

# A Confirmatory Factor Analysis of Change Management for Local Administrative Organization in Chanthaburi Province

## การวิเคราะห์องค์ประกอบเชิงยืนยันการบริหารการเปลี่ยนแปลงขององค์กรปกครองส่วนท้องถิ่นในจังหวัดจันทบุรี

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### Abstract

The objective of this study is to analyze and investigate the components of change management for local administrative organizations in Chanthaburi province with the empirical data. The population of this study consisted of 754 personnel of all management levels of local government organizations in Chanthaburi province (Municipal and Sub-district Administration Organization). The stratified random sampling technique was used to select 400 participants as a sampling group, and later the simple random sampling was applied to recruit the participants from each village. A questionnaire with a four-point scale was used as the research instrument with its reliability of 0.983. The model was analyzed and validated using confirmatory factor analysis program through Mplus Demo Editor. The research results indicated that change management for local administrative organizations in Chanthaburi province consisted of four factors. The loading factors were: Determination of the vision of change, Creating participation, Keeping changes to be a part of the organization, and Creating awareness of the importance of change. The model in accordance

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was fit with the empirical data with Chi-square  $\chi^2 = 3.306$ , df = 2,  $\chi^2/df = 1.653$ , p-value = 0.191, TLI = 0.991, RMSEA = 0.040, SRMR = 0.013, CFI = 0.997.

**Keywords:** *Change Management, Creating Awareness of the Importance of Change, Creating Participation, Determination of The Vision of Change, Maintaining Change to be A Part of The Organization*

### บทคัดย่อ

วัตถุประสงค์ของการวิจัยครั้งนี้ คือ เพื่อวิเคราะห์และตรวจสอบองค์ประกอบเชิงยืนยันของการบริหารการเปลี่ยนแปลงขององค์กรปกครองส่วนท้องถิ่นในจังหวัดจันทบุรีกับข้อมูลเชิงประจักษ์ ประชากรที่ใช้ในการวิจัยครั้งนี้ คือ ผู้บริหารทุกระดับขององค์กรปกครองส่วนท้องถิ่นในจังหวัดจันทบุรี (เทศบาล และองค์กรบริหารส่วนตำบล) จำนวนรวมทั้งสิ้น 754 คน กลุ่มตัวอย่างที่ใช้ในการวิจัยทั้งสิ้นมีจำนวน 400 คน เลือกตัวอย่างโดยใช้วิธีการสุ่มตัวอย่างชั้นภูมิแบบเป็นสัดส่วนจากนั้นจึงใช้วิธีสุ่มตัวอย่างอย่างง่าย ในการเก็บข้อมูลครั้งนี้ ผู้วิจัยได้สร้างแบบสอบถามสี่ระดับเพื่อเป็นเครื่องมือในการเก็บข้อมูลและมีค่าความเชื่อมั่นของแบบสอบถามทั้งฉบับเท่ากับ 0.983 วิเคราะห์ข้อมูลโดยใช้สถิติการวิเคราะห์องค์ประกอบเชิงยืนยันผลการวิเคราะห์และตรวจสอบพบไม่เดลาร์วัดตัวแปรการบริหารการเปลี่ยนแปลงขององค์กรปกครองส่วนท้องถิ่นในจังหวัดจันทบุรี อันได้แก่ การกำหนดวิสัยทัศน์ของการเปลี่ยนแปลง การสร้างการมีส่วนร่วม การรักษาการเปลี่ยนแปลงให้คงอยู่เป็นส่วนหนึ่งขององค์การ และการสร้างความตระหนักรถึงความสำคัญในการเปลี่ยนแปลง ตามลำดับ มีความสอดคล้องกับข้อมูลเชิงประจักษ์พิจารณาจากค่าดัชนีความสอดคล้องกลมกลืนประกอบด้วย  $\chi^2 = 3.306$ , df = 2,  $\chi^2/df = 1.653$ , p-value = 0.191, TLI = 0.991, RMSEA = 0.040, SRMR = 0.013, CFI = 0.997.

