

A Causal Model of Organizational performance in Energy Sector: Stock Exchange of Thailand

Supa Waisayarat¹⁾ Surapool Payomyam²⁾ Suchitra Luangamornlert³⁾
Prachayanun Nilsook⁴⁾ Weerapong Kongsawas⁵⁾

Abstract

The objective of this study was to determine the causal relationships model among leadership style, organizational culture, learning organization as they related to organizational performance of the Energy sector in Stock Exchange of Thailand. This dissertation represents one of the few efforts at conceptualizing leadership style and organizational culture ,and one of the first attempts to empirically test their influence on direct effect and indirect effect (mediating effect)on the learning organization and organizational performance relationship.

The proposed model was tested in the energy sector in Stock Exchange of Thailand (SET). Survey data were collected: 224 sets of completed questionnaire were collected by means of random sampling of company managements selected from the list of companies in Stock Exchange of Thailand. A confirmatory factor analysis was conducted with all constructs; leadership style, organizational culture, learning organization and organizational performance. The factor analysis results showed that all constructs fitted well with the empirical data. And, a structural equation model utilizing the observed and latent variables produced a model that showed the direct and indirect effects of leadership style, organizational culture and learning organization on organizational performance. The results showed that four out of the six hypotheses were supported, and two hypotheses were rejected. Consistent with hypotheses, the results indicated that, learning organization had strong direct effect on organizational performance (0.57, $p < 0.001$), leadership style and organizational culture both had direct effect on learning organization (0.56 and 0.63, $p < 0.001$, respectively). Moreover, leadership style and organizational culture both had indirect effect on organizational performance (0.13 and 0.36, respectively). However leadership style and organizational culture were not found to provide direct effect on organizational performance. As the results of high degree of organizational performance; the relationship between leadership style has been linked directly with the organizational performance (0.36 , $p < 0.001$) but the in the low degree of organizational performance has been linked directly to the learning organizational performance but it was shown little relative to the organizational performance. Therefore, in the differences contexts, the scenarios of management level who respond to the questionnaires have different perceptions form the relationship of leadership style to organizational performance and organizational culture to organizational performance. Respondents who report high levels of learning organization were likely to have high level

1) Ph.D Candidate, Christian University

2) Assoc. Prof. Dr., Chulalongkorn University

3) Assoc. Prof. Dr., Silapakorn University

4) Assist. Prof. Dr., King Mongkut's University of Technology North Bangkok

5) Statistical Specialist, Royal Thai Air Force Academy

organizational performance. The findings of this research make some contributions at both academic and practical levels. In the academic level, the findings will help extend the body of knowledge of organizational performance, learning organization, leadership style and organizational culture. At the practical level of managerial implication, by understanding the determinant of organizational performance will guide managers to develop strategies which will help to develop organizational performance in energy sector in Stock Exchange of Thailand (SET).

This research provides some areas for future research directions. The utilization of the relationship among organizational performance, learning organization, leadership style and organizational culture model could identify/ refine additional mediator constructs to this relationship and improve amount of variance explained in organizational performance. Moreover, future research can be designed to investigate other multi-sample differences or to test the relationship between learning organization and organizational performance in other aspects of demographic.

Key Words: Leadership Style, Organizational Culture, Learning Organization and Organizational Performance

Introduction

In every country worldwide nowadays, the energy sector plays an important role in achieving economic goals and development. This role occurs within a wide range of the energy sector and economics strategies. Some countries like Thailand have to import the energy resources, while others accelerate economic growth by exporting the energy. Where free market is advocated, private initiatives and competition in stock market is encouraged. Especially for the energy sector is very important market and high performance for Thailand's investment, then being a prestige and trustworthy marketplace with competent team by promoting innovative products and services with a pool of liquidity to meet stakeholders' expectations, the companies in stock market must perform their best then the learning organization shall be the key answer for this matter. Furthermore, to be a prime choice for capital raising and investment by offering integrated financial products and services through trustworthy and accessible platforms then we must find the key of success and enhance organizational performance.

