

# Influence of Entrepreneurial Orientation and Total Quality Management on Organizational Performance of Pharmaceutical SMEs in Thailand with moderating role of Organizational Learning

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## ABSTRACT

Performance is a serious concern for manufacturing SMEs, especially for pharmaceutical SMEs in Thailand. Specifically, pharmaceutical SMEs face challenges regarding the enhancing performance by application of total quality management and entrepreneurial orientation. This study envisioned to assess the entrepreneurial orientation and total quality management on organizational performance of pharmaceutical organizations in Thailand. This study also aimed to test the moderating role of organizational learning. To study the proposed association of variables, the data was gathered from the owners and managers of Thai pharmaceutical small and medium firms. This study concluded that entrepreneurial orientation and total quality management are the factors that significantly enhance the performance of pharmaceutical organizations in Thailand. Findings of the study demonstrate that organizational learning significantly moderate the relationship of TQM with performance of pharmaceutical organizations but it does not moderate the link of entrepreneurial orientation. The theoretical contribution of the present study lies in its use of

organizational learning as a moderator of the relationships of entrepreneurial orientation, total quality management, and pharmaceutical SMEs' performance. From the practical perspective, the key contribution of this study is that pharmaceutical SMEs in Thailand may clearly appreciate the benefits of devoting greater attention to the implementation of entrepreneurial orientation, total quality management, and organisational learning to attain a sustained competitive advantage.

**Keywords:** TQM, Organizational Performance, Entrepreneurial Orientation, Pharmaceutical SMEs.

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## INTRODUCTION

Small and medium-sized enterprises (SMEs) are regarded as the key facilitators of financial development, competitiveness and employment generation in the settings of both developing and developed countries (Tuck, 2014; Kaliappen, Nu'Man, & Jermsittiparsert, 2019). It is also generally accepted in both theory and practice that SMEs are used as engine for solving socio-economic problems such as unemployment, poverty alleviation. For example, SMEs have been regarded crucial for financial development with providing jobs to the 88.8 million employees and by producing €3,666 trillion of valued added that represent the 28 percent of GDP with regard to the 28 member nations of European Union (EU) (Muller et al., 2014). Relatedly, the role of SMEs in the GDP and employment of high-income countries, such as Australia, Austria, Canada, and Germany, were 55 percent and 65 percent, respectively. It is also estimated that in the United Kingdom (UK), SMEs contribute 60 percent to total employment and about 47 percent of all private sector turnover. It has also been reported that in upper middle income countries, SMEs are important economic agents for growth (Pail, 2015). In Southeast Asia, SMEs are integral to ASEAN economic integration, providing approximately 80 percent of employment, and contributed as much as 50 percent to the GDP, as well as significantly constituting more than 96 percent of enterprises in the region (Rosli et al., 2015). In

contrast to the aforementioned countries in developed and emerging economies, the SMEs contributed 46 percent in the GDP of Thailand in 2015 (Charoenrat & Harvie, 2014).

International Monetary Fund (IMF) statistics represent that GDP of Thailand with respect to Purchasing Power Parity (PPP) enhanced to \$1.1 trillion in the year 2016 that characterise Thailand as the another largest country of Southeast Asia subsequently Indonesia that has a GDP PPP of \$3 trillion. Thailand's GDP rose with the rate of 3.2% in comparison to the 1.6% increase of US and 2% of the European Union (IMF). According to the Asian Development Bank, Thailand's GDP has the potential of growth about 3.5% and 3.6% in the years 2017 and 2018 respectively. Pharmaceutical industry of the Thailand has the worth of \$4.4 billion in 2012 that has the highest worth in the market of Southeast Asia (Urias, 2017). Destroying floods of 2011 bounced back the market but is now growing with the rate of about 9 percent annually. With the same growth rate, Thailand's pharmaceutical industry should attain worth of \$9 billion till the year 2020. Although Thailand remains Asian's biggest economy, evidence has shown that business enterprises, including SMEs have been facing challenges, such as entrepreneurial orientation deficiencies, poor market orientation, lack of competent management, intense competition, low demand for product and service lack of financial support, lack of training and experience, unfriendly business

environment, and limited capacity for innovations, among others (Aigboduwa & Oisamoje, 2013; Shehu & Mahmood, 2014).