**คำสำคัญ:** การบริหารการเปลี่ยนแปลง การสร้างความตระหนักรถึงความสำคัญในการเปลี่ยนแปลง การสร้างการมีส่วนร่วม การสร้างวิสัยทัศน์การเปลี่ยนแปลง การรักษาการเปลี่ยนแปลง ให้คงอยู่ในองค์การ

### Introduction

The movement of globalization led to a number of changes, in which every activity all around the world moves as a dynamic step with all countries having no boundary. The rapid movement of globalization has brought an enormous amount of exotic changes in the hemisphere across the territory and run through from one country to another country as freely, conveniently, and quickly. Various phenomena have been causing both positive and negative impacts on people's lives at several levels. For this reason, many organizations are aware of the importance of change and trying to leap

forward to keep up with the world by accelerating development of activities in order to respond effectively to the changes that occur (Pinchareon, 2013).

The local administrative organizations in Chanthaburi province must also prepare for the changes as mentioned above. In addition to the overall changes from both internal and external environments, there are still specific changes that the local administrative organizations in Chanthaburi province have to face. This is due to the fact that Chanthaburi province, together with its local government organizations shares a borderline with Cambodia with trade routes

and investment links to Vietnam, a country in the CLMV group that has promoted export and investment. Due to the high economic growth rate and wide open policy for foreign investment, the local administrative organizations in Chanthaburi province must have guidelines for development in order to support the related activities of ASEAN member countries. In addition, the local administrative organizations in Chanthaburi province is also adjacent to Trat and Sa Kaeo provinces which are listed in the Special Economic Zone (SEZ) project.

The anticipated changes from various environments mentioned above insert impacts directly and indirectly on the local government organizations in Chanthaburi province, especially those on the system of work of personnel. This is due to the fact that these personnel have to change their work system from the current familiar way of working towards new ways, and that may cause problems with resistance during the transition mission (Luengalongkot, 2014).

As a result, the operation of the organization is delayed, or not accomplished at the specified time which may become a main problem, of which some may have a severe impact and cause damage to the organization (Sala, 2013). Therefore, the local administrative organizations in Chanthaburi province need to know the components of change management that are appropriate for the organization, since the related personnel may still be unclear about the composition of change management. The awareness of the said components may help prevent the occurrence of problems arising from changes, such as personnel resisting change, team conflicts, or lack of effective organizational management, etc.

In order to avoid the damages that may arise from failure of the operation changes, together with to promote efficiency and effectiveness in organizational management, the Office of the Public Sector Development Commission has stated that government organizations need to pursue their operational processes that coincide with in a rapidly changing environment. Hence, they cannot refuse to change the organizational management, nor inflict on the change without a good management system, since it may cause a negative impact on the organization and personnel (Office of the Public Sector Development Commission, 2013).

Theoretically, change management means dealing with resistance or maintaining the balance of the organization when changes occur. Good change management can help reduce the impact of changes such as reduce resistance, resentment, alienation, pressure, and support for adaptation and acceptance. Furthermore, the components of change management consist of creating awareness of the importance of change, participation, determination of the vision of change, and maintaining change to be a part of the organization. These components are important because they help an organization to achieve successful changes and reduce resistance.

In addition, the success of the change management depends on creating the atmosphere and readiness of the organization to support the changes that will occur. The problems that occurred at the local administrative organizations in Chanthaburi province may concern conflicts in the work team, lack of effective organization management, and personnel resisting change. If the local administrative organizations have good

management of change, personnel's behavior will also be changed to promote and support the changes that occur in the organization, such as accepting, adjusting, understanding, as well as being a core in the development of the organization.

At the same time, the bad change management may result in a slow or unsuccessful change in the organization, causing problems to the efficiency and effectiveness of the organization (Loganit & Luengalongkot, 2017). From these reasons, the researcher is aware of the importance and necessity of using change management principles, and therefore becomes interested in examining the components of change management of local administrative organizations in Chanthaburi province. The findings of this research will shed lights to the components of change management which the organization administrators need to bring its configuration to manage the organizational operations. As a result, the local administrative organizations will be ready to cope with the current and future crisis of change, and that may bring success to national development and sustainable progress.

