

# Influences of Organizational learning, Organization Innovation, and Business Performance on the Sustainability of the Companies Listed on the Stock Exchange of Thailand

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## Abstract

The sustainable investment concept is a concept for investment decision-making that considers the environmental, social and governance (ESG) performance-related data performance, together with the analysis of business financial data in order to generate long-term returns. Organizational learning is an important factor in organizational transformation, especially for medium-sized and large-sized companies which enlarged themselves from small-sized or family-business companies to become public companies which raise their capital through the mechanism of the Stock Exchange of Thailand. However, with the economic situation, competitive challenges, and the transformation of technology, there are concerns about the sustainability of the business. The objectives of this research were to study: 1) levels of organizational learning, organization innovation, business performance, and business sustainability of companies listed on the Stock Exchange of Thailand; 2) influences of organizational learning, organization innovation, and business performance on the business sustainability of the companies listed on the Stock Exchange of Thailand; and 3) a model for the business sustainability of the companies listed on the Stock Exchange of Thailand. This research employed a mixed research methodology combining quantitative and qualitative methods. For the quantitative research part, the research sample consisted of 360 executives of the companies listed on the Stock Exchange of Thailand. The sample size was determined based on the criterion of 20 times the observed variables. They were selected via stratified sampling. Data were collected with the use of a questionnaire and analyzed with a structural equation model. As for the qualitative research component, in-depth interviews were conducted, to confirm to results gained from the quantitative research, with 20 key informants including executives of the listed companies who have received awards for the sustainability or innovation. Data were analyzed with content analysis. The findings showed that: 1) organizational learning, organization innovation, business performance, and business sustainability were rated at the highest level; 2), organization innovation, business performance and organizational learning had a direct influence on business sustainability, with a .05 level of statistical significance, and all of which could predict the results by 80.3 percent; and 3) the model for the business sustainability of the companies listed on the Stock Exchange of Thailand, developed by the researcher, was called the LILP Model. It was an innovative integrated learning model concept for listed companies, consisting of leadership, innovation, and learning platform. The findings can be used as a framework for the development of the organizational learning model that leads to the creation of the organization innovation and sustainability of the listed companies.

**Keywords:** Organizational learning, organization innovation, business performance, sustainability, stock exchange Thailand.

## 1. Introduction

The Stock Exchange of Thailand (SET) is an important center for trading of different securities, delivering a full range of products and

services along with trading infrastructure for various investors, listed companies and other contributors (Tontiset, 2022). The SET was developed in 1975 and formally started securities trading on April 30, 1975. Now there are several companies listed in SET based on various product manufacturing as well as service-related companies. SET is one of the most influential platform for business activities having vital importance for Thailand (Naksomsong & Pongsupatt, 2021). It has key contribute to the promotion of Thai economy as the business companies listed in SET producing significant business opportunities which has considerable role to enhance the overall performance of Thai economy. The companies listed in Thailand stock exchange has vital role to promote economic development. Therefore, to fosters the business activities, it is needed to promote the business performance of these companies which is one of the challenging tasks(Gomez-Piqueras, Ruiz-Barquín, & Olmedilla, 2020; Rykiel, 2020).

However, the different companies listed in SET are facing issues related to organizational innovation. As organizational innovation is one of the major components of performance (Park & Ok, 2020), therefore, these companies also require better innovation at organizational level. The other important issues facing by several companies is related to the organizational performance. A sustainable performance is always required by the companies to survive in the competitive business market. As with the increase in business competition, the performance of companies may decrease because in the same market, various other companies are capturing the market share. Therefore, to survive in the market, a significant level of organizational performance is required. Additionally, organizational sustainability is also a most related concept which required to be focused by the companies. A short-term sustainability in the company's performance is not much beneficial as it cannot produce long term benefits. Therefore, the companies listed in the stock exchange of Thailand required better organizational sustainability (Alnusairat, Elnaklah, Abd Hamid, Ariffin, & Tham, 2021; Salavrakos, 2020). The sustainable investment concept is a concept for investment decision-making that considers the environmental, social and governance performance-related data along with the analysis of business financial data in