Pharmaceutical companies are also a part of SMEs, especially in the context of Thailand. In 2013, approximate worth of Thailand healthcare industry was \$15.8 billion that is half the size of Taiwan's total economic worth. Per-capita spending with regard to healthcare was about \$240 in 2013, and major part was spent on pharmaceuticals. With the increase of population in Thailand, urbanization becomes more popular that ultimately will require more appropriate and better healthcare facilities (Urias, 2017). The pharmaceutical industry in Thailand had a worth of more than \$4.5 billion than that of 2013 that is approximately equal to the Taiwan market. Thai drug industry has the potential to achieve the worth of double till 2020 that is already at the second largest in Southeast Asia (After Indonesia). After the introduction of Universal Coverage Scheme, local pharmaceutical firms are rapidly increasing in numbers by last 20 years (Rao, 2008). Total worth of drug exports has the value of more than \$300 million that are exported to the other Southeast Asian countries that include Vietnam, Myanmar and Cambodia. Furthermore, government is promoting biotechnology with the contemporary starter of biotech parks and big tax incentives. Although, pharmaceutical companies are also a part of SMEs, but it contribute very less in GDP of country. Therefore, it will be pertinent to understand the underlying factors that affect pharmaceutical SMEs' performance. Alarape (2013) has attributed poor entrepreneurial orientation as the major cause of decrease in growth performance of pharmaceutical SMEs in Thailand. Likewise, Ibeh (2003) associated poor entrepreneurial orientation as one of the factors responsible for non-encouraging performance of SME. Furthermore, Boso, Cadogan, and Story (2012) identified entrepreneurial orientation as one of critical as drivers of product innovation achievement among SME in developing economy. Similarly, Mantok et al. (2019) considered entrepreneurial orientation as a solution for the growth of SMEs productivity.

Furthermore, "it is generally agreed that firms that behave entrepreneurially perform better than more conservative firms" (Gupta & Gupta, 2015). While researchers have commonly agreed that businesses that operate entrepreneurially outperform their conservative counterparts. Shehu and Mahmood (2014) noted that research linking entrepreneurial orientation to SME performance in Thailand is still rare, especially in pharmaceutical sector. Hence, in an attempt to address this gap and make theoretical and empirical contributions, entrepreneurial orientation is selected and incorporated as one of the key variables in the present study. Kober, Subraamanniam, and Watson (2012) observed that lack of total quality management (TQM) adoption may be a fundamental factor responsible for poor financial performance of SMEs. Ou-Yang and Tsai (2014) emphasized the need of TQM implementation for improving operations performance multinational corporations in China. A number of other

empirical researches have also demonstrated the important role of TQM implementation for improving the performance of business enterprises (Herzallah, Gutiérrez-Gutiérrez, & Rosas, 2013; Vanichchinchai & Igel, 2011). Two main reasons justified why total quality management has been selected as one of the key variables in this study. First, while total quality management is widely applied in large listed manufacturing companies (C. B. Fotopoulos & Psomas, 2009).

There is still a lack of TQM studies on the SMEs, especially in the pharmaceutical sector (Sharma & Modgil, 2019). Second, even though SMEs are still dominant in many areas of manufacturing industries in Thailand, yet currently, there are few studies conducted regarding the association of total quality management implementation and SMEs performance. Taken together, while there are many factors that affect SME performance in Thailand, entrepreneurial orientation and total quality management have been chosen as the key independent variables because literature indicated absence of a study examining the cumulative influence of these factors, which complement and enhance each other on the outcomes of pharmaceutical SMEs. Furthermore, organizational learning has been incorporated as a moderator between the independent variables and performance of pharmaceutical SMEs because contingency theory (Sharma & Modgil, 2019), and characteristics of the environment might have a strong effect on the intensity and direction of the relationship among these three variables and SME performance. Organisational learning has been defined as the process through which the organizations learn (Lee et al., 2013). Theory and empirical studies considered organisational learning as an intangible resource for achieving sustained competitive advantage.

