopting KM can enhance firm performance in technology businesses in India. Kokkaew et al. (2022) obtained similar results in manufacturing industries in Thailand. Migdadi (2020) found that KM contributes to better performance in Jordan. Recent studies, such as Silva (2024) and Mohaghegh et al. (2024), also noted that KM contributes to flexible decision-making and efficient performance. Meanwhile, in Indonesia, Restuputri et al. (2024) reported that uncertainty alone does not enhance managerial capability, but KM can convert uncertainty to better performance. In conclusion, KM seems to be a factor in driving performance. Based on these findings, the following hypothesis is proposed:

Hypothesis 6: KM positively influences the OP of SMEs in Thailand's retail industry.

Figure 1: Research Model



3. MATERIALS AND METHODS

3.1. Sample and Data Collection

This study focused on the owners or top executives of small retail companies in Thailand that were legally established in 2022 (except for microenterprises). In particular, the Office of Small and Medium Enterprises Promotion (2024) reported 5,363 companies. This study followed Hair, Black, Babin, and Anderson (2010), who suggested having 10-20 cases per observed variable. Using the upper bound of this range with 18 observed variables, this resulted in a sample size of 360. An extra 10% was included to account for incomplete or unusable responses, resulting in a sample size of 396. A business registry and proportional stratified random sampling were used. A total of 396 surveys were sent, with subsequent reminders made via email and telephone. Data were collected from March to May 2024. After discarding incomplete submissions, straight-lining respondents, and outliers, 353 completed questionnaires were included for analysis.

3.2. Measures: Content Validity and Internal Consistency Analysis

The review of the literature, theories, and related research provided a strong conceptual framework for this quantitative study. The survey was divided into six sections. The first section covered demographic information while the rest covered the following measures: EO dimensions according to Lumpkin and Dess (1996), TQM (leadership, resources, strategy, process, people) based on Santos-Vijande and Alvarez-Gonzalez (2007), KM (knowledge creation, storage, sharing,

application) based on Cordeiro et al. (2022), OP (finance, customer, internal process, learning/growth) based on the BSC by Kaplan and Norton (1992), and open-ended questions about influencing factors related to business performance. To facilitate the alignment between the theoretical constructions and measurements, sample items related to each domain of the questionnaire are provided below:
EO: "The agency looks for things that bring it a competitive edge."
TQM: "The company's work process is in a constant state of improvement in order to deliver quality products to the customer."
KM: "The organization uses its knowledge to make better decisions and solve problems more effectively."
OP: "There's been growing profit from the business' operations."

EO, TQM, KM, and OP were measured on a 5-point Likert scale (from 5 = strongly agree to 1 = strongly disagree) to gain structured insights into the significant factors affecting business performance. Three experts assessed content validity, and a trial to investigate reliability was performed with 30 Thai wholesale business owners for further refinement. The Cronbach's alpha coefficients of the reliability of the scores were between 0.80 and 0.91. This range supported some degree of internal consistency between the items for each latent variable, suggesting that the items consistently measured their proposed constructions.

3.3. Data Analysis Technique

To test the relationships between intercorrelated structures, this study used covariance-based structural equation modeling (CB-SEM) in AMOS 24. This approach was selected based on its capability to handle complex internal structures, including various latent structures and observed variables, and the possibility of concurrently estimating the measurement and structural parts. CB-SEM further assesses model fit by means of goodness-of-fit indices such as relative chi-square (χ^2/df), comparative fit index (CFI), Goodness-of-Fit Index (GFI), normed fit index (NFI), Tucker–Lewis index (TLI), root mean square residual (RMR), and root mean square error of approximation (RMSEA), which provide an accurate picture of model adequacy (Hair et al., 2010).

4. RESULTS

4.1. Demographics of the Sample (n = 353)

To situate the sample from which the findings are reported, we present descriptive statistics on the sample demographics. This variable includes personal information about the respondents and their businesses, including their age, gender, education, business tenure, and size in terms of their employment (people). Such information can serve as the basis for classifying the size of their retail establishments, locations, and types of organizations. Knowledge of these features places the findings of the study into context and explains how various forces can influence organizational outcomes. The sociodemographic characteristics of the sample are reported in Table 1.