order to generate long-term returns. In this direction, organizational learning can play a vital role (Alshammari, 2020). Organizational learning is an important factor in organizational transformation, especially for medium-sized and large-sized companies which enlarged themselves from small-sized or family-business companies to become public companies which raise their capital through the mechanism of the stock exchange of Thailand. However, with the economic situation, competitive challenges, and the transformation of technology, there are concerns about the sustainability of the business. This study proposed that, organizational learning among the companies listed in Thailand stock exchange can play a vital role to resolve various issues related to the performance. The performance can be improved with the help of organizational learning activities. Organizational learning is helpful to reduce the issues related to organizational innovation, organization performance and organizational sustainability (Maryam Al Naimi, 2020; Naveed, Hussam Al Halbusi, AlAbri, Fattah, & Uzir, 2021; Prasher & Onu, 2020).

Finally, the objectives of this research are: 1) to examine the levels of organizational learning, organization innovation, business performance, and business sustainability of companies listed on the stock exchange of Thailand; 2) influence of organizational learning on organization innovation, organizational performance and business sustainability of the companies listed in the stock exchange of Thailand; and 3) to develop a model for the business sustainability of the companies listed in the stock exchange of Thailand. Although, number of previous studies have examined Thailand stock exchange (Lerdkanjanaporn & Jongsureyapart, 2019; Sanboon, Keatruangkamala, & Jaiyen, 2019; Wahyuningrum, Amal, & Sularsih, 2021), but these studies have not addressed organizational learning. More importantly, these previous studies have not examined the effect of organizational learning on organizational innovation, organization performance and organizational sustainability among the companies listed in SET. In this way, this study is important to contribute to the literature. Furthermore, it has important role to contribute practically by providing various insights while marking strategies to enhance the performance of companies listed in SET (Govender &

Govender, 2019; Kaitano, 2020; Makin & Bowers, 2020).

## 2. Literature Review

### 2.1 Organizational Learning

Organizational learning is the procedure of creating, retaining, as well as transferring knowledge within any organization. An organization progresses over time as it advances experience. With the help of this experience, it can create knowledge. The creation of knowledge lead to the improvement in organization in any area. Organizational learning is one of the most important elements which has significant role in business activities (Meher, Nayak, Mishra, & Patel, 2022). Organizational learning is based on creating of knowledge, retaining of knowledge and transfer of knowledge within the department of organization as well as within the individuals.



**Figure 1.** Organizational Learning

### 2.2 Organizational Innovation

An organizational innovation is the application of a new organizational technique in the firm's business activities, workplace organization or various external relations. Organizational innovation is another important element among the companies listed in stock exchange. Innovation is introduction of new Idea (Khashman, 2022), new process and a new technique in the development of any product or services at reduced cost and in efficient way. Organizational innovation is based on the management of innovation in any organization. The better management of innovative activities in the organization lead to the organizational innovation. It is also based on the product innovation as well as process innovation. The

This study considered organizational learning as continuous learning of the organization and the individuals. The continuous learning of the employees working in any organization has positive role in business activities as the success of any business activity is based on information related to the internal as well as external sources of the organization. The continuous learning of the organization is also based on the continuous learning. All the organizational employees are based on a specific team and the learning of that team is most important (Kanungo & Chattoraj, 2020; Noble & Jandjsek, 2020; Ojogiwa, 2021). It is also involved the empowerment of the employees. Better the level of empowerment among them lead to the better learning. Additionally, the strategic leadership as well as system connections is most important in organizational learning. The information creates valuable knowledge for the organization and the employees which causes to take various important decisions.

