

# The Mediating Role of Learning Orientation in the Relationship between Organizational Innovativeness, Financial Performance, Production Performance and Marketing Performance of SMEs in Thailand

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The main objective of the current study is to investigate the impact of organizational innovativeness and the learning orientation on the financial, production and marketing performance of SMEs in Thailand. In addition to that, the study has examined the mediating role of learning orientation in the relationship between organizational innovativeness and financial, production and marketing performance of SMEs in Thailand. The study is among the pioneering studies on the issues related to organizational innovativeness, learning orientation, financial, production and marketing performance of SMEs in Thailand. The current study has used SEM-PLS as a statistical tool to answer the research questions raised and research objectives envisaged in the current study. The findings of the current study provide support to the hypothesized results. The study has argued that to deal with the current external opportunities and menaces, new knowledge and skills for improving existing and future performances must be provided for organizations. This study will be helpful for policymakers and

researchers in examining the link between organizational innovativeness, learning orientation, financial, production and marketing performance of SMEs in Thailand.

**Key words:** Organizational Innovativeness, Learning orientation, Financial, Production and Marketing performance, SMEs, Thailand.

## Introduction

The small and medium enterprises (SMEs) of Thailand are significant to its economy, which account, in total, for 99 percent of all enterprises. Therefore, it can be understood how critical they are in sustaining the development of the country and acting as a fundamental mechanism in promoting the revitalization and progress of the country's economy as well as contributing towards poverty alleviation. Moreover, most SMEs have systems and procedures which are relatively simple and flexible providing immediate response, a short decision-making process, better understanding and faster response to the needs of customers. In spite of these supporting characteristics, the SMEs face significant challenges in maintaining their competitiveness both domestically and globally. It is vital that SMEs leverage their competitive advantages against large multinational companies, whether they compete in existing markets or attempt to expand into new global markets (Porter & Millar, 1985).

When defining a learning organization, such concepts as 'continuous learning' (Senge, 1990), 'improvement' (Griego, Geroy, & Wright, 2000; Musti, 2016) 'construction, attainment and transition of knowledge', 'the learning of each person, group as well as organization is attached to solid worth, perceptions and ambitions' 'alteration' (Nevis, DiBella, & Gould, 1995) and 'changeover' (Pedler, Burgoyne, & Boydell, 2010; Orumwense, & Mwakipsile, 2017) are usually cited. In addition, a learning organization signifies an intricate inter-connectedness of systems comprised of people, practices, advances in information and communication technology, and tools all dedicated towards embracing new information. According to Dubos, Willment, Huggins, Grant, and Campbell (2005) successful organizations continue the process of seeking strategies which will provide them competitive benefits. To deal with the current external opportunities and menaces, new knowledge and skills for improving their existing and future performances must be provided for these organizations (Child, Faulkner, Tallman, & Tallman, 2005). Similarly, Wickramasinghe, Geisler, and Schaffer (2005), learning involves a firm's capacity to adjust itself to fast-changing situations. Important to the process of learning is the acquisition and expansion of relevant knowledge. Proportionate with their ability to learn, organizations are capable of responding more quickly and taking full advantage of each circumstance. As a result, they are able to remain superior and competitive. It is essential for organizations to pay more attention to the construction of a learning organization.

Many previous studies also show that the learning organization consists of certain behaviors and activities in order to achieve a positive result in organizational performance (Weldy & Gillis, 2010). Weldy and Gillis (2010), further identified seven aspects of the learning organization: continuous learning, inquiry and dialogue, team learning, embedded system, empowerment, system connection and strategic leadership. Continuous learning signifies the effort of an organization toward creating an environment for continuous learning by all of the organization's members. Inquiry and dialogue points out the attempt by an organization to create a culture for asking questions, giving responses and experimenting. Team learning refers to collaboration and it is the collaborative skills of the individuals that make for an effective team. Embedded system involves an effort to take in and share knowledge through the systems that have been established. Empowerment indicates the capacity of an organization to create and distribute a shared idea which was derived from its members who make a comparison between the present condition and the new perspective. System connection signifies the capability for universal thinking and the organization's action to remain in connection with its surroundings. Strategic leadership entails leaders' planning how to utilize learning to create changes and to allow their organizations to progress in new ways. Implementing all of these seven aspects creates the supportive organizational system and delineates the strategic management roles of the learning organization (Yang, Watkins, & Marsick, 2004; Osman, & Sentosa, 2013).

Interest in the learning organization persists to encourage an increase of literature which suggests that, in order to reach their highest performances, organizations must enhance their learning ability (Marquardt, 2002) by obtaining new knowledge, developing skills and also finding proper solutions for problems concerning the organization's principles, values and assumptions (Argyris & Schön, 1996). Furthermore, it has been demonstrated that new knowledge and skills are gained through studying the company's innovative abilities because an increase in the level of company's competitiveness and performance is required for improvement. Innovation is connected to the concepts of generation, agreement, and utilization of new ideas, processes, products and services specified by the firm's learning direction (Calantone, Cavusgil, & Zhao, 2002; Drucker, 2002).