## LITERATURE REVIEW

### Organizational Performance

Organizational performance has been defined as "a metric that quantifies the efficiency and effectiveness of firm's past actions through the acquisition, collation, sorting, analysis, interpretation, and dissemination of appropriate data" (Lee et al., 2013). Organizational performance has also been defined "as the achievement of organizational goals related to profitability and growth in sales and markets share, as well as the accomplishment of general firm strategic objectives" (Hult, Hurley, & Knight, 2004). Organizational performance also is considered as the sustainable welfare and development of the business enterprise in relation to its competitors. Consistent with the aforementioned definitions, organizational performance in this study refers to the degree to which a firm has actually achieved its organizational goals with respect to growth in sales, increase in market share, and profitability relative to its competitors. Literature indicates that several studies have used various kinds of measures to evaluate business performance in different organizational settings. These measures can be categorized as "subjective and objective" measures of firm performance. Subjective measures of business

performance indicate that are directed at firm's key representatives that include Managers, CEOs and Directors who are inquired to rate the overall performance of their firms relative to its competitors (Zulkifli & Perera, 2011).

Khandekar and Sharma (2006) in a study among 100 senior managers in three global firms operating in India used subjective measure of business performance to examine the association of organizational learning and firm performance. The study recognised a significant positive linkage of organizational learning and business performance (as reflected by organizational efficiencies and inefficiencies in terms of corporate image, competences and overall financial performance). In the same vein, Schepers et al. (2014) inspected the moderating link of socio-emotional wealth with the association of entrepreneurial orientation and business performance of family-based manufacturing firms in Belgium. Using subjective evaluations of firm performance, the conclusions showed a significant positive linkage of entrepreneurial orientation and business performance. In addition, socio-emotional wealth was found to be a moderator with regard to the association of entrepreneurial orientation and performance.

In a more recent study, Deligianni et al. (2016) also applied subjective measures of performance, as reflected by levels of sales, market contribution, return on investment, and profit ratio to investigate the moderating role of decision-making rationality regarding association of entrepreneurial orientation and international business performance. The researcher revealed that: (1) a positive relationship of decision-making rationality and international performance, and (2) decision-making rationality was found to moderate linkage of entrepreneurial orientation and international performance. Objective measures of business performance focus on actual performance indicators, in which firm's key informants may provide absolute quantitative data on how well an organization is doing (Zulkifli & Perera, 2011). Examples of such quantitative performance data include, but not limited to return on assets (ROA), Return on Equity (ROE), overall profit margin, profit per employee, growth in assets, number of customers, number of employees trained, number of innovations, rate of good output with regard to total output, new products introduction, time required for the marketing of new products, number of customer complaint, customer response time and rate of poor quality products return (Mayer-Haug et al., 2013; Yildiz & Karakaş, 2012).

Extant empirical studies have utilized objective measure for organizational performance in different contexts. Specifically, Hussain (2004) utilized objective data to study the association of information technology investments and business performance as measured by Tobin's q (i.e., ratio of the firm's assets market worth and their exchanging cost). The study revealed that information technology investments show a positive significant relation with performance. In the same vein, Hult and Ketchen Jr (2001) used objective performance indicators to examine the linkage of market orientation,

entrepreneurship, business learning, innovativeness and the performance. The authors measured performance by using three objective indicators that include average variation in return-on investment, rate of change in income and stock price change rate for five-year average each. Consistent with resource-based theory, the findings showed that market orientation, innovativeness, entrepreneurship, as well as organizational learning exhibit significant positive relation with performance.

Relatedly, Chiu, Tsai, and Chung (2007) investigated the relationships between internal competences, outside networks and business performance by using both subjective and objective data from Korean technological firms. Both internal competences and external networks were measured using subjective data (i.e., self-administered questionnaires), while firm performance was assessed using profit-based performance indicators (i.e., ration of sales growth to the sales volume). The statistics of regression examination indicated that both internal capabilities and external networks occupy a significant role in predicting firm performance. Furthermore, using resource-based theory, Aragón-Sánchez and Sánchez-Marín (2005) studied the influence of strategic orientation and executives characteristics on performance of Spanish SMEs. Both subjective performance indicator (self-administered questionnaires) and objective data, as reflected by return on investment were utilized to empirically test the hypotheses. As expected, the results confirmed that strategic orientation and Management characteristics are positively associated with firm performance. In another study, Vega-Jurado, Gutiérrez-Gracia, and Fernández-de-Lucio (2009) examined the moderating influence of strategy, construction, human resource strategies and information systems regarding the association of entrepreneurial orientation and business performance among a sample of SMEs in the Spanish chemical industry.

