Leadership Behaviors, Learning Organization Culture and Employee Involvement Climate Effecting to Organizational Effectiveness: A Study of Thai Energy Sector
พฤติกรรมภาวะผู้นำ วัฒนธรรมองค์กรแห่งการเรียนรู้ และบรรยากาศในการร่วมมือที่มีอิทธิพลต่อประสิทธิผลองค์กร : การศึกษาขององค์กรภาคพลังงานของประเทศไทย

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Abstract

The objective of this study was mainly to propose a structural model of organizational effectiveness regarding the selected factors namely transformational leadership behaviors, learning organization culture, and employee involvement climate within the Thai energy sector. About 476 questionnaires were distributed to four major Thai energy enterprises, i.e. Electricity Generating Authority of Thailand (136), Provincial Electricity Authority (98), Metropolitan Electricity Authority (127) and PTT Public Company Limited (115). To achieve the objective, the study utilized descriptive statistics and the Structural Equation Model. The findings presented that overall all constructs were found to have acceptable construct reliability scores within an acceptable range of factor loadings. The study developed the structural model of organizational effectiveness within the Thai energy sector with the acceptable fit scores from several model fit indices (χ^2 = 448.806, p< 0.001, CMIN/df = 2.704, GFI = 916, CFI = 975, RMR = .048, RMSEA = .060, NFI = .961, TLI = .969). After testing of the hypotheses, both direct and indirect effects were found in all constructs with the exception of a direct effect between transformational leadership and organizational effectiveness.

Keywords: Organizational effectiveness, Leadership behavior, Learning organization

บทคัดย่อ

วัตถุประสงค์ของการศึกษาในครั้งนี้คือ การเสนอตัวแบบโครงสร้างของประสิทธิผลองค์กรที่เป็นผลมาจากตัวแปรต่อไปนี้ ได้แก่ พฤติกรรมผู้นำการเปลี่ยนแปลง วัฒนธรรมองค์กรแห่งการเรียนรู้ บรรยากาศในการร่วมมือในองค์กรภาคพลังงานของประเทศไทย แบบสอบถามจำนวน 476 ถูกกระจายไปยัง 4 รัฐวิสาหกิจหลักภาคพลังงานของประเทศไทย ได้แก่ การไฟฟ้าส่วนภูมิภาค (98) การไฟฟ้านครหลวง (127) และ บริษัท ปตท.จำกัด

(มหาชน) (115) เพื่อให้บรรลุตามวัตถุประสงค์ การศึกษานี้ใช้สถิติเชิงบรรยายและการวิเคราะห์โครงสร้าง (SEM) ผลการศึกษาเสนอว่า ตัวแปรโครงสร้างทั้งหมดมีค่า ความน่าเชื่อถือตามโครงสร้างอยู่ในเกณฑ์ คะแนนที่ยอมรับได้และมีน้ำหนักปัจจัยอยู่ในเกณฑ์ยอมรับได้ การศึกษานี้ได้พัฒนาตัวแบบโครงสร้างของประสิทธิผลองค์กรในภาคพลังงานของประเทศไทยที่ให้ค่าคะแนนความกลมกลืนจากดัชนีชี้วัดหลายตัวอยู่ในเกณฑ์ที่ยอมรับได้ (χ^2 = 448.806, p< 0.001, CMIN/df = 2.704, GFI = 916, CFI = 975, RMR = .048, RMSEA = .060, NFI = .961, TLI = .969) หลังจากทำการทดสอบตัวแบบ พบว่า มีอิทธิพลทางตรงและทางอ้อมในทุกตัวแปรโครงสร้าง ยกเว้นอิทธิพลทางตรงระหว่างภาวะผู้นำการเปลี่ยนแปลงและประสิทธิผลองค์กร

คำสำคัญ : ประสิทธิผลขององค์กร ภาวะผู้นำการเปลี่ยนแปลง องค์กรแห่งการเรียนรู้

Introduction

In the current challenging circumstances, most public organizations have attempted to remain effective by means of adopting various management techniques. It can be seen that governments have encouraged their employees to perform their tasks which can lead the organization to become effective by reducing administrative costs, increasing effectiveness, speeding up process times, and improving decision-making. These allow public organizations to be more effective than before.