Table 1: Demographics of the Sample (n = 353)

	(%)		(%)
Personal information of respondents			
Gender		***Education Level***	
Male	66.9	Under bachelor's degree	9.9
Female	33.1	Bachelor's degree	55.2
Age		Above bachelor's degree	30.9
Under 25 years old	1.4	Vocational diploma, associate degree, etc.	4.0
26–30 years old	8.2		
31–35 years old	15.0		
36–40 years old	27.8		
41–45 years old	20.7		
46–50 years old	22.4		
Over 50 years old	4.5		
General information about SMEs			
Location of Establishment		***Type of Retail Establishment***	
Central region	47.3	Supermarkets	7.6
Northeastern region	19.3	discount stores, supercenters, hypermarkets	1.4
Northern region	15.3	convenience stores, minimarts	11.9
Eastern region	9.6	traditional grocery stores	10.5
Southern region	8.5	Other retail sale in non-specialized stores	68.6
Amount of funds		***Business Duration***	
> 50 million baht	88.1	> 3 years	9.9
< 50 million baht	11.9	3-6 years	55.2
Employment Size (people)		7-9 years	30.9
> 30 people	88.1	10 years or more	4.0
<30 people	11.9		

4.2. Descriptive Statistics of Variables and Correlation Matrix between Observed Variables

The descriptive statistics for each observed variable (mean, standard deviation, skewness, and kurtosis) are presented in Table 2. Skewness values between ±1 were defined by Schumacker and Lomax (2004) as close to normal distribution and are acceptable for most social science research projects. They also noted that kurtosis values would have to be within ±1.5 for a distribution to be close to a normal one. If the values are higher than these levels, they can hint at data not being sampled from a normal distribution, which might affect the assumptions around some statistical analyses. For all the data in this study, the skewness and kurtosis show that the distribution of the data is close to a normal one, and most of the variables are close to (but larger than) the ±1 lines. Table 2 shows correlations between the observed variables, with their statistical relationships being significant at the $p < 0.01$ level. However, according to Cohen (1988), these values should not be classified as strong positive correlations. A negative association of 0.5 or less indicates that the two variables are likely to move in opposite directions with an enormous degree of association. This close relationship suggests that when one of the variables is modulated, the other is likely to change, indicating a significant relationship. High correlations (above 0.5) between variables are crucial for interpreting the relationships between the constructs in the current study. All the data in Table 2 are considered acceptable and support the present theoretical model.

Table 2: Descriptive Statistics of Variables and Correlation Matrix between Observed Variables

	PAT	RTK	INV	ATM	CPA	LDS	RSC	PRC	STG	PPL	KC	KST	KSH	KAP	FIN	CTM	INT	LAG
PAT	1																	
RTK	.686**	1																
INV	.699**	.682**	1															
ATM	.717**	.660**	.763**	1														
CPA	.752**	.744**	.808**	.795**	1													
LDS	.601**	.638**	.648**	.648**	.676**	1												
RSC	.601**	.564**	.629**	.624**	.698**	.726**	1											
PRC	.594**	.585**	.635**	.608**	.684**	.769**	.756**	1										
STG	.604**	.602**	.588**	.583**	.659**	.747**	.759**	.759**	1									
PPL	.645**	.636**	.664**	.663**	.717**	.821**	.814**	.819**	.810**	1								
KC	.563**	.537**	.529**	.460**	.541**	.470**	.520**	.524**	.490**	.495**	1							
KST	.599**	.567**	.567**	.568**	.647**	.522**	.573**	.569**	.587**	.572**	.765**	1						
KSH	.594**	.539**	.539**	.558**	.614**	.566**	.613**	.543**	.557**	.593**	.702**	.737**	1					
KAP	.653**	.571**	.653**	.623**	.663**	.584**	.629**	.621**	.610**	.623**	.824**	.837**	.817**	1				
FIN	.521**	.594**	.614**	.569**	.569**	.527**	.551*	.562**	.519**	.569**	.492**	.530**	.449**	.565**	1			
CTM	.515**	.549**	.612**	.563**	.563**	.585*	.566**	.571**	.518**	.568**	.467**	.511**	.506**	.605**	.714**	1		
INT	.661**	.520**	.644**	.641**	.641**	.632**	.655**	.640**	.579**	.676**	.558**	.564**	.633**	.656**	.635**	.673**	1	
LAG	.688**	.619**	.727**	.696**	.696**	.659**	.693**	.705**	.649**	.699**	.601**	.660**	.654**	.748**	.768**	.782**	.848**	1
Mean	3.27	3.19	3.38	3.14	3.28	3.33	3.35	3.36	3.34	3.42	3.44	3.40	3.40	3.26	3.35	3.30	3.36	3.22
S.D.	1.16	1.04	1.10	1.12	1.06	1.12	1.15	1.10	1.13	1.10	1.10	1.10	1.14	1.04	.994	1.05	1.10	.986
Skewness	-.091	-.269	-.468	-.296	-.441	-.384	-.317	-.473	-.387	-.337	-.397	-.362	-.350	-.316	-.373	-.448	-.297	-.362
Kurtosis	-1.034	-.717	-.842	-.468	-.905	-.923	-.923	-.387	-.817	-1.067	-.666	-.997	-.807	-1.142	-.419	-.662	-.362	-1.183