Using objective measures of performance, Ferreira, Leitão, and Azevedo (2008) investigated the impact of the entrepreneurial orientation on small firm's growth (measured using two objective indicators: the sales and employment development). The results supported the hypothesized relation of entrepreneurial orientation and small firm's growth. Furthermore, while objective measures of organizational performance are less affected by social desirability bias; subjective measures of organizational performance would be utilized in the present study for the following reasons. Firstly, subjective measures are more concerned with the general performance, however objective measurement are concerned with the monetary indicators. Secondly, many researchers have argued that SME are often very reluctant to disclose details of their operation and actual financial performance, possibly due to fear of tax and competition reasons (Abubakar, 2016; Promwicit, Mohamad, & Hassan, 2013; Zulkifli & Perera, 2011). Hence, this justified the need for utilizing subjective measures of organizational performance. Finally, SME are not mandated to make their financial performance publicly, as such it would be very difficult to have access

to firms' financial data. Hence, this makes it impossible to obtain objective data of SME performance.

### **ENTREPRENEURIAL ORIENTATION (EO)**

"Entrepreneurial orientation" has certainly developed a key place in the realm of entrepreneurship over the past thirty years, research on EO has flourished for continuous improvement of theory development and measurement technique (Lyon, Lumpkin, & Dess, 2000; Wiklund & Shepherd, 2005; Yama, Mukem, & Jermstipparsert, 2019). The historical foundations of EO research can be found in the seminal works of strategic management theorists, such as (Giraud Voss, Voss, & Moorman, 2005) and (Deshpandé et al., 2013), among others. Specifically, Hooi et al. (2016), viewed an entrepreneurial firm "that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovations, beating competitors to the punch". Relatedly, Mantok et al. (2019) considered entrepreneurial firms as those characterized by innovativeness, pro-activeness, risk bearing, bold and aggressiveness strategic orientations when pursuing opportunities. In a similar pioneering work, Deshpandé et al. (2013) defined entrepreneurial orientation as a business-level predisposition and commitment to involve in behaviours that results in the variation of business or market, such as initiating and sustaining innovative ideas that lead to new products, adopting new business operations in order to expand new markets, trying out new product offerings in the face of uncertainty, encouraging employees to be independent in initiating and implementation of innovative ideas, and monitoring industry trends and competitors' best practices.

Entrepreneurial orientation has also been viewed by Pearce, Fritz, and Davis (2010) "as a set of distinct but related behaviours that have the qualities of innovativeness, pro-activeness, competitive aggressiveness, risk taking, and autonomy". Meanwhile, Alam et al. (2015) conceptualized EO as "the top management's strategy in relation to innovativeness, pro-activeness, and risk taking". In general, the above conceptualization of entrepreneurial orientation suggests that EO is multidimensional construct consisting of at least three components or dimensions. For instance, Cools and den Broeck (2007) definition suggests three perspectives of EO that are innovativeness, pro-activeness and risk taking. While other definitions of EO are equally important, yet the present study adopts Miller (2011) conceptualization of the EO because majority of entrepreneurship researchers have also adopted this earliest definition (Hughes, Hughes, & Morgan, 2007; Hughes & Morgan, 2007).

Furthermore, regardless of the conceptualization used to describe entrepreneurial orientation construct, many researchers have argued that EO could lead to superior business performance and sustained competitive advantage (Boso et al., 2015; Hasan, Syedhamzeh, & Ali, 2013; Lechner & Gudmundsson, 2014). The literature supports a positive entrepreneurial orientation with business performance relationship. For

example, Li, Huang, and Tsai (2009) concluded a statistically significant association of EO and performance in a research with the sample of 165 production, high-tech, and service firms in Taiwan. Jalali, Jaafar, and Ramayah (2014) also concluded a positive association of EO and performance in a research sample of SMEs in the manufacturing industry in Iran. Zhang, Ma, and Wang (2012) have recognised a positive and significant link of entrepreneurial orientation with performance in their study of SMEs in the northeast China. In line with the aforementioned empirical studies, a positive relation of entrepreneurial orientation and SME performance is also expected in the present study. Hence, it can be hypothesised as:

**H1:** There is a positive association between entrepreneurial orientation and performance of pharmaceutical SMEs in Thailand.