Due to a dynamic global environment and increasing competition among countries, public organizations need to be more and more effective in response to those rapid changes in environments and intense competition among nations. The Thai Government has continuously initiated long-term action plans called "The National Economic and Social Development Plans" which aim to improve public administration. For example, The First National Economic and Social Development Plan (1961-1966) aimed to develop the basic infrastructure, the third plan (1972-1976) aimed to improve public organizations, and since The sixth plan (1987-1991), the Government has attempted to bring management tools to manage the public organizations, including learning organization (in the eighth plan, 1997-2001) (Tippawon Lorsuwannarat, 2007: 6-8). The eleventh development plan (2013-2017), launched by the Office of the Public Sector Development Commission has offered seven strategies for developing the public sector: 1) Service Excellence, 2) High Performance Organizations, 3) Public Value, 4) Integration, 5) Collaboration, 6) Integrity and 7) Readiness for ASEAN 2015 (Office of the Public Sector Development Commission, 2013).

By and large, Thai Government agencies, public organizations and State enterprises have adopted various kinds of management tools. Learning organization is one of many tools that has

been used in many public organizations. The evidence shows that there is no significant difference between the demands for adopting learning organization in all sectors. However, private organizations tend to accomplish process of knowledge management rather than public organizations (Kajay, 2010). The underlying reason is that even though there is a plenty of skilled people in public organizations, there is still lack of leadership, suitable climate as well as collaboration among various skilled people which can lead an organization to become ineffective. The understanding of selected variables would help organizations to perform their tasks more effectively.

Even though many researchers have paid much attention to the construct measurements of the characteristics of transformational leadership, learning organization, employee involvement climate and organizational effectiveness for almost two decades, the research that emphasizes the relationship between these variables together is limited, especially in the context of public organizations (Green and Griesinger, 1996; Penn, 1991; Powell, 1987). Furthermore, many research studies have attempted to identify relationships between leadership and various factors such as organization performance and employee commitment (Khan, Hafeez, Rizvi, Hasnain, and Mariam, 2012), group effectiveness (Sosik, Avolio and Kahai, 1997) and organizational effectiveness (Yukl, 2002). Consequently, existing leadership models have been used to explain social phenomena in various predictors such as organizational effectiveness (Pongthap Chandasuwan, 2011) and strategic behaviors (Suebwong Kalawong, 2011). Morover, studies on leadership are plenty (Kreitner, 1995; Stewart, 1994; Rad and Yarmohammadian, 2006): however, studies that highlight the effects of different leadership behaviors, learning organization culture and employee involvement climate on organizational effectiveness at the organizational level are scarce, but in need (Penn, 1991; Powell, 1987 quoted in Green and Griesinger, 1996). This study thus aimed to investigate the effects of leadership behaviors, learning organization culture and employee involvement climate on organizational effectiveness in case of Thai energy sector.

The objective of the study

1. To examine the effects of transformational leadership behaviors, transactional leadership behaviors, learning organization culture and employee involvement climate on organizational effectiveness based on employee perspectives within the Thai energy sector.

2. To compare both direct and indirect relationships among the given variables within the Thai energy sector.

Scope and The Conceptual Framework

The comprehensive review reveals the conceptual framework of the study as shown in the following figure.

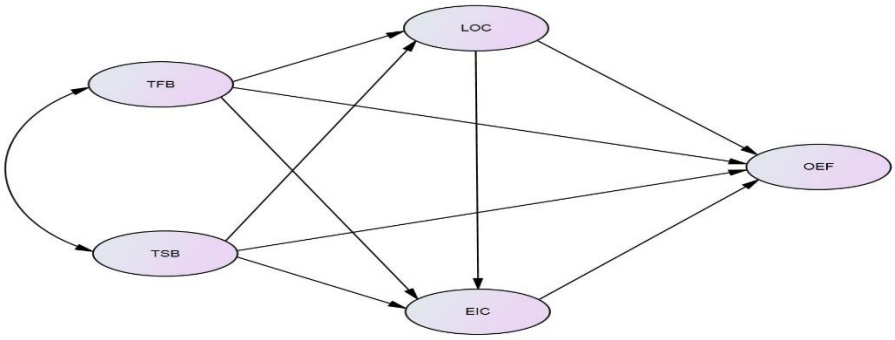


Figure 1 The Conceptual Framework for the Study

According to the proposed framework (Figure 1), the following research variables have been proposed for the study with in the context of Thai energy sector as follows:

Independent variables *consisted of 2 factors; 1) Transformational leadership (TFB), 2) Transactional leadership (TSB). The idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration as the observe variables of transformational leadership behavior, while contingent reward, management by exception in terms of active and passive and laissez-faire leadership as the observe variables of transactional leadership behavior.*

Intervening variables *consisted of 2 factors; 1) Learning organization culture (LOC), 2) Employee involvement climate (EIC). The seven observe variables of learning organization culture included continuous learning, inquiry and dialogue, team learning, embedded system, empowerment, system connection, and strategic leadership, while capability development, team orientation, and empowerment as observe variables of the employee involvement climate .*

Dependent variable *is organizational effectiveness (OEF), and the four observe variables included internal process model, open system model, human relations model, and rational model.*

Literature Review

This literature review provides a basis for better understanding of the nature relationships between transformational leadership, learning organizational culture, employee involvement

climate and organizational effectiveness from a number of existing studies. Then, the theoretical framework is proposed as the result of a reviewed literature which reveals all possible relationships between the selected variables. The essential academic literature used in this paper can be concluded as follows:

Organizational effectiveness is one of the complicated issues in organizational management study. The major difficulty in studying the issue is to find a single definition that can apply to all researchers' interest. Many scholars have found several definitions of effectiveness in organizations. Some have shared common ground while others are completely different grounds. Robbins (1990) has logically provided a clear discourse regarding the definitions of organizational effectiveness. The first approach defines organizational effectiveness as the ability of an organization to achieve its goals. The second approach refers to the relationship between organization and environment. The third approach defines it as a system which has an influence on beneficiary groups who have control over resources. The last approach gives a broad definition by combining the first three approaches. Many empirical studies have attempted to link various factors with organizational effectiveness. For example, Watana Vinitwatanakhun (1998) studied the link between transformational leadership and organizational effectiveness, Ellinger et al., (2002) are interested in the association between learning organization and organizational effectiveness, and Patterson et al., (2005) focus their attention on the connection between organizational climate and organizational effectiveness in terms of organizational performance. However, it seems that the measure of organizational effectiveness appears to be dominated by organizational performance which can be measured in two major ways including by finance-related indicators and by non-finance related indicators.

The direct and indirect effects of transformational leadership roles, transactional leadership, learning organization, organizational climate and organizational effectiveness have been found by many scholars. Smith-Crowe, Burke and Landis, (2003) suggest that their result is consistent with previous organizational climate studies when organizational climate is treated as a mediator. The relationships between independent variables and the dependent variable become stronger when organizational climate is more supportive or positive similar to the results found by Hofmann, Morgeson and Gerras, (2003). Wei and Morgan (2004) examine the effect of organizational climate as a mediating factor on performance. The findings support that there is a positive relationship of market orientation on a firms' performance, with a moderating effect of

organizational climate. These studies indirectly imply that a positive climate is likely to strengthen the relationships of selected variables.

Methodology

For this research study, the Stratified sampling type was employed from which population was divided into sub-population and sample was randomly selected with respect to given characteristics in the population (Kumar, 1999). According to this sampling technique, the questionnaires were distributed to staff within the four state enterprises within the Thai energy sector

Questionnaires are the research tools in which people are asked to respond to the same set of questions in a predetermined order (Gray, 2009: 337). The tools used in this study are of the Likert scale which has been well developed by scholars. According to the purpose of the study, four instruments were used for collecting the data.

Firstly, the instrument was the Multifactor Leadership Questionnaire (MLQ) which was developed by Bass and Avolio (2000). Transformational leadership contained twenty items (α = .963), while transactional leadership contained six-teen items (α = .861). Secondly, the instrument was the Dimensions of the Learning Organization Questionnaire (DLOQ) which was originally developed by Watkins and Marsick (1993), and learning organization contained twenty-one items (α = .958). Thirdly, the instrument is the Dimensions of Organizational Culture/Climate Survey (DOCS) which was developed by Denison (1996), the employee involvement climate included nine items (α = .939) to measure this variable. The last instrument was the Competing Values Framework (CVF) which was developed by Quinn and Rohrbaugh (1983) and Kalliath et al. (1999) that contained six teen items (α = .968)

Apart from the demographics in the first section, all other sections are measured by 7-point Likert scales. This adjusted instrument comprised of 82 questions in total which were derived from 36 questions of MLQ, 21 questions of DLOQ, 9 questions of DOCS and 16 questions of CVF (excluded 4 questions concerning demographics).