introduction of something new in the product which can improve product and lead to decrease in overall cost. Similarly, the process of product development can be improved with the help of introduction of new technology in the process. Additionally, the market innovation is also related to the organizational innovation which has vital role in any business activity. The organizational learning is strongly linked with the organizational innovation. As reported by Yang, Sulaiman, Yin, Mallamaci, and Alrabaiah (2022), organizational learning improves the innovation process. Moreover, Abdi et al. (2018) also reported the positive effect of organizational learning on innovation. By considering the connection between organizational learning and organizational innovation, it is proposed that;

**Hypothesis 1.** Organizational learning has positive effect on organizational innovation.

### 2.3 Organizational Performance

Organizational performance includes the real output of an organization (Singh, Gupta, Busso, & Kamboj, 2021) as measured contrary to its projected outputs or goals as well objectives. Performance of any organization can be measured through financial as well as non-financial measures. While considering organizational performance, this study considered the financial element of the organization as well as the customers as the performance of the organization. The better financial achievement of the organization as well as the customer satisfaction indicates better organizational performance. Furthermore, the internal process of the organization is also linked with the organizational performance. The unique process of the organization can lead the over-all organizational performance. Furthermore, within the organization, the learning as well as development also connected with performance of the organization. Therefore, organizational performance is based on the financial element, customers, internal process, learning and development. There is an important connection between organizational learning and organizational performance. As highlighted by previous studies that organizational learning has relationship with performance (Alshammari, 2020; Ur Rehman, Bhatti, & Chaudhry, 2019). Organizational learning activities among the organizations has positive role to influence the employee's performance. Generally, it has positive role to promote employee efficient work which causes to increase employee performance. Kordab, Raudeliūnienė, and Meidutė-Kavaliauskienė (2020) also reported the positive role of organizational learning in organizational performance. Hence, it is hypothesized that;

**Hypothesis 2.** Organizational learning has positive effect on organizational performance.

### 2.4 Organizational Sustainability

Organizational sustainability is creative as the outcome of a congruent ideology of economic, societal, as well as ecological concerns (Crucke, Kluijtmans, Meyfroidt, & Desmidt, 2021) that have effect on various practices of human resources. In this study, sustainability is considered with the help of three prospective.

First the sustainability is considered in economic perspective. Economic perspective of the organization is based on the financial element of the organization. The economic growth of the organization as well as its impact on the economic opportunities, in any society or in any nation is linked with organizational sustainability. The sustainability element connected with the long-term outcome in any organization. Therefore, economic benefits of the organization for long-term basis are called organizational sustainability. For the more social perspective, it is also an important element among the organizations (Kahraman & Koray, 2020; Khoram, Bazvand, & Sarhad, 2020). The social connection of the organizations and the social responsibility of the organization is linked with the sustainability. Furthermore, environmental concern of any business organization is also most important because the environmental pollution is increasing significantly due to the increase in business activities. Therefore, the creation of sustainable environment is most important which is strongly connected with business organizations. Organizational sustainability can be promoted with the help of organizational learning. It is mentioned by Hutomo, Haizam, and Sinaga (2018), organizational learning lead to the business sustainability among organizations. Furthermore, Hermelingmeier and von Wirth (2021) also reported a positive connection between organizational learning and sustainability. Therefore, this study proposed that;

**Hypothesis 3.** Organizational learning has positive effect on organizational performance.

Moreover, the current study also considered the role of organizational innovation in organizational performance and organizational sustainability. It is evident from the literature that innovation has significant relationship with organizational performance (El-Kassar & Singh, 2019; Singh et al., 2021). As reported by several studies that innovation among the organizations can lead to the better performance outcomes. Therefore, better innovation opportunity among the organization can increase the business performance. Similarly organizational innovation also led to the organizational sustainability. The economic sustainability, social sustainability as well as environmental sustainability among the organizations can be

achieved through better innovative ideas. Earlier studies highlighted that innovation has significant influence on organizational sustainability (Chaurasia, Kaul, Yadav, & Shukla, 2020). Moreover, organizational performance is also linked with organizational sustainability. The element of sustainability among the organizations can be promoted through organizational performance. Hence, the current study also proposed following hypotheses based on the above discussion;