Kaiser and Holton (1998) proposed a model of

learning organization as a performance improvement strategy. It showed that if organizational learning and innovation were conceptualized as drivers of organizational performance, the following conceptual model might explain the role of hypothesized learning organization strategies in improving organizational effectiveness and performance. As the leadership theories, organizational culture theories and learning organization's concept have been changed the business environment worldwide, in order to survive and remain competitive. Pfetter J. (1997) argues that the current state of organization theory produces theoretically rich research but lacks in providing actionable knowledge. The research contributes to the organization theory by hypothesis and studying a model for organizational performance. The research outcomes identify an integrated approach to determine, develop match and sustain the level of organization performance.

To better understand the concept of the organizational performance in a Thai context, organizations in the sampling company from Stock Exchange of Thailand especially for the energy sector are selected as the target group of this study. The

study examined the effects of leadership styles, organizational culture as the organizational characteristic and learning organization as the performance driver through the organizational performance including financial and knowledge performance. In this particular dissertation ,the theory of learning organization would based on the Vitoria J Marsick and Karen E.Watkins,1993,1999) which is different in three main categories .First ,they frequently work through action technologies, action research, action learning ,and action science. Second, most of the learning organization use the system thinking perspective popularized by Senge (1990). The leadership theory was developed by Bass and Avolio(1993) with their instrument called MLQ would be an instrument for leadership testing. Last theory shall be concerning with the organizational culture, the Organizational Culture Assessment Instrument (OCAI) shall be applied. Therefore, with their instruments Dimension Learning Organization Questionnaire (DLOQ), Organizational Culture Assessment Instrument (OCAI) and Multifactor Leadership Questionnaire (MLQ) have undergone

extensive refinement and testing to ensure validity and reliability and have strongly reliable.

Theoretical Conceptual Model

The conceptual model depicted the interrelationship among leadership style, organizational culture, learning organization as they related to organizational performance of the Energy sector in Stock Exchange of Thailand. The variables in the study were shown as follow.

Independent Variable

- Leadership style (LDS) : Transformational Leadership (LDS1) and Transaction Leadership (LDS2)
- Organizational Culture (OC) : Ad-hocracy Culture(OC1), Clan Culture(OC2), Hierarchy Culture (OC3) and Market Culture (OC4)
- Learning Organization (LO) : Continuous learning(LO1), Dialogue & inquiry(LO2), Team, Learning (LO3), Empowerment (LO4), System connection (LO5) , Embedded system (LO6) and Provide leadership (LO7)

Dependent Variable

- Organizational Performance (OP) : Financial Performance (OP1)and Knowledge

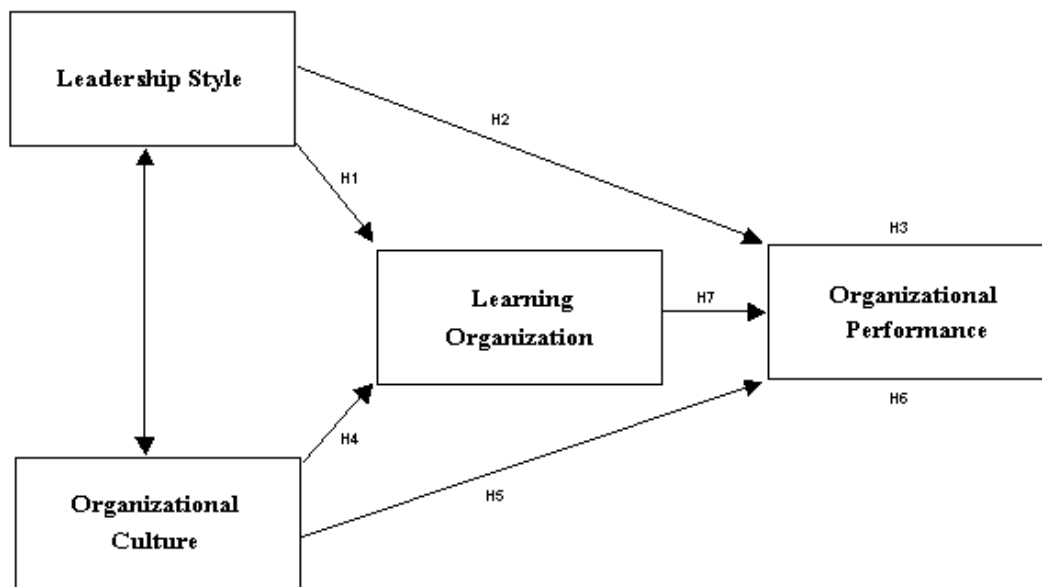


Fig. 1 The Conceptual Model of Organizational Performance

Performance (OP2)

Definition of Variables

Leadership style (LDS) : is identified in two distinct style of leadership, transformational and transactional leadership. Each dimensions has corresponding set action and behaviors. And it can be measured by the MLQ.