### **Research Questions**

What are the components of change management for local administrative organizations in Chanthaburi province?

### **Research Objectives**

To analyze and investigate the components of change management for local administrative organizations in Chanthaburi province with the empirical data.

### **Research Hypothesis**

The change management model for local administrative organizations in Chanthaburi province fit with the empirical data.

### **Literature Review**

The researcher analyzed the components of change management for local administrative organizations in Chanthaburi province according to the concepts of change management components as following:

1) Creating awareness is an important component of change management for local administrative organizations. It means communicating with relevant personnel about the objectives of the change and inform the current conditions of the organization that may affect the personnel, including the benefits and values of successful changes to organizations, and expectations of changes of all staff (Conger, Spreitzer, & Lawler, 1999). In addition, Hiatt (2006) stated that creating awareness is an important component for making people aware of the reason why the organization must be changed.

2) Creating participation is an important component of change management for local administrative organizations. It means encouraging the organization to create specialized teams with skills, knowledge, and expertise in change, and providing knowledge to relevant staff (Lippitt, Watson, & Wesley, 1958). In addition, Metre (2009) stated that creating participation helps an organization's staff to promote commitment and help each other.

3) Determination of the vision of change is an important component of change management for local administrative organizations. It means creating a clear vision to communicate easily and in the same direction, including promoting

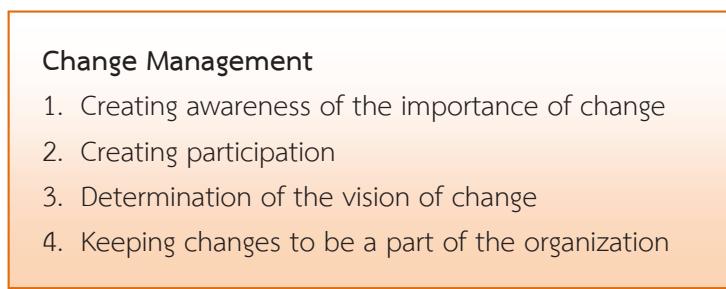
the vision of effective communication processes, such as personnel development (Conger et al., 1999). In addition, Luecke (2003) stated that determination of the vision of change is an important component of change management to manage the organization's competitive situation.

4) Keeping changes to be a part of the organization is an important component of change management for local administrative organizations. It means maintaining changes to

be a part of the organization forever (Kotter, 1996). In addition, Brandt and Sommer (2013) have conducted a research on "The 4-by-10 ruler of change: A practical framework for managing change" and found that keeping changes to be a part of the organization is an important component of change management.

### Research Conceptual Framework

Based on the literature review above, the research conceptual framework is as follows.



**Figure 1** Research conceptual framework

### Methodology

#### Population and sample

1. The population of this study consisted of 754 people at all management levels of local government organizations in Chanthaburi province (Municipal and Sub-District Administration Organization) (Department of Local Administration, 2016).

2. Regarding the sample and sample size, the researcher has determined the sample size of 400 people for the Confirmatory Factor Analysis, which is considered acceptable (Comrey & Lee, 1992). The sample group was selected using stratified random sampling technique, while participants from each village were selected by using the simple random sampling (Srihong, 1999).

### Research Instrument

The research instrument was developed from synthesizing the theoretical concepts regarding the components of change management for local administrative organizations in Chanthaburi province. Then, the researcher matched the questionnaire items with the operational definitions. To ensure that the questionnaire is fit and good to use for data collection, the questionnaire was then tested for validity and reliability to acquire the effectiveness in data-gathering procedures.

In terms of validity, the questionnaire was checked by the experts to be certain about its content validity in accordance with the research objectives. The items in the created questionnaire were verified based on the score range of index of

IOC, and only the items higher than the 0.5 index of item-objective congruence were kept in the questionnaire for further use. The reliability of the whole questionnaire was 0.983, with the alpha coefficients of 0.983 for “Creating awareness of the importance of change,” 0.984 for “Creating participation,” 0.982 for “Determination of the vision of change,” and 0.983 for “Keeping changes to be a part of the organization.” These high alpha coefficients indicated that the invented questionnaire is of high reliability and can be used for effective data collection.