### **TOTAL QUALITY MANAGEMENT**

In contemporary globalized and competitive environment, adoption of the total quality management practices is widely recognized as an indispensable strategy for the survival and success of organizations (Abdi, Awan, & Bhatti, 2008; Yunis, Jung, & Chen, 2013). Total Quality Management (TQM) is well defined by Dahlgaard, Khanji, and Kristensen (2008) "a corporate culture characterized by increased customer satisfaction through continuous improvements, in which all employees in the firm actively participate". Furthermore, from methodological perspective, a comprehensive review of literature suggests several factors as critical for measuring and successful implementation of TQM (Porter & Parker, 1993). Vanichchinchai and Igel (2011) developed and validated Total Quality Management Practice (TQMP) measure in Thailand's automotive industry. One necessary condition for building a strong competitive position is creating a customer relationship, which help firms to understand whether the needs and expectations of their customers are met, as well as to receive feedback on how well those needs are being met (Tortorella et al., 2019). Commitment and strategy relate to the need for executives to positively inspire workers participation in quality management, as well as to have a clear idea, vision, strategies, long term aims and plans for quality betterment (Vanichchinchai & Igel, 2011). Human resource management has to do with providing training and training facilities to employees, as well as evaluating and implementing workers feedback with regard to the quality and supply chain management of a firm. Information analysis is concerned with making sure that information is shared among functional business departments, such as production department, marketing department and finance department in order to improve quality and process management (Vanichchinchai & Igel, 2011).

Nuruzzaman (2015) studied the association of TQM application and different indicators of firm performance, including employee affiliations, operational methods, client satisfaction, and increased profitability. As expected, the results confirmed the hypothesized positive relationships between TQM



implementation and all investigated perspectives of firm performance. C. V. Fotopoulos and Psomas (2010) also studied the relationships between TQM and organizational performance, by utilizing a sample of 370 ISO 9001:2000 certified Greek companies. They showed that a number of TQM factors, including quality steps of executives, employee participation, client emphasis, management of information, and quality techniques and tools improved organizational performance. Akgün et al. (2014) study among 193 firms in Turkey demonstrated that TQM had significant and positive effects on firm's financial performance. Recently, besides the aforementioned empirical studies, there are also several researches that found significant positive relationships of TQM practices and business performance (Nguyen & Chau, 2017; Pantouvakis & Karakasnaki, 2017; Sweis et al., 2016). Consistent with above discussion, a positive association between TQM and SME performance is also expected in the present study. Accordingly, it can be hypothesised as:

**H2:** There is a positive association of TQM implementation with performance of pharmaceutical SMEs in Thailand.

## ORGANIZATIONAL LEARNING

Learning organization can be defined as a specific type of organization, which is conducive or ideal for learning to take place, so that behaviour can be improved and adapted, with the aid of learning facilities (Yeo, 2008). The focus of this study will be on organizational learning. Organizational learning is important because it enables firms to increase their competitive advantage, innovativeness, as well as enhancing their effectiveness (Goh, Elliott, & Quon, 2012).

Organizational learning is often conceptualized as either unidimensional or multidimensional construct (Goh, Quon, & Cousins, 2007; Wang & Ellinger, 2011). Specifically, an earlier study by Chakrabarty and Rogé (2002) has attempted to examine dimensionality of the organizational learning construct. Following a confirmatory factor analysis using LISREL 8.30, the study has established a unidimensionality of organizational learning construct. Relatedly, drawing from a sample of 546 private and public sector organizations in Canada, Goh et al. (2007) have re-examined the unidimensionality of organizational learning construct. Using both exploratory and confirmatory factor analysis, results suggest a unidimensionality for organizational learning construct. Wang and Wang and Ellinger (2011) have come up with four dimensions of organizational learning, including information access, information delivery, information understanding, and organizational retention. Michna (2009) concluded that organizational learning is conceptualized into six orientations, namely: knowledge source, strong commitment, documentation focus, skills development focus, dissemination focus, Value-chain focus, and skills development focus. In spite of this converging evidence for the multidimensionality of the organizational learning, the present study focused on unidimensional approach for the following reasons. Firstly, unidimensional approach is opted for in this