Data Analysis

Statistical Package for Social Science (SPSS) program was used to analyze both descriptive and inferential statistics. In terms of descriptive statistics, the result described either the characteristics of a sample or the relationships among variables in a sample (Babbie, 2010). It includes frequency,

percentage, mean and standard deviation of the sample, along with testing of the data assumptions. The study also employed SEM using Amos (Analysis of Moment Structure) for inferential statistics to address the hypotheses of the study. The univariate statistics was firstly utilized to analyze the characteristics of the sample and the distribution of scores, while the multivariate statistics was then used to test the relationships among various variables and to determine the predictor for organizational effectiveness. As such, the effect of the selected variables on the dependent variable was examined regarding the purposed conceptual framework by means of Structural Equation Model (SEM) in order to study the relationships among those variables, and to form the model.

The Findings

After the preliminary analyses were completed and no serious violations of the data assumptions were found, the structural equation modeling then proceeded in order to test the proposed hypotheses. By using the SEM software AMOS (version 18.0), a two-step approach is used to perform SEM analysis. In the first step, the measurement model is identified using Confirmatory Factor Analysis (CFA). The second step is to estimate the structural equation model in order to derive an appropriate conceptual framework, and then test the hypotheses using the structural model. The detailed results of the SEM analysis are presented as follows.

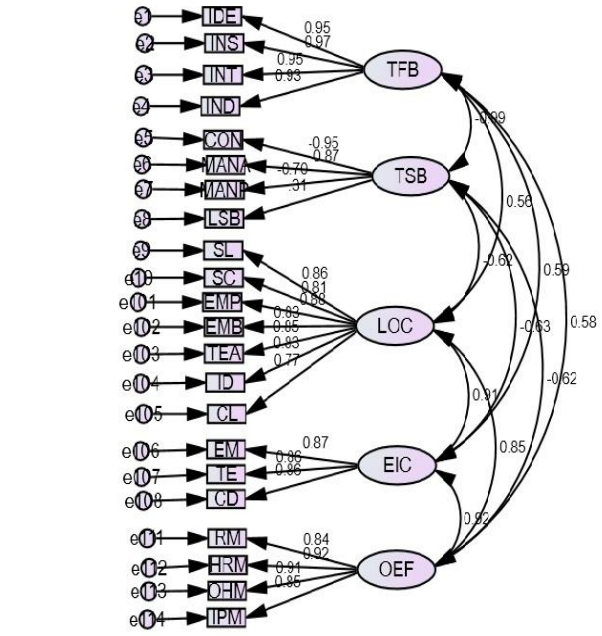


Figure 2 Path Diagram for the Measurement Model

Firstly, a close investigation of the overall construct reliability for all constructs reveals that all constructs have acceptable construct reliability scores within an acceptable range of factor loadings (0.32 and above), with the exceptions of LF in the transactional leadership construct as shown in Figure 2. The highest reliability score is from learning organizational culture construct and the lowest score was from transactional leadership construct. Given that most of the model fit indices present the acceptable fit scores, including RMR (0.063), RMSEA (0.088), CMIN/df (4.697),GFI (0.841), CFI (0.936), NFI (0.921) and TLI (0.926), the further step then proceeds with these constructs.