- Transformational leadership(LDS1) is based on the personal value, belief and qualities of the leaders rather a process between leaders and followers. Further more transformational leadership has a ability to lead change in organization.
- Transactional leadership(LDS2) is based an exchange process between leader and followers. The transactional leadership recognizes specific follower's desires and provides goods that meet those desires in exchange.

Organizational culture is formed as a pattern of sharing basis and group that learned as it solved its problems of an external adaptation and internal integration, that has worked well enough to be considered ,therefore ,to be taught to new members as the correct way to perceive, think and feel in relation to those problems(Schein 1993).It can be measured by OCAI.

- Adhocracy culture (OC1) is defined as the organization that focuses on the external positioning with high degree of flexibility and individuality.
- Clan culture (OC2) is defined as the organization that focuses on the internal maintenance with flexibility, concern for people and sensitivity to customers.
- Hierarchy culture (OC3) is defined as the organization that focuses internal maintenance a need for stability and control.

- Market culture(OC4) is defined as the organization that focuses on the external position with a need for stability and control.

Learning organization (LO) : is defined originally as one of that is characterized by continuous learning for continuous improvement, and by capacity to transform itself (Watskins and Marsick,1996). This learning organization shall generate new knowledge which they can create innovative products and service to meet customer needs. Learning organization can identify in seven action imperatives that characterize the companies toward this goal (Watskin and Marsick,1993;1999)

- Create continuous learning opportunities (LO1) - learning is designed into work so that people can learn on the job: opportunities are provided for ongoing education and growth;
- Promote inquiry and dialogue (LO2) - people gain productive reasoning skills to express their views and the capacity to listen and inquire into the views of others; the culture supports questioning, feedback, and experimentation;
- Encourage collaboration and team learning (LO3) - work is deigned to use groups to access different modes of thinking; groups are expected to learn together and work together; collaboration is valued by the culture and rewarded;
- Establish systems to capture and share learning (LO4) - Both high and low technology systems to share learning are created and integrated with work; access is provided and systems are maintained;
- Empower people toward a collective vision (LO5) - people are involved in setting, owning, and implementing a joint vision; responsibility is distributed close to decision making to motivate people to learn that for which they

are accountable;

- Connect the organization to its environment (LO6) - people are helped to see the impact of their work on the entire enterprise; people scan environment and use information to adjust work practices; organization is linked to community; and
- Provide strategic leadership for learning (LO7) - leaders model, champion, and support learning; leadership uses learning strategically for business results.

Organizational performance (OP) : Measurement of the organization's capabilities in both financial aspects as related to future performance in term of finance ,performance with customer relations, the internal process and the learning and growth perspective according to the KPI or balance score card from Kaplan and Norton (1996).

Financial performance (OP1) is measured by the perception of the management for this purpose study is included :

- Return of investment
- Employee productivity
- Time to market for products or services
- Customer response time
- Market share

Knowledge performance (OP2) : is measured by the extent of knowledge capacity which are increasing by the below list which is measured via DLOQ and the combination of OCAI and MLQ.

- Customer satisfaction
- Implement suggestions
- New product or services
- Percent of skilled worker
- Time devoted to technology
- Number of individuals acquiring new skills.
- Cost per transaction

Objective of the study

The objective of this study was to determine the causal relationships model among leadership style, organizational culture, learning organization as they related to organizational performance of the Energy sector in Stock Exchange of Thailand.

Hypotheses of the study

The following hypotheses were tested:

Hypothesis 1: Leadership style has direct effect on learning organization.

Hypothesis 2: Leadership style has direct effect on organizational performance.

Hypothesis 3: Leadership style has indirect influence on organizational performance through learning organization.

Hypothesis 4: Organizational culture has a direct effect on learning organization.

Hypothesis 5: Organizational culture has a direct effect on organizational performance.

Hypothesis 6: Organizational culture has indirect influence on organizational performance through learning organization.

Hypothesis 7: Learning organization has a direct effect on organizational performance.