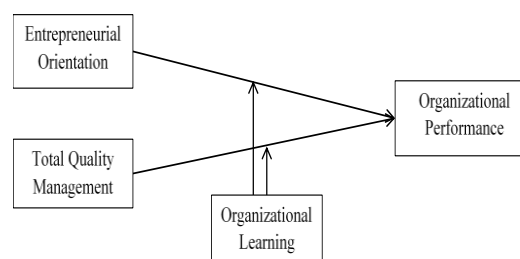
study because multidimensional constructs are associated with item redundancy, i.e., where the items within a scale are simply repeated versions of one another. Secondly, from a questionnaire administration point-of-view, organizational learning is modelled as a unidimensional construct because it would reduce the tiredness, hindrance, and boredom linked with responding lengthy survey (Robins, Hendin, & Trzesniewski, 2001). Finally, organizational learning has been widely used and successfully validated as a unidimensional construct across a number of researches in the field of entrepreneurship. Organizational learning could moderate the relationship of Entrepreneurial Orientation and Total Quality Management with Organizational Performance. Accordingly, it can be hypothesised as:

**H3:** Organizational learning has moderating role on the association of entrepreneurial orientation and total quality management with performance of pharmaceutical SMEs in Thailand.

## Research Framework:

Current research is intended to investigate the association of EO and TQM with business Performance of pharmaceutical SMEs in Thailand with moderating role of Organizational Learning.

Figure 1: Proposed research framework



## METHODOLOGY

This study has the aim to investigate the relations among entrepreneurial orientation, TQM and organizational learning on the performance of SME. Towards this end, the present study employed a quantitative technique. The study also adopted survey research method where data was gathered once during the whole study by means of questionnaire. The choice of quantitative and survey approach as the most appropriate type of research design is guided by several considerations. Firstly, quantitative technique allows researchers to collect numerical data rather than data in words and concepts; analyse such data using statistically based method in order to draw valid conclusions. Secondly, quantitative technique enables researchers to understand the views of respondents concerning an organization and/or the behaviours of people within a social setting by mean of questionnaire administration (Sekaran & Bougie, 2010). Thirdly, survey research method was applied in the study due to resource constraints of the researchers in terms of time

and money (J. F. Hair et al., 2007; Sekaran & Bougie, 2010). In the present study, the population of interest was the pharmaceutical SMEs in Thailand. The unit of analysis was organizational, in which owners and managers were invited to participate in the study. Owners and managers were specifically involved as key informants because they are the most informed about firms' strategies and capabilities (Sciascia et al., 2014), and could therefore respond to the research issues and the information sought accurately (Zahra & Covin, 1995).

### ANALYSIS AND DISCUSSION

The data was tested by applying Partial Least Squares Structural Equation Modeling (PLS-SEM), which is typically a multivariate statistical analysis for testing theoretical models. The data was analysed in two portions i.e. measurement model and structure model.

#### Measurement Model Assessment:

Testing of the "structural model" may be worthless without the evaluation of "measurement model" to determine whether the data fits the model. Given that PLS path modeling belongs to a family of structural equation modelling. This study, before testing the "structural model", "measurement model" was assessed to determine "reliability and validity" of data (Hair & F, 2010). "Measurement model", also recognized as the outer model demonstrates the associations between indicators and the latent constructs. "Reliability and validity" are two important criteria for evaluating the quality of measures. Reliability was assessed by composite reliability and alpha and threshold value for both is 0.7 (Hair & F, 2010). Present study focuses mainly Fornell and Larcker (1981), as well as cross-loadings approach because they are the most widely used methods of establishing discriminant validity in entrepreneurship research.

Figure 2. Measurement Model Assessment

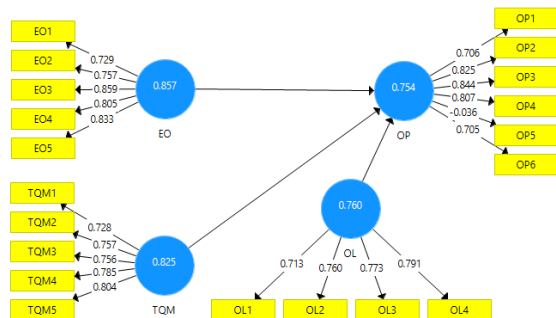


Table 1: Values of alpha and CR:

Sr#	Constructs	alpha	CR
1	EO	0.857	0.897
2	OL	0.760	0.845

3	OP	0.754	0.834
4	TQM	0.825	0.877

Table 2 presents that the "square root of AVE" for the investigation of Validity of constructs.