**Hypothesis 4.** Organizational innovation has positive effect on organizational performance.

**Hypothesis 5.** Organizational innovation has positive effect on organizational sustainability.

**Hypothesis 6.** Organizational performance has positive effect on organizational sustainability.

### 3. Methodology

A mixed method approach is used in the current study to observe the effect of organizational learning on organizational innovation, organization performance and organizational sustainability. While using mixed method approach, data collection is made through survey as well as interviews from the companies listed in stock exchange of Thailand (Caliskan & Zhu, 2020; Putri, 2020). Therefore, population of the study is based on the companies listed in Thailand stock exchange. Consequently, this research used a mixed research method combining quantitative and qualitative methods. Mixed method approach has several benefits over a single approach (Kiessling & Harvey, 2005) because it effect on the originality of the results.

Respondents of the study are the executives working in various companies listed in stock exchange. The sample size was determined based on the criterion of 20 times the observed variables. This study selected 600 sample size for quantitative data collection. A questionnaire is designed for data collection with the help of previous studies. Therefore, for the quantitative research, the research sample consisted of 600 executives of the companies listed in the stock exchange of Thailand. Data collection is made through stratified sampling which is most suitable in the current study. Finally, by using stratified sampling, the current study distributed the questionnaires among the executives working in companies of Thailand listed in stock exchange (Gudalov & Treshchenkov, 2020; Kikulwe & Asindu, 2020; Machado, Oliveira, Marin, Sampaio, & Bertolucci, 2020). 372 respondents were responded to the survey. 12 respondents could not fill the complete questionnaire; therefore, these questionnaires were not included in survey. Finally, 360 questionnaires were used in this study. Data were collected with the use of a questionnaire and finally, the data collected is analyzed through structural equation modeling (SEM). For the qualitative research, in-depth interviews were conducted. To confirm the results gained from the quantitative research, 20 key informants including executives of the listed companies in stock exchange who have received awards for the sustainability or innovation were interviewed. Data statistics are given in Table 1 which shows the standard deviation along with the normality of the data.

**Table 1** Statistical test of empirical variables (n=360)

| ตัวแปร | $\bar{X}$ | S.D. | %CV   | Sk     | Ku     | $\chi^2$ | P-value |
|--------|-----------|------|-------|--------|--------|----------|---------|
| CL     | 4.69      | .52  | 11.16 | -8.052 | 1.178  | 66.219   | .000    |
| DI     | 4.35      | .86  | 19.92 | -5.511 | -2.128 | 34.896   | .000    |
| TL     | 4.28      | .82  | 19.30 | -4.457 | -2.531 | 26.265   | .000    |
| ES     | 4.34      | .83  | 19.27 | -5.109 | -2.919 | 34.625   | .000    |
| EM     | 4.46      | .66  | 14.93 | -5.283 | -2.430 | 33.816   | .000    |
| SC     | 4.73      | .54  | 11.41 | -9.340 | 3.446  | 99.116   | .000    |

|        |      |      |       |        |        |        |      |
|--------|------|------|-------|--------|--------|--------|------|
| SL     | 4.65 | .62  | 13.33 | -8.188 | 1.803  | 7.290  | .000 |
| MINN   | 4.71 | .56  | 11.89 | -9.089 | 3.087  | 92.134 | .000 |
| PINN   | 4.60 | .60  | 13.11 | -6.946 | -.054  | 48.252 | .000 |
| MKINN  | 4.60 | .61  | 13.24 | -7.103 | .264   | 5.529  | .000 |
| PCINN  | 4.49 | .66  | 14.76 | -5.721 | -1.739 | 35.751 | .000 |
| FIN    | 4.17 | .89  | 21.47 | -4.060 | -2.994 | 25.450 | .000 |
| CUST   | 4.37 | .79  | 18.23 | -5.342 | -1.951 | 32.346 | .000 |
| PROC   | 3.77 | 1.16 | 30.73 | -2.518 | -5.181 | 33.183 | .000 |
| LD     | 4.30 | .78  | 18.21 | -4.305 | -2.479 | 24.680 | .000 |
| ECON   | 4.56 | .68  | 14.93 | -7.184 | .047   | 51.617 | .000 |
| SOCIAL | 4.52 | .70  | 15.48 | -6.542 | -.386  | 42.948 | .000 |
| ENVI   | 4.51 | .65  | 14.61 | -5.996 | -1.410 | 37.935 | .000 |