Delimitation of this research

As the energy sector in the Stock Exchange of Thailand is playing an important role in achieving economic development and it linked closely to the growth of Thai's industry, transportation and urban areas. Therefore this particular study would be emphasized in two perspective performance (both financial and knowledge performance)

1. Study variable will be responded by the executive level or leaders in the energy sector.

2. The business will be selected only those in the stock market which is based on the theoretical framework using in this study.

3. The study period shall be started from 2007 until 2009, the secondary data shall be collected from SET but the interview process and questionnaire issuing shall be collected during May 2009 to July 2009.

Research assumption

1. The perception of the leaders in energy sector is believed to be true.

2. The perception of the relationship between leadership styles, organizational culture, learning organization and organizational performance can be measured from leaders in energy sector and all relations are linear.

3. The questionnaires and instruments use in this study need to be tested for the valid and the reliability.

Limitation of this research

This study may be limited due to its focus on the management of the organization for the leadership style survey and the learning organization. Furthermore the DLOQ, MLQ and OCAI shall be used as the appropriate instrument in this research. An evaluation of organizational performance would be given way to a stronger and study in terms of examine a relationship between the leadership styles, organizational culture as the performance driver through learning organization to organizational performance. The research participants shall be self-reported for knowledge and financial performance.

Research methodology

Research design

This study will employ a relational description as the methodological design. The quantitative method for quantification was used in this research.

Population and Samples

The target population of this study is executive

member in management level within Energy sector. The survey instruments categorize three self-reported designations. The designations are:

1. Executive management/CEO/Board of management
2. Senior management/Vice president
3. Division Manager from the large companies.

Therefore the number of sample size is calculated from the populations of the designations in the Energy sector, by the estimation, it shall be calculated from the assumption of multivariate normality, the ratio of respond to parameters. With 14 parameters, the numbers of samples shall be based on 15 respondents per parameter then the number of samples shall be multiplied by 14X15 samples. From Maximum Likelihood Estimation (MLE) it is generally accepted that the minimum sample size to ensure test model is calculated at least 210 samples (Hair et al, 1998) survey instruments will be delivered to the random sampling persons.

The survey also gathered demographic information about the firm, and included total number of employees, and percentage of minorities and women. To reduce possible desirability bias, the commitment has to given for keeping all individual responses completely confidential and confirm that all of analysis would be restricted to an aggregate level that would prevent the identification of any organization.

Research instruments

The purpose of this study shall be measured the relationship of leadership style and the organizational culture and the learning organization as the driver for the organizational performance. Therefore, three instruments shall be used for three purposes, the first measurement is called Dimensions of the Learning Organization Questionnaire "DLOQ" The second instrument is called "Organizational

Culture Assessment Instrument(OCAI)" was designed by Cameron(2002). And the last instrument is called "the Multifactor Leadership Questionnaire (MLQ)" which was designed by Bass and Avolio(1993). There three instruments required approximately 40 minutes to complete.

Dimension Learning Organization Questionnaire (DLOQ)

The Dimension Learning Organization Questionnaire (DLOQ) instrument (Watskin & Marsick,1993,1996) and survey are used to examine the relationship between perception of learning organizational and organizational performance. Measuring learning orientation has been framed in the literature by constructs described by Watkins and Marsick (1993; 1999) Senge (1990) and Garvin (2000). Learning orientation is measured using the scale originally constructed and validated by Watkins and Marsick .

Financial performance for this purpose study is included:

- a. Return on investment
- b. Employee productivity
- c. Time to market for products or services
- d. Customer response time
- e. Market share and
- f .Cost per transaction

Knowledge performance for this purpose study included:

- a. Customer satisfaction
- b. Implement suggestions
- c. New product or services
- d. Percent of skilled worker,
- e. Time devoted to technology
- f. Number of individuals acquiring new skills.

The Organizational Culture Assessment Instrument (OCAI)

The Instrument is based on a theoretical model

entitled the Competing Values Framework (Cameron 1999). This framework is extremely useful in helping to organize and interpret a wide variety of organizational phenomena. These four culture types serve the core values, assumptions, interpretations, and approaches that characterize an organization. The OCAI is a self-scoring ,consisting of 24 items, it was distributed to respondents to describe the capacity of the organization into a organizational culture by indicating through the use of a six point Likert-scale how often each of the 24 items was true of the organization. This instrument has scores on each item, which range form one to six points depending on the strength of agreement with each item. Rating scale for OCAI is 1 to 6, from less frequently to most frequently.