The questionnaire consisted of 2 parts. Part 1 dealt with the basic information of the respondents, using multiple choice questions. Part 2 consisted of 18 items asking 4 components of Creating awareness of the importance of change, Creating participation, Determination of the vision of change, and Keeping changes to be a part of the organization. The questionnaire items were invented with a rating scale of 4 levels, with 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree.

#### **Data Collection Procedure**

The researcher sent a letter to the head of local government organizations in Chanthaburi province asking for permission to collect data from their personnel. Then, the questionnaires

were administered to the sample group, and its completion process took around four weeks. The respondents were asked to return the questionnaire via the researcher’s post address. The completed questionnaires were then analyzed and drawn fundamental conclusion by the researcher.

#### **Data Analysis**

The components of change management for local government organizations in Chanthaburi province were analyzed to investigate the concordance of change management for local government organizations in Chanthaburi province with the empirical data using confirmatory factor analysis through Mplus Demo Editor program (Muthén & Muthén, 2000). The measurement of question items were of the interval scale. Statistics used were Mean, Standard deviation, Pearson’s correlation coefficient, and confirmatory factor analysis.

#### **Results and Discussion**

The analysis and investigation of the components of change management for local government organizations in Chanthaburi province with the empirical data revealed the following findings.

**Table 1** Mean and standard deviation of change management components.

<b>The components of change management for local government organizations in Chanthaburi province</b>	<b>Mean</b>	<b>S.D.</b>
1. Creating awareness of the importance of change (X1)	2.40	0.44
2. Creating participation (X2)	2.85	0.44
3. Determination of the vision of change (X3)	2.57	0.45
4. Keeping changes to be a part of the organization (X4)	2.37	0.39

From Table 1, the mean values indicated that Creating participation (X2) was highest (mean = 2.85), followed by Determination of the vision of change (X3) (mean = 2.57), Creating awareness of

the importance of change (X1) (mean = 2.40), and Keeping changes to be a part of the organization (X4) (mean = 2.37), respectively.

**Table 2** The relationships between components of change management

	X1	X2	X3	X4
Creating awareness of the importance of change (X1)	1	0.505**	0.506**	0.481**
Creating participation (X2)		1	0.358**	0.597**
Determination of the vision of change (X3)			1	0.413**
Keeping changes to be a part of the organization (X4)				1

\*\* Correlation is significant at the 0.01 level, The value in parentheses are relationship between variables.

From Table 2, the results of Pearson Correlation in Table 2 indicate that Creating awareness of the importance of change (X1) is moderately and positively related to Creating participation (X2), Determination of the vision of change (X3), and Keeping changes to be a part of the organization (X4) at the significance of 0.01. In addition, creating participation (X2) is positively related to Determination of the vision of change

(X3) in a low level, and to Keeping changes to be a part of the organization (X4) in a moderate level at the significance of 0.01.

Furthermore, Determination of the vision of change (X3) is moderately and positively related to Keeping changes to be a part of the organization (X4) at the significance of 0.01. Pearson's correlation coefficient of each variable is between 0.358-0.597.

**Table 3** The results of analysis of the components of change management for local government organizations in Chanthaburi province.