#### 4. Results

The current study reported the results with the help of Structural Equation Modeling (SEM). SEM is one of the prominent data analysis technique which is recommended by several previous studies as a suitable data analysis technique to examine the primary data (Hair et al., 2019; Khan et al., 2019). SEM is based on two major steps which include confirmatory factor analysis (CFA) to examine the factor loadings, reliability and validity. Organizational learning is measured by using scale items related to the Continuous learning (CL), Dialogue and Inquiries (DI), Team Learning (TL), Embedded System (ES), Empowerment (EM), System Connection (SC) and Strategic Leadership (SL). Furthermore, organizational innovation is measured by using Management Innovation (MINN), Product Innovation (PINN), Market Innovation (MKINN) and Process Innovation (PCINN). Organizational performance is measured by using Financial (FIN), Customer (CUST), Internal Process (PROC), Learning and Development (LD). Finally, organizational sustainability is measured by using Economic Perspectives (ECON), Social Perspectives (SOCIAL) and Environment Perspectives (ENVI). All these items are given in Table 2 along with the factor loadings, t-value and r-square value. All the items have achieved the minimum threshold level of 0.5 for factor loading.

**Table 2.** Factor Loadings (n=360)

| <b>Variables</b>                          | <b>Factor Loading (<math>\lambda</math>)</b> | <b>Error (<math>\theta</math>)</b> | <b>t</b> | <b>R<sup>2</sup></b> |
|-------------------------------------------|----------------------------------------------|------------------------------------|----------|----------------------|
| <b>Organizational Learning (OL)</b>       |                                              |                                    |          |                      |
| Continuous learning (CL)                  | .69                                          | .33                                | 13.22    | .67                  |
| Dialogue & Inquiries (DI)                 | .58                                          | .36                                | 10.82    | .64                  |
| Team Learning (TL)                        | .54                                          | .31                                | 9.40     | .69                  |
| Embedded System (ES)                      | .59                                          | .35                                | 11.00    | .65                  |
| Empowerment (EM)                          | .70                                          | .31                                | 13.52    | .69                  |
| System Connection (SC)                    | .62                                          | .32                                | 11.51    | .68                  |
| Strategic Leadership (SL)                 | .57                                          | .38                                | 10.30    | .62                  |
| <b>Organizational Innovation (OI)</b>     |                                              |                                    |          |                      |
| Management Innovation (MINN)              | .61                                          | .33                                | 10.23    | .67                  |
| Product Innovation (PINN)                 | .69                                          | .33                                | 11.78    | .67                  |
| Market Innovation (MKINN)                 | .83                                          | .32                                | 13.94    | .68                  |
| Process Innovation (PCINN)                | .55                                          | .30                                | 9.79     | .70                  |
| <b>Organizational Performance (OP)</b>    |                                              |                                    |          |                      |
| Financial (FIN)                           | .58                                          | .67                                | 10.11    | .33                  |
| Customer (CUST)                           | .63                                          | .61                                | 11.84    | .39                  |
| Internal Process (PROC)                   | .77                                          | .41                                | 14.49    | .59                  |
| Learning & Development (LD)               | .83                                          | .32                                | 15.54    | .68                  |
| <b>Organizational Sustainability (OS)</b> |                                              |                                    |          |                      |
| Economic Perspectives (ECON)              | .81                                          | .34                                | 16.94    | .66                  |
| Social Perspectives (SOCIAL)              | .76                                          | .42                                | 15.60    | .58                  |
| Environment Perspectives (ENVI)           | .82                                          | .33                                | 17.07    | .67                  |