Hult, Hurley, and Knight (2004) accentuated that the ability to introduce new ideas can be considered an exposure to innovation and an organization's ability to create new things. Obviously, innovation is connected to the ideas of creating, acknowledging and employing new thoughts, products, services and procedures (Drucker, 2002; Tidd, Bessant, & Pavitt, 2001), which is frequently dictated by the organization's learning ability (Baker & Sinkula, 2002; Calantone et al., 2002; Fernandes, Morales, Montes, Molina, & Moreno, 2006). It is generally understood that learning companies are more able than their competition to respond quickly and more effectively when facing critical changes given new data and circumstances (Tippins & Sohi, 2003). Therefore, it has been noted that learning is a stimulus for increasing

an organization's innovative capacity (Calantone et al., 2002; Hult et al., 2004). In other words, the learning process directly promotes innovation. As learning culture and innovative ideas are expanded in an organization to apply new thoughts, products or methods to the organization's capability for creating innovation, the capability of new products, marketing plans and technological progress for new products is also improved and increased (Brockman & Morgan, 2003).

It can only be found in one study, reported by Dharmadasa (2009), that the mediating effect of innovation measures the difference in the dimensions between learning and performance found in SMEs (Dharmadasa, 2009; Rahman, & Castelli, 2013). Lacking mediating effects, this present study requires more evidence to determine innovativeness for the results (Hussain, Sallehuddin, Shamsudin, & Jabarullah, 2018).

This study, therefore, aims at the empirical examination of the relationship of those seven dimensions or aspects of the learning organization with organizational innovativeness and organizational performance regarding Thai SMEs in Bangkok, Thailand. This study is intended to make a significant contribution both to academics and practitioners, both of whom are capable of promoting learning and are able to create within an organization a culture of innovation that maintains a competitive position and enhances individual and organizational performance. There is the possibility that the effect of these seven aspects, which can be witnessed on the performance of a learning organization, are both direct and indirect. Therefore, this fact can support the hypothesis of this study which poses that a major connection exists between the seven aspects of the learning organization, innovativeness and performance of organizations (Fatula, 2018).

## **Literature Review**

### ***Learning Organization***

The term 'learning organization' achieved wide popularity in the 1990s. A learning organization is a business value and an approach for the modern organization that purposefully aims at achieving full utilization of the potentialities of all organizational members for innovation and change, in order to survive and succeed in an ever changing business environment and in order to achieve a sustainable advantage (Davis & Daley, 2008; Othman, & Othman, 2018). The concept of a learning organization is an integration of very different aspects of human behavioral science and organizational science. It is rooted in such areas as organizational theory, organizational learning, system theory, strategic planning, strategic management, change management, and quality management (Olkiewicz, 2018).

According to Watkins and Marsick (1996) learning organization is defined as an organization which takes part in the process of continuous learning to improve, having a continual

transformation capacity. The Dimensions of the Learning Organization Questionnaire (DLOQ) is the learning organizations' instrument having seven dimensions, which helps to differentiate among the organizations which are striving to become a learning organization. These dimensions are: team learning, continuous learning, empowerment, inquiry and dialogue, strategic leadership, embedded system, and system connection. Yang et al. (2004) suggested that these development and organizational transformation elements can be applied at all levels whether team, organization, or individual. The organizational assessment instrument, i.e. DLOQ helps the members of organizations in determining the extent of following identified seven principles and practices by these organizations. They further argued that cultural and climatic dimensions are comprised of complex constituents, i.e. leadership, learning process, and other systematic dimensions.

In particular, the DLOQ comprises of seven dimensions which a supporting learning organization must possess. These dimensions are essential for individual's collaborative learning and in contributing towards improving progressive organizational learning at all levels of organization. The DLOQ involves two concepts, i.e. organizational learning and learning organization. The DLOQ's sub-dimensions, such as system connection, embedded system, and continuous learning are connected indigenously with the system, which helps the organization in achieving the position of learning organization. Other dimensions, such as strategic leadership, dialogue and inquiry, empowerment, and team learning are embedded more into the organizational processes. Originally, 43 items were involved in the DLOQ, for determining the seven dimensions; however, (Yang et al., 2004) have redeveloped this instrument, on the basis of DLOQ's empirical validation, resulting in the formulation of a shorter version, without compromising the theoretical structure of the original DLOQ. The new version now comprises of 21 items (Sanchez, 2018).