The Multifactor Leadership Questionnaire (MLQ)

The instrument is based on the theoretical model are used of an international testing, revision and validation (Bass and Avolio 1993). The MLQ shall be used for the transactional and transformational leadership testing, it shall be distributed to respondents to describe the leadership role and their competencies by indicating how often of 45 items was true of their behavior through the use of a five point Likert-scale. This instrument has scores on each item, which range form one to five points, depending on the strength of agreement with each item. Rating scale for MLQ is 1 to 5, from less frequently to most frequently. The 45 items were dived into two major leadership behaviors or styles, in which each leadership behaviors or styles represents two roles of each quadrant.

Instrument development

Three instruments had been approved from the owners for using and translation. Later on the researcher had developed and modified three instruments in to the completed package both the

Thai and English languages.

Validity

The instruments including DLOQ, OCAI and MLQ had been completed modified for many years ago and three of instruments were tested and used in among of many research in United State of America and also in many several of number of countries. However as the questionnaires were written in the English language, then in order to utilize this instruments effectiveness in Thai organization, it is necessary to translate the instrument from the English version to the Thai version. Thus, constructed content validity of three instruments shall be constructed via three experts.

The experts shall be requested to evaluated three instruments in Thai Language version in the following ways

(a) Clarity of language of the questionnaire with the Thai language.

(b) Comprehensibility of the questionnaire

(c) Clarity of the instructions on the questionnaire.

Experts for testing the content of validity shall be nominated for the clarity of instrument in context of this study (McCarron et al, 2002). By the score of the following item;

Scoring is started from 1 to 5 for the less agreement to most agreement.

Additional comment shall be added for an appropriateness of questionnaires.

The clarity of language shall be improved to prevent any problem that might be experienced when completing the questionnaire.

The forward and backward translation is required for the utmost accuracy for the content of validity. Hence the original contents of all instruments shall be confirmed by backward by English which was certified for the translation by Center for Translation and Language service, Institute of Language & Culture for Rural Development.

Reliability

The internal consistency method, specifically Cronbach's Alpha, were selected to measure the reliability of the survey instrument since it is required for the testing with three instruments. After testing with five experts, then the instruments had been tested with the other group (MAI) that had smaller size than SET, at least 30 persons which are not in the Energy sector but it's related to the consequence of the mentioned group. The calculating of the Coefficient Alpha's Cronbach was found that the reliability coefficients of DLOQ, OCAI, and MLQ were 0.8626, 0.9510, and 0.9660 respectively. Three instruments were tested for the measurement of LDS, OC, LO and OP.

Data analysis and statistical analysis

Data Analysis

The statistical package for social science (SPSS version 11.5) and AMOS for windows shall be used for the computational analysis in this study. Each of the variables in theses hypotheses was measured by the perception of organization members. The sample was described by use of a descriptive summary statistics for the means, standard deviations, and percentages.

Path Analysis

Path analysis is a form of applied multiple regression analysis that uses path diagrams to guide problem conceptualization or test complex hypotheses. Through its use one can calculated the direct and indirect influences of independent variables on a dependent variable. These influences are reflected in so-called path coefficients, which are actually standardized regression coefficients (beta : b). Moreover, one can test different path models for congruence with observed data. While path analysis has been and is an important analytic and heuristic method, it is doubtful that it will continue to be used

to help test models for their congruence with obtained data, Rather, its value will be as a heuristic method to aid conceptualization and the formation of complex hypotheses (Hair et al, 1998).

Structural Equation Modeling (SEM)

Structural equation modeling (or sometimes called covariance structure analysis) includes various modeling methods that explain linear (or sometimes nonlinear) relationships among variables by analyzing correlations or covariance among them. SEM provides estimates of the strength of the relationships between variables. Each of the relationships is expressed in a kind of equation called structural equation. Thus, structural models express the dependent relationship between the variables. The relationship between the constructs is often assumed as a causal relationship.