After the confirmatory factor analysis (CFA), this study examined the relationship between organizational learning, organizational innovation, organization performance and organizational sustainability which is revealed in Figure 2. Results are given in Table 3. It is found that learning has significant impact on organizational innovation with 0.87\*(10.16). Organizational learning has significant effect on

organizational performance and organizational sustainability with 0.42\*(5.32) and 0.37\*(5.39), respectively. Additionally, organizational innovation has significant effect on organizational performance and organizational sustainability with 0.59\*(3.16) and 0.62\*(2.83), respectively. Furthermore, organizational performance has significant effect on organizational sustainability with 0.54\*(5.33).

Thus, all the direct effects are supported along with the indirect effect.

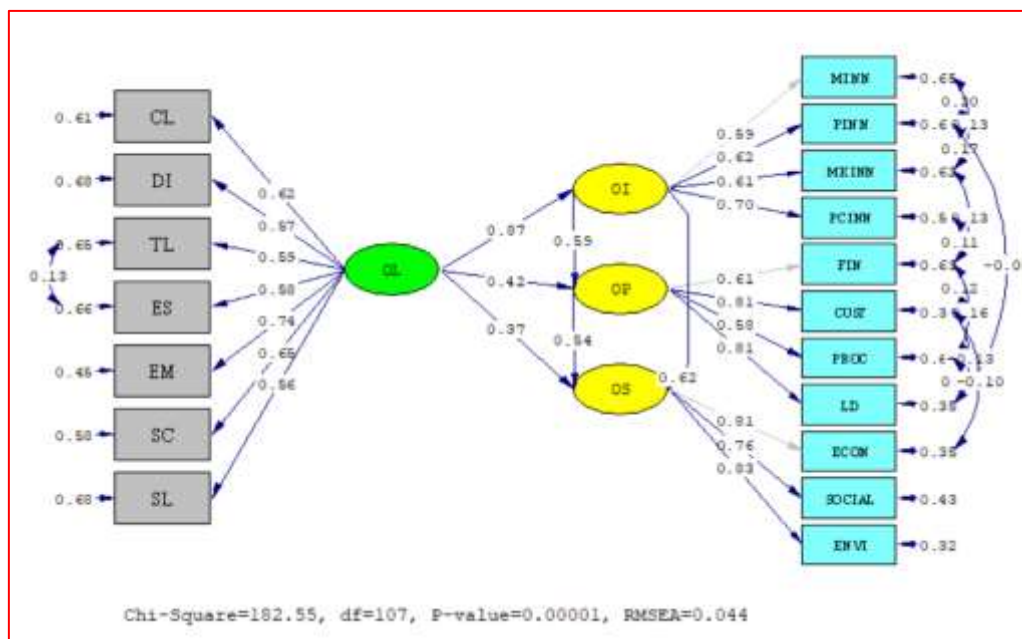


Figure 2. Study Framework

Table 3. Parameter estimation result of direct effect coefficient, indirect effect and total effect from adjust model (n=360)

| Dependent Variable                 | R <sup>2</sup> | Effect | Independent Variable           |                                 |                              |
|------------------------------------|----------------|--------|--------------------------------|---------------------------------|------------------------------|
|                                    |                |        | Organizational Innovation (OI) | Organizational Performance (OP) | Organizational Learning (OL) |
| Organizational Innovation (OI)     | .76            | DE     | -                              | -                               | .87*(10.16)                  |
|                                    |                | IE     | -                              | -                               | -                            |
|                                    |                | TE     | -                              | -                               | .87*(10.16)                  |
| Organizational Performance (OP)    | .61            | DE     | .59*(3.16)                     | -                               | .42*(5.32)                   |
|                                    |                | IE     | -                              | -                               | .51*(3.17)                   |
|                                    |                | TE     | .59*(3.16)                     | -                               | .93*(8.60)                   |
| Organizational Sustainability (OS) | .80            | DE     | .62*(2.83)                     | .54*(5.33)                      | .37*(5.39)                   |
|                                    |                | IE     | .32*(6.34)                     | -                               | .57*(3.51)                   |
|                                    |                | TE     | .94*(3.31)                     | .54*(5.33)                      | .94*(10.33)                  |