### ***Organizational Innovativeness and organizational performance***

The term organizational innovativeness has been initially used for explaining a system of opportunities that are adopted practically. Organizational innovativeness brings flexibility in selecting various alternatives, in order to satisfy clients on the basis of justifiable foundation, thus ensuring survival of the firm. Moreover, it shows the degree of adopting and implementing innovation and change. Thus, it can be defined differently depending on the context. Various innovative alternatives have been suggested by scholar, such as adopting new manufacturing techniques, developing new services and products, exploiting new resources, originating new forms of organization, and identifying new markets. Accordingly, business and industrial level criteria form the basis for organizational innovativeness. Organizational innovativeness can be considered from two perspectives; i.e. 1) originality of doing something for the first time, and 2) originality of it being done for the first time by an industry or a company. Innovativeness refers to a new idea of developing and implementing new process, service, or a product, which

consequently leads to increased employment, dynamic economic growth of a country, and increased pure profit by business organization.

The innovativeness is defined as a process of searching unusual, unique, or creative methods for dealing with certain needs and challenges, which might result in innovative and new services and products, and technological innovations and processes; where such technologies and processes perform these entrepreneurial functions involving production, packaging, promotion, administration, and delivery. Furthermore, Ali, Krapfel Jr, and LaBahn (1995) have also considered innovativeness as a novelty product for the market and a market construct. However, organizational innovativeness has also been viewed as the propensity of an organization to look for innovative and new ideas, which consequently result in new product development (Lumpkin & Dess, 1996).

Wang and Ahmed (2004) indicated five important dimensions which verify organizational creativity: the newness of (1) product, (2) market, (3) process, (4) behaviour, and (5) strategy. Product innovativeness is considered “the innovativeness and value of new merchandises launched to the marketplace at the right time”. Product novelty can be distinguished from other inventive features that will come later. Therefore, innovativeness of product may be considered as a determining factor. Innovativeness of market is considered “new-fangled methods that firms implement to make an entrance into their targeted market and gain profit from it”. Although innovativeness of product is primarily the newness of the product, innovativeness of market emphasizes the unusualness of the market approach.

Even though they may be considered as distinct factors, nevertheless, they are integrally connected. Innovativeness of process means “the launch of new ways of production, management and technologies utilized in improving processes of both production and management”. Process innovativeness is “vital for innovative capacity in general since the potential of an organization to make efficient use of its resources and capabilities, and its capacity to merge and organize its resources and abilities to once again to keep up with market requirements, is important for the accomplishment of the organization”. Behavioral innovativeness can be seen at different levels in the companies: individual, group and managerial. This is a reflection of “the continual change of the organization’s behavior towards modernization, which is behavioral obligation, and allows the configuration of a new culture, the general in-house receptiveness to new concepts and novelty”. Meanwhile, strategic innovativeness depicts the ability of the organization to pinpoint outside opportunities at an appropriate time and meet such opportunities with inner capacities either by delivering new products or discovering new marketplaces or business segments.

Organizational performance is the concept that an organization can be conceived as an association of productive resources, including human, physical, and capital, in order to achieve

a common objective. Organizational performance indicates to what extent an enterprise is able to achieve its purpose (Venkatraman & Ramanujam, 1986). An organization can assess organizational performance according to how efficiently and effectively it achieves its goals. The term 'organizational performance' is interchangeable and synonymous with 'effectiveness'. The notion of effectiveness can be considered as a ratio: two entities are needed for effectiveness to be defined and measured and as the degree of the achievement of profitability goals.

Hancott (2005); Rahman & Zhang, (2017) indicate that since the mid-1900's, various indicators have been selected in order to measure organizational performance, such as rate of growth of profits, net or total rate of growth of assets, financial return on sales, financial return to shareholders, expansion of market share, increase in new products, net asset return, etc. also pointed out that measurement of organizational effectiveness can be done through financial, operational and behavioral means. First, the scholars indicated that financially, financial performance can indicate the profitability and growth of an organization. Second, such aspects as productivity, efficiency, resource acquisition, and employee reaction – all operational activity - can assist in determining the effectiveness of the work activity of organizations. Third, individual performance which indicates behavioral effectiveness can be measured by aspects such as absence of strain, satisfaction, adaptability, development and open communication.

Different internal measures are highlighted in various studies when focusing on the degree to which goals are achieved as the major aspect in measuring performance and in describing organizational performance, using this to measure the health of organizations. Yet other researchers highlight external factors when assessing performance, examining the organizational relationship to its environment (Schermerhorn Jr, Hunt, & Osborn, 2002). Schermerhorn Jr et al. (2002) and both the quality and quantity of the achievement of individuals or groups indicate performance. Organizational performance can be determined by the capability of the organization to survive, "the ability of the organization to utilize its environment by acquiring limited and beneficial resources in maintaining its operations".