Notes: *PAT = proactiveness; RTK = risk-taking; INV = innovativeness; ATM = autonomy; CPA = competitive aggressiveness (observed variables of entrepreneurial orientation – EO). LDS = leadership commitment; RSC = resource support; PRC = process excellence; STG = Quality strategy; PPL = people engagement (observed variables of total quality management – TQM). KC = knowledge creation; KST = knowledge storage; KSH = knowledge sharing; KAP = knowledge application (observed variables of knowledge management – KM). FIN = financial perspective; CTM = customer perspective; INT = internal process perspective; LAG = learning and growth perspective (observed variables of organizational performance – OP). **p < .01.*

4.3. Reliability and Validity of the Measurement Model

The constructs' internal consistency and validity were tested using confirmatory factor analysis. Table 3 shows the factor loadings, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) related to the second-order factors. The values exceed the cutoff criteria (Hair et al., 2010). The discriminant validity results are presented in Table 4. The square root of the AVE for each construct is higher than its correlation with the other constructs (Fornell & Larcker, 1981), indicating satisfactory discriminant validity.

Table 3: Validity and Reliability Analysis

Observed Variables	Dimensions	Factor Loading	Cronbach's Alpha	CR	AVE
Entrepreneurial orientation	Proactiveness	0.827	0.948	0.932	0.734
	Risk-taking	0.797	0.924		
	Innovativeness	0.872	0.935		
	Autonomy	0.859	0.943		
	Competitive aggressiveness	0.923	0.928		
Total quality management	Leadership commitment	0.869	0.940	0.946	0.779
	Resource support	0.867	0.945		
	Process excellence	0.878	0.934		
	Quality strategy	0.863	0.948		
	People engagement	0.935	0.928		
Knowledge management	Knowledge creation	0.848	0.942	0.935	0.782
	Knowledge storage	0.873	0.936		
	Knowledge sharing	0.845	0.945		
	Knowledge application	0.966	0.915		
Organizational performance	Financial perspective	0.787	0.920	0.920	0.742
	Customer perspective	0.804	0.921		
	Internal process	0.864	0.942		
	Learning and growth	0.978	0.900		

Table 4: Discriminant Validity Analysis

	CR	AVE	EO	TQM	KM	OP
EO	0.932	0.734	**0.857**			
TQM	0.946	0.779	0.835	**0.883**		
KM	0.935	0.782	0.762	0.715	**0.884**	
OP	0.920	0.742	0.834	0.790	0.778	**0.861**

Notes: The bold numbers on the diagonal indicate the square root of the AVE.

4.4. Assessment of the Structural Model

When the structural model is estimated using CB-SEM, the initial model fits the empirical data without any covariance added between the observed variables. The assessment of the structural model using SEM reveals the following model fit indices: chi-square (χ^2) = 320.050, degrees of

freedom (df) = 129, χ^2/df = 2.481, CFI = 0.971, GFI = 0.908, NFI = 0.953, TLI = 0.966, RMR = 0.033, and RMSEA = 0.065. Contrary to the criteria of Hu and Bentler (1999), these values demonstrate an acceptable model fit.

EO has the greatest impact on TQM, KM, and OP (Table 5). EO has a direct and high influence on TQM ($\beta = 0.835$, $p < 0.001$), KM ($\beta = 0.546$, $p < 0.001$), and OP ($\beta = 0.412$, $p < 0.001$). It also has significant effect on OP through TQM and KM, summing up to 0.422 and having a total effect of 0.834. TQM affects KM ($\beta = 0.260$, $p < 0.001$) and OP ($\beta = 0.234$, $p < 0.001$), and KM has a direct effect on OP ($\beta = 0.297$, $p < 0.001$).

The direct, indirect, and total effects are shown in Table 5. The hot hypothesis testing results are summarized in Table 6 and are all statistically significant ($p < 0.001$).