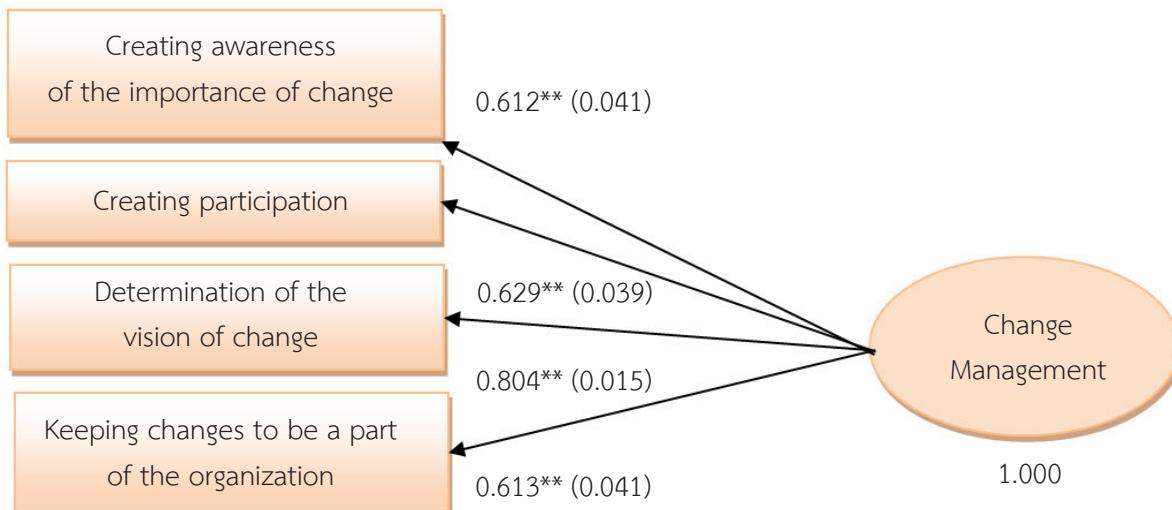
Observable variables	Level of change management				
	Factor Loading Unstandard	Factor Loading	SE	t	R <sup>2</sup>
Creating awareness of the importance of change	0.761	0.612	0.041	14.902**	0.375
Creating participation	0.782	0.629	0.039	15.989**	0.396
Determination of the vision of change	1.000	0.804	0.015	52.383**	0.647
Keeping changes to be a part of the organization	0.762	0.613	0.041	14.949**	0.376

$\chi^2 = 3.306$ , df = 2, p-value = 0.191, TLI = 0.991, RMSEA = 0.040, SRMR = 0.013, CFI = 0.997, \*\*p < 0.01

Table 3 depicted the results of the confirmatory factor analysis of change management model. The measurement model was devised to check the construct validity of each component of each variable that is in the model. The purpose was to verify whether the components were of the genuine according to the reviewed theories. Mplus Demo Editor was utilized to analyze the measurement model of variables in change management.

The research results indicated that change management for local government organizations in Chanthaburi province consisted of four factors, as identified by the order of factor loadings:

Determination of the vision of change, Creating participation, Keeping changes to be a part of the organization, and Creating awareness of the importance of change, respectively. The model in accordance was fit with the empirical data with Chi-square  $\chi^2 = 3.306$ , df = 2,  $\chi^2/df = 1.653$ , p-value = 0.191, TLI = 0.991, RMSEA = 0.040, SRMR = 0.013, CFI = 0.997. The component weight of the observed variable is between 0.612-0.804. The significance level is 0.01. The accuracy coefficient of the observed variable (R<sup>2</sup>) is between 0.375-0.647. The researcher summarized the results of the study as shown in picture 2 as follows.



\*\* The P-value is less than 0.01, the value in the line is Factor Loading and Standard Error (SE) are presented in parentheses.

**Figure 2** Model of change management

The researcher presented the index to check the validity of the model and empirical data, by comparing the consistency index of the model

with the criteria for consideration in Table 4 (Hooper et al., 2008).

**Table 4** Consistency index values for change management model and empirical data

Statistics used to measure the concordance	Criterion	The value	Result
$\chi^2/df$	less than 2.00	1.653	Passed
<i>p</i> -value	more than 0.05	0.191	Passed
TLI	more than 0.95	0.991	Passed
CFI	more than 0.95	0.997	Passed
SRMR	less than 0.08	0.013	Passed
RMSEA	less than 0.07	0.040	Passed

The result of the analysis also showed that the model in accordance with change management variables of Creating awareness of the importance of change, Determination of

the vision of change, Creating participation, and Keeping changes to be a part of the organization, was fit with the empirical data with Chi-square  $\chi^2 = 3.306$ , df = 2,  $\chi^2/df = 1.653$ , *p*-value = 0.191,

TLI = 0.991, RMSEA = 0.040, SRMR = 0.013, CFI = 0.997. The order of loading factors were as follows: Determination of the vision of change, Creating participation, Keeping changes to be a part of the organization, and Creating awareness of the importance of change, respectively.