One of the most important characteristics of SEMs is that they can analyze the independent relationships of more than one set of variables. For example, one SEM can encompass several linear regression equations, which are not related to each other. Because of this nature, SEM can deal with a very complex relationship between variables, which usually requires, say, several multiple regression equations to be more fully described. SEM is a flexible design and researchers can easily construct their theoretical or hypothetical models on SEM. Thus, researchers can develop more complex and situational oriented models with which they can confirm and

explain their theories or hypotheses. The model can be developed exclusively based on the researcher's insight. SEM is fundamentally for verifying hypothesized models and this is why SEM is mentioned as a confirmatory method rather than exploratory.

Consequently, the hypothesis model for testing shall be investigated through structural equation modeling. Therefore, dimensions of transactional and transformational leadership were exogenous variables in the path model. In other words, there were no variables hypothesized to influence them. Conditions for organizational culture and the learning organization were endogenous variables as they had at least one hypothesized cause in the path model. The one directional model, known as a recursive model, assisted in establishing causal links between the variables.

The direct and indirect effects of factors

The direct and indirect effects of all endogenous and exogenous variables in the revised model are reported in Table 1. From the structural model tested, organizational culture had the strongest positive direct effect (.630) on learning organization and leadership style had positive direct effect (.560) on learning organization. Organizational culture had the strongest positive indirect effect (.356) on organizational performance and leadership style had the positive indirect effect (.317) on organizational performance. Moreover, the learning organization had an direct

Table 1 Direct, Indirect and Total effects in revised SEM Model

Variable	Direct Effect	Indirect Effect	Total Effect
LDS Leadership style ---> LO Learning Organization	.560	-	.560
OC Organizational Culture ---> LO Learning Organization	.630	-	.630
LDS Leadership style ---> OP Organizational Performance	-.101	.317	.216
OC Organizational Culture ---> OP Organizational Performance	.068	.356	.425
LO Learning Organization ---> OP Organizational Performance	.566	-	.566

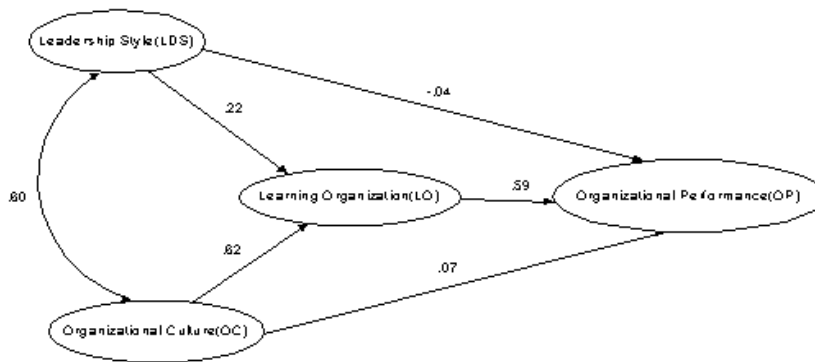


Fig. 2 Structural Equation Modeling of the study

effect (.566) on organizational performance.

The Structural Equation Modeling Result

A confirmatory factor analysis was conducted with two independent constructs, learning organization and organizational performance, showed that two constructs fitted well with the empirical data. And, a structural equation model (SEM) utilizing the data as observed variables and the constructs as latent variables produced a model that showed the impact of the relationship between learning organization and organizational performance. The fitted structural equation model indicated the chi-square values (CMIN) was 112.268, the degree of freedom (df) was 72, the CMIN/df was 1.559, which was very close to 2, also represented an acceptable fit as Byrne (2001) stated that the value of CMIN/df which was less or equal to

2 represented a good fit. The Root-Mean Square Error of Approximation (RMSEA) was .05, the RMSEA which was greater than .05 but less than or equal to .08 can be accepted. (Brown and Cudeck, 1993), the goodness of fit index (GFI) was 0.941 and the Adjusted Goodness of Fit Index (AGFI) was 0.901. Both of values were very close to 1, which indicated a good fit (Byrne, 2001).

Hypothesis Testing

The full model in this study was a structural model. The structural model was constructed by the six hypotheses.

1. Relation of Leadership style (LDS) and learning organization (LO).

Hypothesis 1 stated that leadership style has

Table 2 : Fit indices for the Model

Fit indices	statistics
Chi-square (χ^2)	369.23
Degree of freedom (d.f.)	346
$\chi^2/d.f.$ (CMIN/d.f.)	1.067
Probability Level	0.187
Goodness of fit index (GFI)	0.962
Adjusted goodness of fit index (AGFI)	0.946
Root mean square effort of approximation (RMSEA)	0.011
Comparative fit index (CFI)	0.998
Normed fit index (NFI)	0.967

direct effect on learning organization.(LDS→LO) .