Table 5: Direct, Indirect, and Total Effects

	TQM			KM			OP		
	DE	**IE**	**TE**	**DE**	**IE**	**TE**	**DE**	**IE**	**TE**
EO	0.835***	-	0.835***	0.545***	0.217***	0.762***	0.412***	0.422***	0.834***
TQM	-	-	-	0.260***	-	0.260***	0.234***	0.077***	0.311***
KM	-	-	-	-	-	-	0.297***	-	0.297***
R^2		0.698			0.601			0.76	

Notes: *DE = Direct Effect; IE = Indirect Effect; TE = Total Effect; ***p < .001.*

Table 6: Hypothesis Testing Results

Hypotheses	β	b	S.E.	C.R.	p-value	Results
H1: TQM → EO	0.835	0.897	0.023	39.821	<.001	supported
H2: KM → EO	0.545	0.423	0.087	4.852	<.001	supported
H3: OP → EO	0.412	0.190	0.053	3.569	<.001	supported
H4: OP → TQM	0.234	0.538	0.055	9.806	<.001	supported
H5: KM → TQM	0.260	0.370	0.090	4.114	<.001	supported
H6: OP → KM	0.297	0.292	0.031	9.522	<.001	supported

Squared multiple correlation (SMC) values were calculated for each endogenous variable to determine the proportion of variance accounted for by the predictors in the model. OP shows an SMC value of 0.76, indicating that the model explains 76% of the variance in OP. This substantial proportion suggests that the model is effective in predicting OP based on EO, TQM, and KM.

5. DISCUSSION

This study provides empirical evidence for the suggested links between EO, TQM, KM, and OP in Thailand's retail SME sector. The findings complement the notion that EO, TQM, and KM are interrelated and contribute to improving OP. Each hypothesis is described below in relation to previous research and theoretical constructs.

H1: EO has a positive effect on TQM. The findings reveal a significant positive relationship between EO and TQM ($\beta = 0.835$, $p < 0.001$). This result is consistent with the notion that firms managed entrepreneurially tend to use quality and innovative management practices. Similarly, Sahoo and Yadav (2017), and Wahyun et al. (2021) observed that proactive firms incorporate continuous quality improvements into their strategies. Hence, innovation, particularly in SMEs, could lead to TQM.

H2: EO has a positive effect on KM. The influence of EO on KM is proven to be positive in this study ($\beta = 0.545$, $p < 0.001$), indicating that firms accumulate, collect, and apply knowledge efficiently under the strong influence of EO. This result is consistent with the findings of Al-Dhaafri et al. (2016), and Sawaean and Ali (2020). Entrepreneurial companies are thought to be more responsive to change and support corporate innovation, which helps to develop knowledge processes. As KM associates strategic capabilities with the best outcomes, the finding supports the proposition that EO lays a fertile environment for KM.

H3: EO has a positive impact on OP. EO is found to be significantly related to OP ($\beta = 0.412$, $p < 0.001$), confirming the role of entrepreneurial thinking in enhancing business success. The findings are aligned with those of Kusa et al. (2023), Kantur (2016), and Lita et al. (2020), who found that EO stimulates innovation and adaptability. These characteristics enable firms to compete and map out long-term goals.

H4: TQM has a positive impact on OP. The relationship between TQM and OP ($\beta = 0.234$, $p < 0.001$) is positive but weaker than that between EO and OP. This result is consistent with those of Santos-Vijande and Alvarez-Gonzalez (2007), Sadikoglu and Olcay (2014), and Singh et al. (2018), who also found that performance is achieved because of the practice of quality. Although the gains may be small, sound quality systems and leadership are significant in driving operational and customer satisfaction improvements.

H5: TQM has a positive effect on KM. TQM has a positive effect on KM ($\beta = 0.260$, $p < 0.001$), suggesting that good quality systems enable firms to manage knowledge better. This result aligns with those of Abbas and Kumari (2021), Qasrawi et al. (2017), and Loke et al. (2012). A positive quality culture fosters learning and knowledge sharing, thus strengthening the organization's capacity to improve and innovate.

H6: KM has a positive effect on OP. The findings of this study reveal that KM has a significant positive relationship with OP ($\beta = 0.297$, $p < 0.001$). This result is consistent with those of Payal et al. (2019), Kokkaew et al. (2022), and Migdadi (2020), who reported that best knowledge practices contribute to decision-making and innovation. Similarly, Silva and Fain (2024) demonstrated that knowledge practices improve performance during times of crisis and have the potential to make organizations more resilient and responsive.