## Discussion

The confirmatory results of analysis and verification of components in change management of local government organizations in Chanthaburi province revealed that the 4 change components: Creating awareness of the importance of change, creating participation, determination of the vision of change, and Keeping changes to be a part of the organization, are consistent with the empirical data. The first factor was Determination of the vision of change, the second was Creating participation, the third was Keeping changes to be a part of the organization, and the fourth was Creating awareness of the importance of change.

As for the determination of the vision of change, Luecke (2003) stated that determination of the vision of change is an important component of change management to manage the organization's competitive situation, and that corresponds to change management process (Kotter, 1996). The vision came at forefront because the local administrative organizations in Chanthaburi province need to analyze the environment, weaknesses, strengths, opportunities and obstacles before establishing a vision based on the collaboration of personnel in the organization. In addition, the local government organizations in Chanthaburi province communicated the vision of changes to personnel so that they accepted and thoroughly applied it to their practice. The vision was also communicated in the same direction (Conger et al., 1999).

As for creating participation, Metre (2009) stated that creating participation helps organization to promote commitment and help among the staff. Generating participation is an important component in accordance with change management component process (Kotter, 1996), because the personnel in the local administrative organizations in Chanthaburi province are involved in creating an organization atmosphere that is full of help and collaboration. The organization also encourages its personnel to work together to solve problems creatively with the opportunity for them to express their opinions in the work openly (Lippitt et al., 1958). In addition, the local government organizations in Chanthaburi province have encouraged the organizations to create specialized teams with skills, knowledge, and expertise in change management and provide knowledge to relevant staff (Makumbe, 2016).

As for the component of keeping changes to be a part of the organization, Brandt and Sommer (2013) have conducted a research on change and found that keeping changes is a part of the organization as an important component of change management, and in accordance with change management process (Kotter, 1996). Furthermore, the local administrative organizations in Chanthaburi province have evaluated the change process, updated it periodically, and continuously supported changes by using principles of planning, operation, monitoring and assessment. The structure was also adjusted to support and maintain change to be a part of the organization (Kotter, 1996).

As for the fourth component of creating awareness of the importance of change, Hiatt (2006) stated that creating awareness is an important component for making people aware

of why the organization must be changed. Hence, the local government organizations in Chanthaburi province have communicated with relevant agencies about the objectives of the change and informed about the current conditions of the organization that may affect all staff, including the benefits to organizations that are successful in change management. For this reason, local administrative organizations in Chanthaburi province have provided personnel development to support the change and informed the personnel about the purpose and necessity to make changes (Conger et al., 1999).

## Conclusion

In conclusion, the confirmatory component model for change management of local government organizations in Chanthaburi province has been developed in harmony with empirical data. Change Management Model for local administrative organizations in Chanthaburi province consisted of four factors, in order of loadings factors as follows: Determination of the vision of change, Creating participation, Keeping changes to be a part of the organization, and Creating awareness of the importance of change. The suggestions related to the research findings are as following:

### 1. Suggestions for implementing research results

The result of the research found that the weight of the most valuable component was the determination of the vision of change. Therefore, the administrators of the local administrative organizations in Chanthaburi province should have a policy to set the concrete vision of change in the local administrative organizations in Chanthaburi province. The details are as followed:

1.1 Promoting effective vision in the communication process.

1.2 Communicate the vision of change in the same direction.

### 2. Suggestions for further research

2.1 The next research should expand the scope of studying to local administrative organizations in other provinces in order to compare and contrast the research results between Chanthaburi and other provinces whether there are different administrative management components or not.

2.2 The future research may focus on studying change management of local administrative organizations in Chanthaburi province in terms of qualitative research to gain more in-depth information.

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