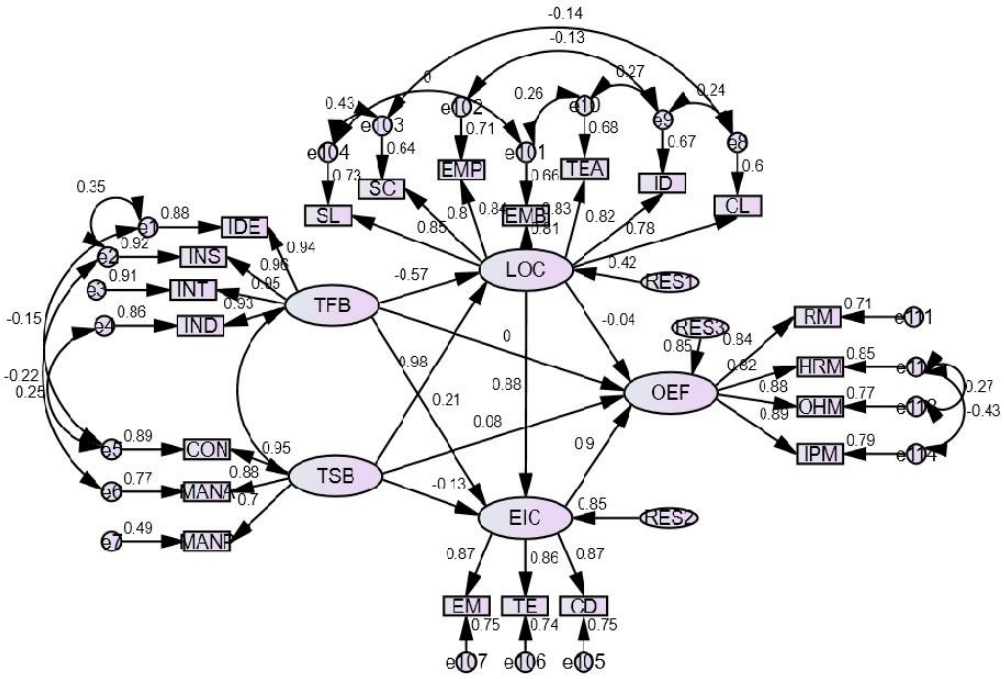


Figure 3 The Adjusted Models After Computed Modification Indices: MIs

For the initial model, there are 21 observed variables representing five latent variables. The fit indices are as follows: RMR (0.054), RMSEA (0.087), CMIN/df (4.581), GFI (0.852), CFI (0.944), NFI (0.929), and TLI (0.934). Almost all of these indicators suggest poor model fit regarding the recommended criteria. Therefore the modification suggested by AMOS was considered. The adjusted model tends to have better fit due to the deletion of the variable with a low factor loading. However, the above model still needs to be adjusted in order to improve the overall goodness of fit. As such, 13 sets of covariance were drawn as suggested by the modification indices (MIs), which intended to increase the scores of the fit indices indicating the better fit between the model and the empirical data (Figure 2). As a result, the adjusted model after

modification indices are computed presented a good model fit (χ^2 = 448.806, p< 0.001, CMIN/df = 2.704, GFI = 0.916, CFI = 0.975, RMR = 0.048, RMSEA = 0.060, NFI = 0.961, TLI = 0.969). The overall fit indices suggested a good fit between the model and the empirical data.

Table 1 Standardized Direct Effects, Indirect Effects and Total Effects of the Study Variables

Endogenous variables	Effect	Exogenous variable		Endogenous variables		
		Transformational Leadership Behaviors (TFB)	Transactional Leadership Behavior (TSB)	LOC	EIC	OEF
Organizational Effectiveness (OEF)	Direct Effect	.00	.08	-.04	.90	-
	Indirect Effect	.58	.54	.79	-	-
	Total Effect	.58	.62	.75	.90	-
Employee Involvement Climate (EIC)	Direct Effect	.21	-.13	.88	-	-
	Indirect Effect	.37	.76	-	-	-
	Total Effect	.58	.63	.88	-	-
Learning Organizational Culture (LOC)	Direct Effect	-.57	.98	-	-	-
	Indirect Effect	.41	-.55	-	-	-
	Total Effect	-.16	.63	-	-	-

According to Table 1, the analysis reports that transformational leadership behaviors had no direct effect (β = 0.00) on organizational effectiveness while the indirect effect between these two variables was high (β = 0.58). However, the direct effect between transactional leadership and organizational effectiveness was very low (β = 0.08), while the total effect between these two variables was high (β = 0.62). Learning organization and employee involvement climate, both present high values for total effect on organizational effectiveness (β = 0.79, 0.90). Yet, the direct effect of learning organization on organizational effectiveness was negative (β = -0.04).