6. CONCLUSIONS

Three dimensions, namely, EO, TQM, and KM, were identified as factors significantly associated with the performance of retail SMEs in Thailand. Between them, they explained much of the variation in OP (76%). Of the three variables, EO had the most significant impact on OP, with a

total effect of 0.834. This finding supports the argument that innovativeness, proactiveness, risk-taking, autonomy, and competitive aggressive behavior—the primary dimensions of EO—are significant for firm success. In terms of EO, aggressive competitiveness was the indicator with the largest factor loading for the observed variable, indicating that it plays a key role in driving companies to outperform competitors and capture market opportunities. The total effect of TQM on OP was 0.311, affecting performance through both direct and indirect routes. Its constituent factor "people" had the most power. This result emphasizes the crucial role of manpower in quality efforts. KM also significantly contributed to OP, with a total effect of 0.297. The highest weight in KM was associated with knowledge application, indicating that how well firms utilize their existing knowledge also significantly influences the quality of their decision-making and operational vitality. These results provide empirical evidence that EO, TQM, and KM are interconnected strategic capabilities that contribute to OP.

6.1. Theoretical Implications

The excellent fit indices of the measurement model confirm the relevance of the constructs in the study's context. The results are consistent with findings from other industries, suggesting that EO, TQM, and KM are robust predictors of OP and broadly applicable across sectors.

EO was measured using five dimensions: proactiveness, risk-taking, competitive aggressiveness, innovativeness, and autonomy. Collectively, these factors capture a firm's strategic posture toward opportunity-seeking, risk management, and innovation, which are core behaviors to sustain a competitive advantage. TQM was assessed using leadership, strategy, people, process, and resource, thus reflecting the essential elements of quality-oriented management, including employee involvement, process improvement, and responsiveness to customer needs. KM was evaluated along four dimensions: knowledge creation, storage, sharing, and application. These components represent how firms generate, retain, and use knowledge that is central to organizational learning and adaptability. OP was measured using four perspectives, namely, financial, customer, internal process, and learning and growth, thereby providing a balanced view of performance outcomes across financial and nonfinancial areas.

Confirming the validity of these indicators reinforces their theoretical and practical value. This study extends the applicability of EO, TQM, KM, and OP to the retail SME context and strengthens their positions as key performance drivers in dynamic business environments. Furthermore, this study adds to the resource-based view (RBV) theory by providing empirical data on how intangible assets, such as entrepreneurial thinking, quality practices, and knowledge, can be built and used together to give businesses a lasting competitive edge. EO plays a key role in driving quality and knowledge efforts, which then help improve business performance. This result supports the RBV by showing that internal strengths must be regularly adjusted to match changes in the business environment.

This study also enhances the theoretical link between EO, TQM, and KM by showing that they work better when viewed as connected parts of the same system rather than as separate elements. While earlier studies often looked at these areas individually, this study provides a full picture of how they support each other and collectively help improve performance. It thus helps build stronger theories in the fields of strategic management and SME development.

6.2. Practical Implications

The implication for enhancing OP is that the development of EO, TQM, and KM must be reinforced. These lessons provide tangible guidance for Thailand's retail operators on how to be more robust and flexible in an ever-changing market. In the context of EO, increasing competitive aggressiveness involves remaining informed about market changes, monitoring competitors, and acting promptly (through attention-gaining promotions, unique product features, or price strategies to attract more customers). In TQM, human factors emphasize the role of human development. Retailers must equip employees with the right training, tend to quality control and customer service, facilitate open lines of communication, and involve teams in shaping how processes are executed. These efforts contribute to service quality and increase the level of customer satisfaction. Knowledge application is also a critical aspect of KM. Companies can improve it by introducing knowledge systems, having well-written product guides that are user-friendly and not overly technical, and encouraging knowledge sharing across teams (a culture of insight). These actions help facilitate informed decision-making and increase operational efficiency.

6.3. Study Limitations and Future Research

This study has some limitations. First, it does not provide a clear-cut sign to adopt TQM in retail, which seems to be problematic in making TQM effective for retail. Furthermore, because the analysis was based on self-reported survey data, possible response biases might have affected the accuracy of the results. These limitations should be considered when interpreting the results of this study. In the case of retail firms, future research may focus on the indirect effects of the results on EO, TQM, KM, and OP, or include other interesting variables. A comparative investigation of these factors would be meaningful. A qualitative research approach might provide further insights into the forces behind OP and the ways in which these forces influence performance in various business contexts.

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