$\chi^2 = 182.55$  df = 107 p-value = .00001,  $\chi^2 / df = 1.70$ , RMSEA = .044, RMR = .024, SRMR = .047, CFI = .99, GFI = .95, AGFI = .91, CN = 284.30

5. Discussion

To achieve the study objective, the current study examined the connection between

organizational learning, organizational innovation, organization performance and organizational sustainability. To examine this



relation, the current study proposed various hypotheses including the direct and indirect hypotheses. In this direction, the current study examined the effect of learning on organizational innovation, organizational performance and organizational sustainability. Results of the study highlighted that organizational learning has significant and positive influence on organizational innovation. It shows that increase in organizational learning among the companies has the ability to promote organizational innovation. Therefore, among the listed companies of Thailand the organizational innovation can be promoted through organizational learning. These results are also constant with the preceding studies which shows the significant effect of organizational learning in relation to the organizational innovation. Furthermore, the impact of organizational learning on organizational performance is also significant and positive which demonstrates that organizational learning also has the potential to enhance organizational performance. This is also proved by the previous studies in various other industries (García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012). Additionally, it is found that organizational learning has positive impact on organizational sustainability. As it is also proved by other researchers that organizational performance and organizational sustainability has significant relationship with each other which has significant importance for the business activities (Akram, Goraya, Malik, & Aljarallah, 2018). Therefore, it is observed that organizational learning has positive influence to enhance organizational innovation, organizational performance as well as organizational sustainability among the listed companies of Thailand in stock exchange. In addition to these results, results of the study also proved that organizational innovation has positive effect to promote organizational performance. The increase in organizational innovation internally is the possibility to enhance overall performance of the companies. Furthermore, organizational innovation also has positive effect on organizational sustainability. The increase in organizational innovation among the companies can increase organizational sustainability. Finally, it is also proved that organizational performance has significant contribution to the organizational sustainability. As results of this study shows that increase in organizational

performance can increase the organizational sustainability.

## 6. Conclusion

Among the Thai listed companies in stock exchange, organizational learning, organization innovation, organizational performance, and organizational sustainability were rated at the highest level. The organizational learning is most influential factor which has significant influence to promote organization innovation, organizational performance, and organizational sustainability. Organizational innovation, organizational performance and organizational learning has a direct influence on organizational sustainability. The model for the business sustainability of the companies listed on the stock exchange of Thailand, developed by the study is called the LILP Model. It is an innovative integrated learning model concept for listed companies, consisting of leadership, innovation, and learning platform. The findings can be used as a framework for the development of the organizational learning model that leads to the creation of the organization innovation and sustainability of the listed companies.

### 6.1 Implications of the Study

The current study has significant implications theoretically as well as practically in relation to the listed companies in Thailand stock exchange. Especially, the current study considered stock exchange of Thailand in relation to the organizational learning which is not considered in several previous study. As several previous authors has conducted research on stock exchange of Thailand along with the listed companies, however, these studies ignored the important element of organizational learning and its effect in various innovative activities along with the business sustainability. Therefore, this study contributes by considering the effect of organizational learning on organizational innovation, organizational performance and organizational sustainability. This relationship is really considered by literature along with various indirect influence of innovation and organizational performance. Along with these important insights in relation to the literature, the current study also has significant insights practically. This study

provides various insights for the listed companies of Thailand to enhance organizational performance, organizational innovation and organizational sustainability. All these elements have major role to promote business activities of these companies, therefore, the results of this study provided important points for the practitioners to enhance the overall level of performance, sustainability as well as innovation with the help of organizational learning. This study recommended to the management of listed companies to enhance organizational learning to promote innovation, performance and business sustainability.

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