Considering the effect on employee involvement climate, transformational leadership behaviors had a small direct effect (β = 0.21), but higher indirect effect (β = 0.37); transactional leadership behaviors had a negative direct effect (β = -0.13), while the indirect effect was highly positive (β = 0.76). The total effect of learning organization on employee involvement climate was highly positive (β = 0.88). Both direct and indirect effects between leadership behaviors and learning organization were also reported in Table 1. Transformational leadership behaviors had a negative direct effect on learning organization (β = -0.57), yet the indirect effect between them was moderate (β = 0.41); transactional leadership behaviors presented a direct effect with a positive value (β = 0.98) which had the highest degree of effect among five constructs, but a negative value for the indirect effect (β = -0.55). According to the above direct and indirect effects, the model of organizational effectiveness in the Thai energy sector is then proposed as shown in Figure 3. The model summarizes the paths of the relationships regarding the five constructs (transformational leadership behaviors, transactional leadership behaviors, learning organizational culture, employee involvement climate and organizational effectiveness) and only significant values are presented in the black lines.

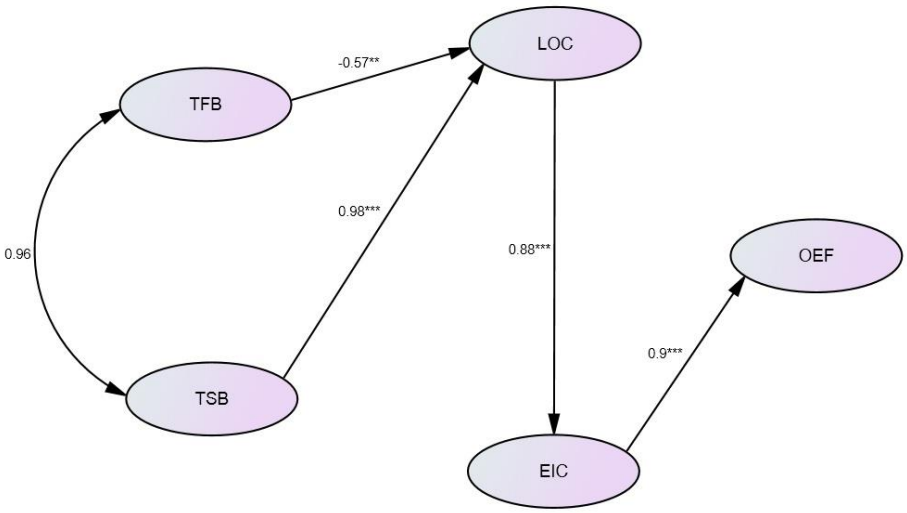


Figure 3 Summary of the Proposed Model of Organizational Effectiveness in Thai Energy Sector.

Summary

The study proposed a structural model of organizational effectiveness regarding the selected factors, namely transformational leadership behaviors, learning organization culture, and employee involvement climate. Prior to the development of the structural model, all

constructs were tested for validity and reliability. The results revealed that all constructs in this study had given acceptable construct reliability scores within an acceptable range of factor loadings with the exception of LF in the transactional leadership construct. The highest reliability score was from the learning organizational culture construct ($\rho c = 0.878$), while the lowest score was from the transactional leadership construct ($\rho c = 0.691$). Given that the overall reliability scores were in the acceptable range. The study then developed the structural model of organizational effectiveness for Thai energy sector with the acceptable fit scores from several model fit indices including Chi-square value (χ^2)/ degrees of freedom, Comparative Fit Index (CFI), Normed Fit Index (NFI), Goodness of Fit Index (GFI), Non-Normed Fit Index (NNFI) or TLI, Root Mean Square Error of Approximation (RMSEA), and Root Mean Square Residual (RMR), (χ^2 = 448.806, p< 0.001, CMIN/df = 2.704, GFI = 916, CFI = 975, RMR = .048, RMSEA = .060, NFI = .961, TLI = .969). Therefore, the derived model showed the acceptable fit between the model and empirical data.