### ***Empirical Studies on Learning Organization and Organizational Performance***

In this section, the literature review of previous studies has been achieved by examining those empirical researches which have incorporated the DLOQ for organizational performance assessment, in various countries and by various researchers (Yang et al., 2004). Hameed et al. (2018) examined the general impact of the learning organization on financial performance. In this study, 208 logistics managers for profit-oriented American organizations were surveyed including manufacturers in industries such as retail, food, paper, electronics, automotive parts,

and chemicals Performance was measured subjectively by such indicators as, response time for customer complaints, average productivity per employee, return on investment, and cost per business transaction whereas objectively it was measured by return on assets, return on equity, market value added and Tobin's q. Financial data was for one year – 1998. This study used the DLOQ instrument with 43 and 21 items to determine to what degree practices and behaviors of the organization reflect a learning organization's criteria.

Empirically, the results showed a high correlation between the practices of a learning organization with its financial performance both subjectively and objectively. The researchers indicated that the DLOQ dimensions could explain four indicators of financial performance that was more than 10 percent of the variance and proposed that learning culture can be adequately measured and confirmed in relation to organizational performance. This research studied those dimensions of a learning culture and a non-random sampling of 836 participants from a variety of organizations were questioned in order to identify the domain of measurement.

Subjectively, financial performance and knowledge performance were used to assess organizational performance. A non-random sampling of 836 American service, manufacturing and public organizations was used. This study improved upon and streamlined the DLOQ and consisted of 21 items without diminishing the efficacy of the original version which had 43 items in order to measure the seven dimensions. The findings found that indirect effect on organizational outcomes were the dimensions of team learning, dialogue and inquiry, continuous learning, and empowerment; on the other hand, such dimensions as system connection, embedded system, and the provision of leadership for learning served as mediator. The DLOQ is a very beneficial and effective instrument for researchers and practitioners of an organization's mission in creating learning organizations.

H1: Organizational innovativeness is in significant relationship with the financial performance.  
H2: Organizational innovativeness is in significant relationship with the market performance.  
H3: Organizational innovativeness is in significant relationship with the production performance.

### ***Empirical Studies concerning Learning Organization, Organizational Innovativeness and Organizational Performance***

The literature about organizational innovativeness, organizational performance, and learning organization has been analyzed in this section, by discussing in detail the empirical research by a number of researchers and enterprises, including Small Enterprises, Small and Medium Enterprises, and Small-Medium-Large Enterprises (Hult et al., 2004; Oyewale, & Osadola, 2018). A study attempted to examine a causal relation among firm's innovative capability,

performance, and orientation towards learning. The study gathered responses from 187 vice presidents of the manufacturing and service SME firms, operating in the USA. Based on the average age of organization, the sample has been divided into two groups. Those organizations which were above the average age is considered as old and the ones which were below the average age is considered to be young. The study concluded that no significant difference is found between old and young firms. However, the study also supported that organization's age has moderating effect on the association among firms' innovativeness and orientation towards learning.

Furthermore, the time length i.e. for how long an organization is part of the business also influences the learning orientation's impact on the innovativeness of a firm. The older firms have more tendency to utilize the learned knowledge and perform innovative activities. Therefore, the younger firms are expected to develop efficient mechanism to readily internalize the gained knowledge. Thus, no empirical finding has reported that age of an organization has moderating impact on the association among performance and learning. Although, learning orientation helps organizations in establishing essential skills and resources for the leaning orientation and performance of the firm; and considered to be crucial for the other organizational activities and innovation.

There is moderating impact of the mode of business operations on orientation to the market and to learning, and on innovativeness. Furthermore, a firm's innovativeness is very much affected by its orientation to the market, its mode of business operations, and orientation towards learning, and innovativeness significantly impacts on business performance. Meanwhile, market and learning orientation as well as the mode of business operations via innovativeness have major indirect effect on business performance. Both market orientation and learning orientation also have direct effect on business performance. The researchers stated that both market and learning orientations as well as innovativeness have been shown as significant directly and indirectly in contributing to business success. Therefore, for every organization emphasis should not only be on improving market and learning orientation as well as performance but also fostering innovativeness which also includes technical innovation, innovative management, and innovative ideas.

The researcher selected four organizational learning dimensions as independent variables: learning commitment, common vision, an orientation to being open to learning, and sharing of intra-organizational knowledge. The study sampled 115 senior leaders which included presidents and/or managing directors of accounting firms. The results indicated that aspects such as shared vision, open-mindedness, and intra-organizational knowledge sharing impacted significantly and positively on innovativeness of these accounting firms, while there was no effect from commitment to learning on innovativeness. Likewise, innovativeness had a significant effect on organizational efficiency. Surprisingly, there was no significant linkage

between learning commitment, shared vision, and open-mindedness with organizational efficiency; only intra-organizational knowledge sharing impacted positively and significantly on the efficiency of the company. The researchers stated that accounting firms had a greater likelihood to gain these approaches of organizational learning when innovativeness contributed towards improving organizational efficiency, providing excellent value to customers, developing greater competitive advantages, encouraging superior competitiveness, and achieving excellent performance.