The structural equation modeling analysis indicated that standardized coefficient of the path from leadership style and learning organization was .560. The *t*-value was 3.250, which was significant at *p*-value = .001. Therefore, The significant coefficient provided evidence of support for hypothesis 1.

2. Relation of Leadership style (LDS) and organizational performance (OP).

Hypothesis 2 stated that leadership style has direct effect on organizational performance. (LDS→OP).

The standardized coefficient of the path from leadership style and organizational performance was -0.101. The *t*-value was -0.448, which was insignificant with *p*-value = .654. Statistical results indicated that there was no direct effect of leadership style on organizational performance. The insignificant coefficient provided evidence of no support for hypothesis 2.

3. Relation of Leadership style (LDS), learning organization(LO) and organizational performance (OP).

Hypothesis 3 stated that leadership style has indirect influence on organizational performance through learning organization. This hypothesis exploring the indirect effect of on leadership style on organizational performance and was shown as the path from LDS→LO→OP. The standardized coefficient for this path (indirect effect) was .317. The *t*-value of the path from LDS→LO was 3.250 and, the *t*-value of the path from LO→OP was 5.198 which was significant at *a* = .000. The significant coefficient provided evidence of support for hypothesis 3.

4. Relation of Organizational culture (LDS) and learning organization(LO)

Hypothesis 4 stated that organizational culture has a direct effect on learning organization. (OC→LO). The structural equation modeling analysis indicated

that standardized coefficient of the path from organizational culture and learning organization was 0.630. The *t*-value was 8.662, which was significant at *p* = .000. Therefore, these statistical results confirmed that there was strong direct effect of organizational culture on learning organization. The significant coefficient provided evidence of support for hypothesis 4.

5. Relation of Organizational culture (OC) and organizational performance (OP).

Hypothesis 5 stated that organizational culture has a direct effect on organizational performance. (OC→OP).

The standardized coefficient of the path from organizational culture and organizational performance was 0.068. The *t*-value was 0.603, which was insignificant with *p* = .546. The statistical results indicated that there was no direct effect of organizational culture on organizational performance. The insignificant coefficient provided evidence of no support for hypothesis 5.

6. Relation of Organizational culture(OC), learning organization(LO) and organizational performance (OP).

Hypothesis 6 stated that organizational culture has indirect influence on organizational performance through learning organization. This hypothesis explored the indirect effect of on organizational culture on organizational performance and the hypothesis was shown as the path from OC→LO→OP. The unstandardized coefficient for this path (indirect effect) was .356. The *t*-value of the path from OC→LO was 8.662 and, the *t*-value of the path from LO→OP was 5.198 which was significant at *a* = .000. The significant coefficient provided evidence of support for hypothesis 6.

7. Relation of learning organization(LO) and organizational performance (OP)

Hypothesis 7 stated that learning organization has a direct effect on organizational performance. (LO→OP)

The structural equation modeling analysis indicated that unstandardized coefficient of the path from learning organization and organizational performance was 0.566. The *t*-value was 5.198, which was significant at $p = .000$. Therefore, these statistical results confirmed that there was strong direct effect of learning organization on organizational performance. The significant coefficient provided evidence of support for hypothesis 7.

The results showed that five out of the seven hypotheses were supported, and two hypotheses were rejected. Consistent with the major hypothesis, learning organization was found to have a strong influence on organizational performance. Respondents who report high levels of learning organization were likely to have high level organizational performance. For the hypothesis testing, it indicated that, learning organization had direct effect on organizational performance (0.57), leadership style and organizational culture both had direct effect on organizational culture (0.56 , 0.63, respectively), however leadership style and organizational culture were not found to provide direct effect on organizational performance. However, leadership style and organizational culture both had indirect effect on organizational culture (0.13, 0.36, respectively).

The findings of this research make important contributions at both academic and practical levels. In the academic level, the findings will help extend the body of knowledge of organizational performance, learning organization, leadership style and organizational culture.

This research provide several areas for future research directions such as the future research

utilizing the relationship among organizational performance, learning organization, leadership style and organizational culture model that could identify/ refine additional mediator constructs to this relationship, improving the amount of variance explained in organizational performance, including a future research that can be designed to investigate other multi-sample differences or test the relationship model of learning organization and organizational performance in other aspects of demographic.