Discussions

While the direct relationship between transformational leadership behavior and organizational effectiveness was low and not significance, the effect noticeably increased when employee involvement climate was mediated ($\beta = 0.189$). This means that transformational leadership behaviors had an indirect effect on organizational effectiveness (internal process model, open system model, human relations model and rational model) as mediated by employee involvement climate (capability development, team orientation and empowerment). This result can also be seen on the effect of learning organizational culture on organizational effectiveness. Learning organizational culture had a positive effect on organizational effectiveness with a low score of the coefficient. On the contrary, the constructs of learning organizational culture (create systems, inquiry and dialogue, connect the environment, continuous learning, collaboration and team learning, empower people and strategic leadership) had an indirect effect on organizational effectiveness (internal process model, open system model, human relations model and rational model) as mediated by employee involvement climate (capability development, team orientation and empowerment, β = 0.792). These two hypotheses may partially confirm the mediating effect of employee involvement climate. It is noteworthy that employee involvement tended to be a crucial factor

in improving organizational effectiveness which was consistent with a wide range of scholars including the studies of Comwatchara Iangong in 2013, Sahaya in 2012, Pongthep Chandasuwan in 2011, Pinyada Ampirid in 2011, Song, Kim and Kolb in 2009, Ozsahin, Zehir and Acar in 2011, and Cegarra-Navarro and Rodrigo-Moya in 2011.

Nevertheless, the indirect relationship between transactional leadership behaviors and organizational effectiveness as mediated by employee involvement climate was negative (β = -0. 117). The finding to some extent contradicted with the direct relationship between these two variables. Although positive correlations existed between transactional leadership behaviors, the constructs of transactional leadership behaviors had a negative effect on organizational effectiveness (internal process model, open system model, human relations model and rational model) as mediated by the employee involvement climate (capability development, team orientation and empowerment). It confirmed the Burns' argument on transactional leadership in 1978 that the transactional leadership behaviors tended to result in a short-term relationship between followers and leader. This implies the same conclusion from the study of Liu et al. (2011) which predicted the negative effect of transactional leadership on team innovativeness. By examing the role of employee involvement climate, transactional leadership had a negative effect on employee involvement climate, and then led to negative association with organizational effectiveness as mediated by employee involvment climate.

Recommendations for Development Administration

This research presented several positively and negatively significant effects. The most surprising results seem to be with the direct relationships between transformational leadership behaviors and learning organizational culture, and transactional leadership behaviors and leadership organizational culture. This expands the understanding of these constructs especially in the Thai context. Likewise, the direct effect of transformational leadership on organizational effectiveness was another finding that seemed to have a contradicting result. Nonetheless, the transformational leadership behaviors presented a positive effect on organizational effectiveness with the mediating effect of employee involvement climate. Therefore, an increase in such factors as transformational leadership behaviors and learning organization tended to improve organizational effectiveness through employee involvement climate.

The study revealed a negative indirect effect of transactional leadership behaviors on the organizational effectiveness through employee involvement climate. This notion may have

resulted from the overemphasis of transactional leadership behavior, therefore causing the negative influence on involvement climate, and eventually on organizational effectiveness as confirmed by the result of the direct effect of transactional leadership behaviors on employee involvement climate, indicating a negative effect. Compared to the effect of transformational leadership behaviors, the public enterprise should be well-balance between both leadership behaviors in order to improve overall organizational effectiveness.

In conclusion, the implications for development administration and management should be due to the causal relationships among proposed variables in improving organizational effectiveness. The direct and indirect effects being explored in the study should be used to manage public organizations by considering both antecedent variables and mediating variable.

Recommendations for Future Studies

There were still gaps in this current study as presented in the following.

1) Based on the derived structural equation model, the research expands the understanding of the causal relationship between the selected variables. Yet, the explanatory power is theoretically limited to the effects of these variables in a certain setting, which is the Thai energy sector. Therefore, the model can be re-tested to confirm the results using different settings, such as within-group as well as between-groups sectors; for example, studies in other public enterprises such as the financial sector, transportation sector and so forth. A comparative study should be an interesting way to conduct the research.

2) Since the structural equation model aims to explore a series of connected correlations among a set of variables which normally cannot be performed using a single statistical technique, it allows researchers to add more variables. Thus, other distinctive variables can be additionally included in order to improve the explanatory power of the model, such as the control variables (i.e. sex, size of the organization) and the other variables (i.e. other dimensions of organizational culture and climate).

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