H4: Organizational innovativeness is in significant relationship with the organizational learning

H5: Organizational learning is in significant relationship with the financial performance.

H6: Organizational learning is in significant relationship with the market performance.

H7: Organizational learning is in significant relationship with the production performance.

Eshlaghy and Maatofi (2011) researched the relationship of small-sized business firms in Iran between learning orientation, innovation and performance. A sample of 82 small-sized firms was investigated. The different factors of learning orientation, commitment to learning, open-mindedness, and shared vision were measured, while three factors of performance, namely sales, profitability, and return on investment (ROI) were measured. Results found that open-mindedness, commitment to learning, and shared vision impacted positively and significantly on innovation. The effect of innovation on sales, profitability, and return on investment (ROI) of firms was positive. However, a positive and significant effect was seen in commitment to learning on sales, profitability, and ROI. In addition, the results also indicated significant and positive linkage between open-mindedness and sales, profitability, and ROI, and also shared vision having a positive and significant impact related to sales, profitability, and ROI.

Salim and Sulaiman (2011) studied the impact of innovation, organizational learning, and performance of SMEs in Malaysia. A sample of 320 SME companies of the ICT industry was investigated. Results showed that a direct and significant impact related to organizational innovation was realized from organizational learning. Organizational innovation had a positive and significant impact on organizational performance. The researchers concluded that organizational learning played a vital role in innovation being applied in understanding its environment, which also included its customers, competitors, and emerging technologies. Innovation reflected the mind-set of assimilating new ideas. This confirms that a positive learning culture is of great benefit for organizations striving to surpass its competitors by means of various innovative processes. In addition, as performance is a critical focus for all companies, appreciating the linkage between performance and innovation would assist these companies in developing greater competitive advantages and strategies.

Eris and Ozmen (2012) examined how learning orientation, market orientation, and innovativeness impact on organizational performance. Data was collected from 102 owners or CEOs or directors or managers from small-medium-large logistic firms in Turkey. The results determined that learning orientation was positively and significantly impacted by market orientation. Learning orientation affected innovativeness positively and significantly, while innovativeness impacted company performance positively and significantly. Moreover, learning orientation played a mediating role in the effect of market orientation on innovativeness. Meanwhile, innovativeness played a mediating role in the effect of learning orientation on organizational performance. Therefore, both learning orientation and innovativeness mediated the effect of market orientation on organizational performance. The conclusion reached was that such normative values as learning orientation, market orientation, and innovation were vital in improving service providers' performance of the logistics sector in Turkey, and that these three aspects had a combined effect on improving the performance of these service providers. It can be surmised that supply chain entities related to these logistics service providers might demonstrate similar aspects, thus engendering a synergic effect on performance.

H8: Organizational learning mediates the relationship between organizational innovation and financial performance.

H9: Organizational learning mediates the relationship between organizational innovation and production performance

H10: Organizational learning mediates the relationship between organizational innovation and market performance

## **Methodology**

The nature of the present study is correlational and descriptive. The correlational part determined whether export performance and marketing program are correlated, while descriptive part described the exporters profile and ratings of the subject matter. This research has been formulated on the basis of hypothetico-deductive approach, which is a scientific method. It consisted of seven steps including problem identification, problem statement, and hypotheses formulation, establishing measures, gathering data, data analysis and interpretation of the findings. The main constituent is the deductive approach, which involves formulation and application of a general theoretical framework for a certain practical case. Using previous research, a theoretical foundation was designed. In addition, a quantitative survey approach is also employed. In this approach, the study determines the research objectives, develops a research design, determines a valid and reliable instrument of research, survey conduction, data collection and analysis, and interpretation and suggest findings.

The nature of present study is also cross-sectional i.e. the research took place at a specific time period, since it was convenient for the academics. An email-questionnaire survey was also

developed for data collection, which was then further used for statistical testing to assess the formulated hypotheses. This method was chosen because it requires less time and cost and cover wide geographical area. Thus the survey research method involves collecting data from the people for a particular case. In other words, the current study is a field study conducted under a natural setting, however a correlational study is usually carried out in an environment where researchers do not interfere and let the events happen in a normal setting. The survey conduction is done for generalizing the outcomes. The population already had high validity since the items of the questionnaires were quite relevant and directly address the items of a dimension.

Cluster sampling was used for the survey research. A Five-technique approach was adopted for sample size calculation. While estimating sample size, firstly the total population and population sample size is calculated, the present study determined both of these using a Krejcie and Morgan (1970) table. Therefore, a sample size 310 was obtained. In the field of social sciences, researchers mostly employ SEM, since it is a powerful tool for testing multiple associations, simultaneously (Hair Jr, Hult, Ringle, & Sarstedt, 2016; Pride, & Tatenda, 2017). Previously, several researchers have argued to use a co-variance approach, i.e. AMOS, but PLS-SEM has unique features making it a potential replacement for CB-SEM approach.