Table 2: Discriminant Validity

Sr #	Constructs	1	3	4	
1	EO	0.798			
2	OL	0.730	0.760		
3	OP	0.643	0.576	0.712	
4	TQM	0.625	0.676	0.646	0.766

#### Structural Model:

Hypotheses of the study were tested by using structure model. The results of structure model presents in Table 3 and Table 4.

Figure 3. Structural Model Assessment

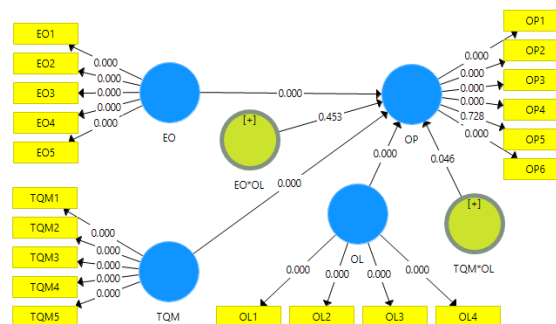


Table 3. Structural Model Assessment (Direct Results)

	(β)	(STDEV)	T Statistics	P Values
EO -> OP	0.415	0.090	4.623	0.000
TQM -> OP	0.349	0.078	4.487	0.000

The purpose of the study was to investigate the relationship of EO and TQM with performance of Thai pharmaceutical SMEs. The study also intended to investigate the moderating role of organizational Learning. Results of structure model indicated that entrepreneurial orientation has positive significant impact on the performance of pharmaceutical SMEs in Thailand. The t-value 4.623 and p-value 0.000 indicated that H1 is significant at 1% significance level. The significant positive influence of entrepreneurial orientation on SME performance in current study was consistent with many of the past empirical studies, such as Li et al. (2009), Jalali et al. (2014), and Brouthers, Nakos, and Dimitratos (2015). Collectively, these studies found a significant positive influence of

entrepreneurial orientation on various similar organizational performances. Study also concluded that TQM has significant positive association with performance of pharmaceutical SMEs in Thailand. The t-value 4.487 and p-value 0.000 directed that H<sub>2</sub> is also significant at 1% significance level. Therefore, hypothesis H<sub>2</sub> is also accepted by statistical analysis. Furthermore, this finding was very much similar to the previous studies in the literature of TQM, including Akgün et al. (2014), and C. V. Fotopoulos and Psomas (2010).

**Table 4. Structural Model Assessment (Moderation)**

	(β)	(STDE V)	T Statistics	P Values
<b>EO*OL -&gt; OP</b>	0.070	0.093	0.750	0.453
<b>TQM*OL -&gt; OP</b>	0.175	0.088	1.997	0.046

Results show that organizational learning does not moderate the relationship of entrepreneurial orientation with performance of pharmaceutical SMEs in Thailand. However, organizational learning significantly and positively moderates the relationship of TQM with performance of pharmaceutical SMEs in Thailand. The t-value 1.997 and p-value 0.046 indicated that H<sub>3b</sub> is accepted on statistical grounds.

### CONCLUSION:

The research envisioned to investigate the influence of TQM and EO on performance of pharmaceutical SMEs in Thailand. This study also tested the moderating role of organizational learning on the association of EO, TQM with performance of pharmaceutical SMEs. Generally, the cross-sectional analyses provide empirical support for the hypothesized relationships. The data was gathered from the owners and executives of pharmaceutical SMEs in Thailand. For data analysis, smart-PLS statistical software was applied and data tested into two steps i.e. "Measurement model" and "Structure Model". This study found that EO significantly effect to performance of pharmaceutical SMEs in Thailand. Moreover, findings of study show that TQM improve the performance of pharmaceutical SMEs in Thailand. Research also concluded that organizational learning significantly moderates the relationship of TQM with performance but it does not moderate the relationship of entrepreneurial orientation with organizational performance. The results also supported theory and research in demonstrating the main impacts of entrepreneurial orientation and total quality management on performance of pharmaceutical SMEs. The findings will aid both practitioners and managers to take action towards enhancing firms' sustainable competitive performance by implementing entrepreneurial orientation and total quality management strategies.

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