Summary of Research Findings

1. There was strong direct effect of leadership style on learning organization and only Transformational Leadership played a major role for the direct effect on learning organization

2. Leadership style had indirect effect on organizational performance through learning organization.

3. The interaction effect between leadership style and learning organization affected organizational performance in positive direction and the increasing in interaction effect between leadership style and learning organization would increase organizational performance.

4. There was strong direct effect of organizational culture on learning organization while clan culture, adhocracy culture and market culture played major roles in the direct effect on learning organization.

5. There was strong direct effect of learning organization on organizational performance while dialogue and provide leadership played major roles in the direct effect on organizational performance.

6. Both dialogue and provide leadership had strong effected on financial performance but there was no effect on knowledge performance.

7. Both transformational leadership and transactional leadership were correlated with organizational culture and the strong leadership styles

would lead to strong organizational culture.

Implications for Further Research

The findings of this dissertation provide several research implications for future research directions in a number of areas and the findings from this investigation suggest a number of areas that might require attention in future research.

1. A future study can be designed to investigate other multi-sample differences such as, by gathering a larger sample and comparing high and low organizational performance groups. This line of inquiry can pinpoint the critical determinants associated with organizational performance and provide more diagnostic information for effective performance strategies.

2. Longitudinal studies may be conducted to overcome the constraints of cross-sectional data. Because learning organization and organizational performance involve a long term process, longitudinal research can better represent the causal effects in the proposed model. To further explore the research model, the study period could be expanded beyond the presented 5 years with access to the appropriate data and the fit model can be developed into constructs applicable to organizations in different contexts.

3. Research should also test the model using sample in other demographical segmentation, such as smaller to mid-size companies. In general, future research should test the model across a more generalizable sample in terms of income type of businesses and geographic area.

4. Future study should focus on the possible effects from corporate restructuring of organizations such as mergers and acquisitions. Although there were no evident effects detected with the measures employed in the Investigation, the relationship might be worth exploring to understand the context of

organizational change.

5. This study raises an important question about the driver to the organizational performance from the multiple paths and differing combinations of LDS, OC and LO for achievement of organizational performance .It could be further developed in further future research efforts. In conclusion, the energy business has experienced a great deal of change over the past few years. The industry, among the private companies, is fiercely competitive, and this will continue into the future, Thus energy companies must develop strategic alternatives in order to remain competitive. Learning organization is an important tool that organizations can use to remain competitive. Learning organization is subject to environmental changes and highly turbulent business conditions. The simultaneous management of the environment, strategy, culture, structure, and leadership is the essence of strategic management. Smerk (1971) identified management as the weak link for its failure to adapt and adjust to driving forces and environmental changes within the Energy business. The role of leaders is to formulate the vision and strategy for the organization, then to implement those strategies (Nahavandi and Malekzadeh, 1993). In order for an organization to be successful, it must continue to learn (Mintzberg, 1994).

6. This researcher established a link between leadership styles, organizational culture learning organization, and organizational performance. A leader should recognize when a particular learning stock needs to be developed, and what type of leadership style would best accomplish that objective. This requires the best leader to be both a manager and a leader. Researchers suggest that creating a learning culture plays a key role in organizational success (Watkins and Marsick, 1996). All business entities, regardless of industry, are ultimately about

competition, which included gaining and sustaining a competitive advantage. Energy business in Thailand must compete against different industries and multinational companies. High-tech companies compete to bring new innovative products or services online, for skilled employees, and market share among other things. Energy companies compete against the fast of service and innovation. While these energy companies face many of the same environmental forces, whether it is high fuel cost or changing governmental regulations, they must develop strategic alternatives to be competitive. The traditional competitive strategies that organizations use to gain a competitive advantage can no longer serve as the sole catalyst for competition. Learning organization, while not the only tool, is a tool that companies and organizations can use to gain and sustain a competitive advantage.

Continuous quality improvement training and education should continue to focus on the promotion of dialogue, team building, and systems thinking.

More external factors affecting organizational performance i.e. Economics, Government's policy , Social impacts ,Technologies and Globalization shall be studied through the industrial environment.

Interviewing with the executives should be explored for the more internal factors and external factors in greater depth.

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