## Results

For several reasons, PLS-SEM is a popular and a robust approach which has gained considerable attention among the researchers and scholars. Urbach and Ahlemann (2010) have observed arguments by the researchers in favor of this approach. In addition, Hair Jr et al. (2016) also suggested that PLS is beneficial when it is adopted solely for the explanation and predictive relevance of the constructs. Thus, this paper employed PLS-SEM due to its flexibility, less requirements in case of sample size and proper handling of multiple regressions. Furthermore, the PLS-SEM consisted of formative and reflective constructs which is supported by Hair Jr et al. (2016).

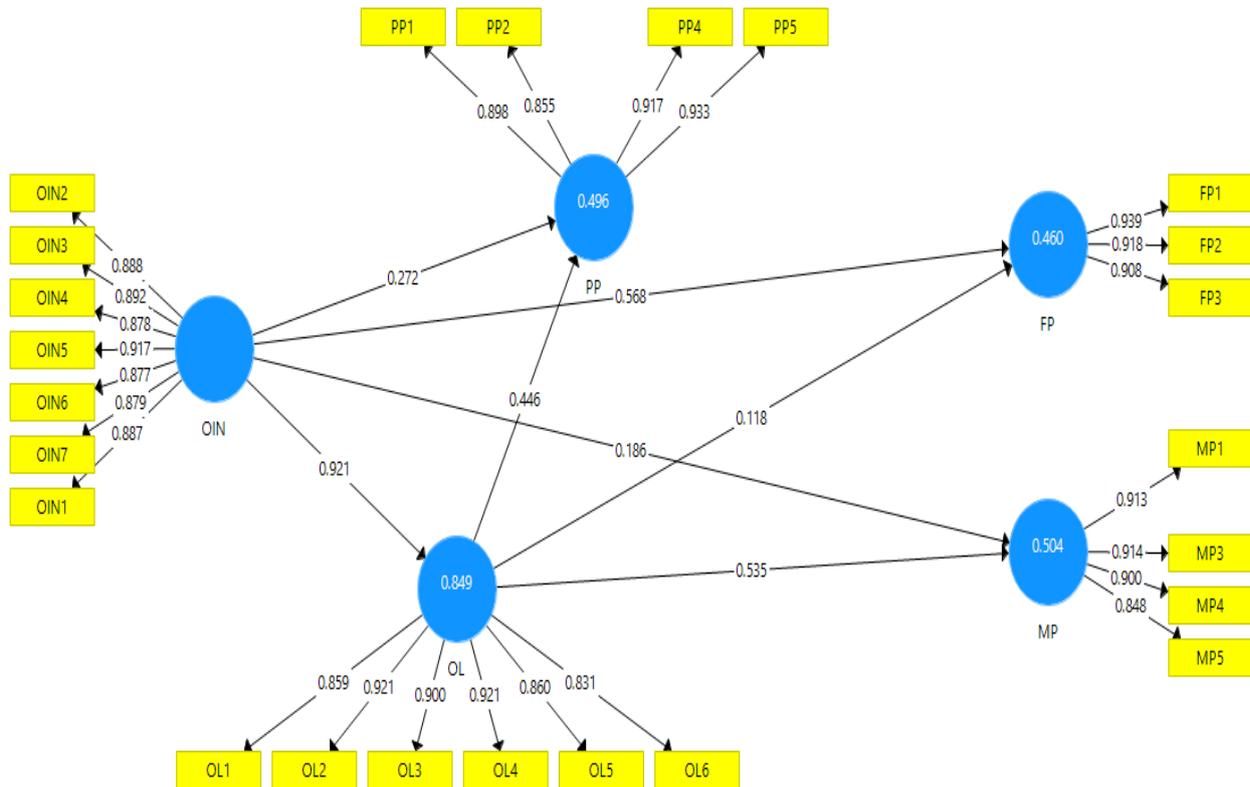
The SEM-PLS analysis involves the outer and inner model estimation. The outer model includes the measuring of its elements or components, assessing the degree of indicators theoretical loadings and correlating with the corresponding constructs. Put differently, the outer model analysis verifies whether the survey items are measuring the constructs as they are expected, thus confirming the validity and reliability of the model, which are the two commonly used criteria under SEM-PLS for analyzing the measurement model. The outcome regarding the relation between the constructs is determined through the measures of validity and reliability. The measurement model's suitability is analyzed by; 1) observing the convergent validity for the measures of indicators, using average variance extracted, 2)

discriminant validity by following the outer loadings and Fornell and Larcker (1981) criterion, and 3) individual reliabilities of the items, such as internal consistency reliability and indicator reliability by estimating composite reliability.

**Table 1:** Outer Loadings

	FP	MP	OIN	OL	PP
FP1	<b>0.939</b>				
FP2	<b>0.918</b>				
FP3	<b>0.908</b>				
MP1		<b>0.913</b>			
MP3		<b>0.914</b>			
MP4		<b>0.900</b>			
MP5		<b>0.848</b>			
OIN2			<b>0.888</b>		
OIN3			<b>0.892</b>		
OIN4			<b>0.878</b>		
OIN5			<b>0.917</b>		
OIN6			<b>0.877</b>		
OIN7			<b>0.879</b>		
OL1				<b>0.859</b>	
OL2				<b>0.921</b>	
OL3				<b>0.900</b>	
OL4				<b>0.921</b>	
OL5				<b>0.860</b>	
OL6				<b>0.831</b>	
PP1					<b>0.898</b>
PP2					<b>0.855</b>
PP4					<b>0.917</b>
PP5					<b>0.933</b>
OIN1			<b>0.887</b>		

**Figure 1.** Measurement Model



Whereas, the relation among the latent and observed variables is exhibited in the measurement model. Changes in items of the model can also occur while estimation of the measurement model. To confirm its validity, the confirmatory factor analysis is employed by taking first and second order constructs. Through the formative, structural, and reflective modelling, each element of the measurement model is estimated separately.

**Table 2:** Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
FP	0.911	0.912	0.944	0.850
MP	0.916	0.921	0.941	0.799
OIN	0.955	0.956	0.963	0.789
OL	0.943	0.944	0.955	0.779
PP	0.923	0.930	0.945	0.812

In empirical research, the Fornell and Larcker (1981) criterion is a widely used and an effective measure to assess the discriminant validity, wherein, the discriminant validity shows whether

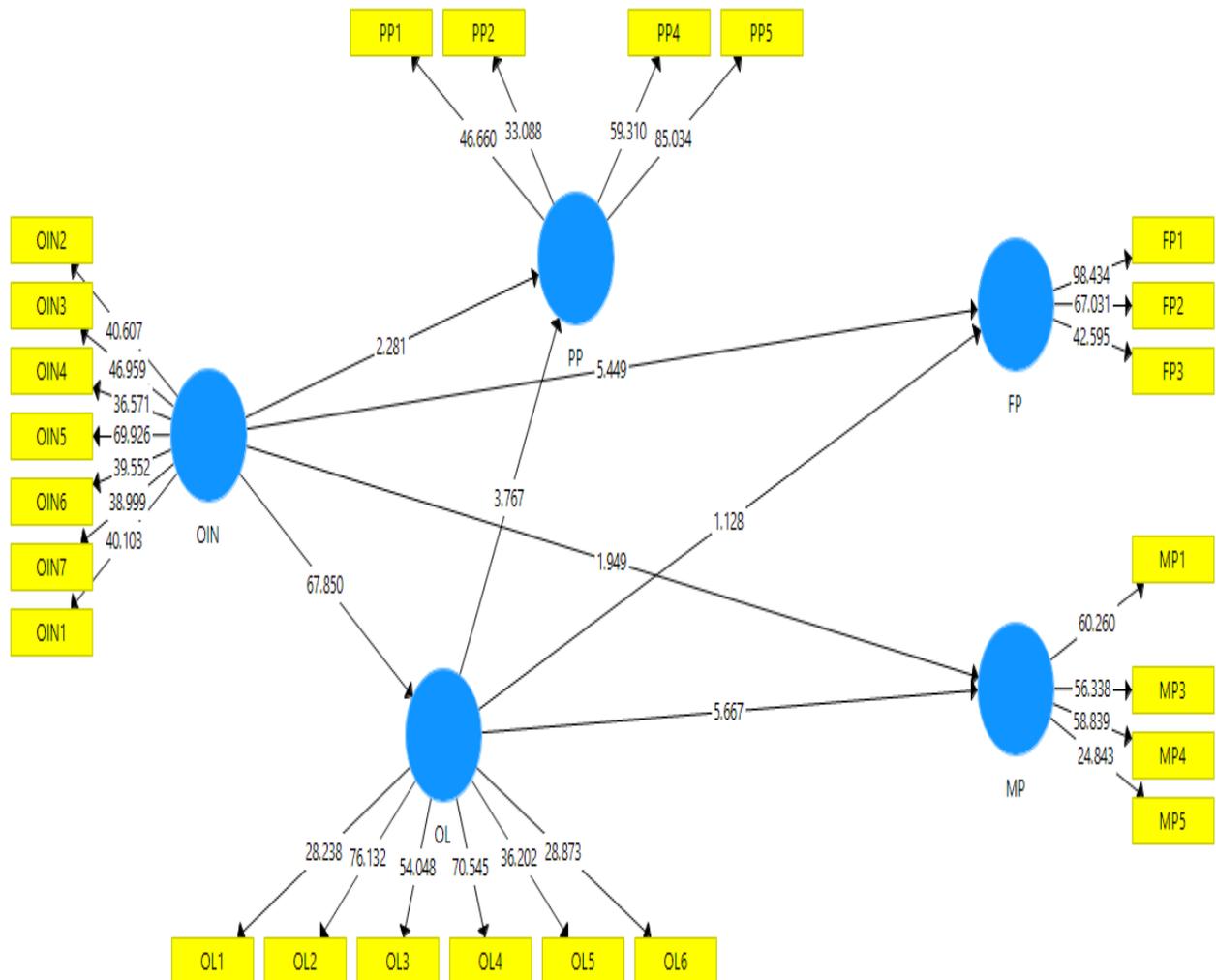
the reflective variables are related to their constructs. Thus, the Fornell and Larcker (1981) criterion was used as a threshold. Therefore, the Reliability index must exhibit value equal or higher than 0.70. The outer and cross-loadings exhibited same values. The cross loadings in a study determine any correlation existing between the constructs. Thus, the values of discriminant validity are presented in Table 3.

**Table 3:** Discriminant Validity

	FP	MP	OIN	OL	PP
FP	0.922				
MP	0.865	0.894			
OIN	0.677	0.679	0.888		
OL	0.641	0.706	0.821	0.883	
PP	0.904	0.892	0.682	0.696	0.901

Further, the structural model of the study was estimated. The SEM-PLS simultaneously estimates a set of all constructed variables. Thus, the structural model determines both the direct and indirect impacts of all the involved variables. It is presented as follows:

**Figure 2.** Structural Model



The level of mediation was also checked to assess the role of moderator or indirect impact of variable. Furthermore, bootstrap method having 1000 samples was also used for analyzing the significance of a relationship. Except for the **H5**, and **H6** all other hypotheses exhibited less than 0.05 p-value which is the threshold level for the hypothesis's acceptance. The t and p values for all the hypothesis except **H5** and **H6** were above 1.96 and less than 0.05, respectively, thus satisfying the threshold level, and resulted in the acceptance of the hypotheses.

**Table 4:** Direct results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
OIN -> FP	0.677	0.675	0.074	9.175	<b>0.000</b>
OIN -> MP	0.679	0.678	0.066	10.284	<b>0.000</b>
OIN -> OL	0.921	0.921	0.014	67.850	<b>0.000</b>
OIN -> PP	0.682	0.681	0.068	10.055	<b>0.000</b>
OL -> FP	0.118	0.119	0.104	1.128	<b>0.260</b>
OL -> MP	0.535	0.534	0.094	5.667	<b>0.000</b>
OL -> PP	0.446	0.449	0.118	3.767	<b>0.000</b>

**Table 5:** Indirect results (Mediation)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
OIN -> OL -> FP	0.108	0.110	0.097	1.123	<b>0.262</b>
OIN -> OL -> MP	0.493	0.492	0.087	5.654	<b>0.000</b>
OIN -> OL -> PP	0.411	0.414	0.110	3.742	<b>0.000</b>

Coefficient of determination also known as  $R^2$  shows how much variation in dependent variable is caused by the independent variables. It ranges between 0-1, the value closer to 0 shows insignificant coefficients having weak or poor predictive relevance, whereas moving towards 1 shows greater accuracy in predicting. The  $R^2$  values i.e. 0.25, 0.50, & 0.75 explains weak, moderate, and substantial predictive power, respectively.

**Table 6:** R-Square

	R Square
FP	0.460
MP	0.504
OL	0.849
PP	0.496

## Conclusion

The study aims at the empirical examination of the relationship of seven dimensions or aspects of the learning organization with organizational innovativeness and organizational performance regarding Thai SMEs in Bangkok, Thailand. This study intended to make a significant contribution both to academics and practitioners, both of whom are capable of



promoting learning and are able to create within an organization a culture of innovation that maintains a competitive position and enhances individual and organizational performance. There is the possibility that the effect of these seven aspects, which can be witnessed on the performance of a learning organization, is both direct and indirect. Therefore, this fact can support the hypothesis which states that a major connection exists between the seven aspects of the learning organization, innovativeness and performance of organizations.

Additionally, the study has examine the mediating role of learning orientation in the relationship between organizational innovativeness and financial, production and marketing performance of SMEs in Thailand. The study is among the pioneering studies on the issues related to organizational innovativeness, learning orientation, financial, production and marketing performance of SMEs in Thailand. This study has used SEM-PLS as statistical tool to answer the research questions raised and research objectives envisaged for this research. The findings have provided support to the hypothesized results. The study argued that to deal with the current external opportunities and menaces, new knowledge and skills for improving their existing and future performances must be provided for organizations This study will be helpful for policymakers and researchers in examining the link between organizational innovativeness, learning orientation, financial, production and marketing performance of SMEs in Thailand.

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