

**ORGANIZATIONAL CULTURE AND ORGANIZATIONAL COMMITMENT
AFFECTING INNOVATIVE BEHAVIOR OF EMPLOYEES IN THE ELECTRICAL
AND ELECTRONIC APPLIANCE INDUSTRY**

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ABSTRACT

This study aims to study the influence of employee's personal characteristics, organizational culture and organizational commitment on the innovative behavior of in the electrical and electronic appliance industry. The sample group used in this study was 400 from 98,231 employees in the electrical and electronic appliance industry. The research instruments were questionnaires. Descriptive statistical analysis employed frequency, percentage, mean, standard deviation. The Inferential statistics consisted of independent t-test, One-way ANOVA and multiple regression analysis

The results of the study showed that the difference in personal characteristics in terms of age, job position, and duration of work influenced the innovative behavior of the employees in the electrical and electronic appliance industry with statistically significant level as of 0.05. The organizational culture in terms of self – actualizing ($\beta = 0.098$), humanistic – encouraging ($\beta = 0.256$) and affiliative ($\beta = 0.584$) can predict the innovative behavior of employees in the electrical and electronic appliance industry by 40.7 percent. In addition, the organizational commitment in terms of attitudinal commitment ($\beta = 0.456$) and programmatic commitment ($\beta = 0.138$) can predict the innovative behavior of employees in the electrical and electronic appliance industry by 32 percent.

Keywords: Organizational Culture, Organizational Commitment, Innovative Behavior

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Introduction

Globalization has virtually connected people across all administrative boundaries which was considered unyielding in the past. Technologies like remote connection using cellphones and computers have made people daily activities much convenient. However, it is also true that such technologies have resulted in both positive and negative impacts on economic, environment and societal aspects. A clear example can be taken of electronics, where users' demand shifted from personal computers and laptop to smart phones and tablets. This led companies to strategize the advanced technologies in their gadgets and other products. The electronic goods designed and produced in countries like Thailand with relatively simpler technology, thus could not compete with tech-giants in the global market. An example of this is viewed as 18.67% decrease from 136,568 million Thai Baht which was the market value of public companies and electronics groups in the Stock Exchange of Thailand (SET) during January to June, 2017 (Center for Economic Business and Grassroots Economy Research, 2016).

Companies/organizations need to innovate and expand their market for their sustainability, for which a better preparation is desired in terms of skilled manpower who can adjust to the swift changes in the technology. However, development of human resources in any organization needs constructive and favorable culture and environment. Work culture in any organization directly affects employees' work quality and effectiveness. The culture and commitment to the organization can help any organization to retain skilled and talented manpower, which are crucial for success of the organization.

For the survival of any organization, innovative behavior is crucial to develop and

Conceptual framework

maintain the work flow processes. Innovation created by employees in the organization can help develop technologies which it finally meets the present needs of consumers and drives organizational success, it also helps create the organizational proactive image. In Thai companies, innovative behavior must also be included in human resource development, especially if they want to compete with other global technological companies.

In conclusion, this research aimed to study the influence of employee's personal characteristics, organizational culture and organizational commitment on the innovative behavior of in the electrical and electronic appliance industry. Especially, the recent announcement of Thailand 4.0 policy of Thai government motivates many organizations to drive through innovative organization in order that they can compete with foreign countries. Therefore, this research will then provide the strategies and points to improve the employees' innovative behavior which finally can drive the organization innovative. The electrical and electronics appliance industry has been selected in this research as it is subjected to frequent changes in technology and corresponding user demands.

Objectives of the study

The objectives of this research were written as following:

1. To determine the differences of employee's personal characteristics in electrical and electronic appliance industry affecting employees' innovative behavior.
2. To study the influence of organization culture on employees' innovative behavior.
3. To study the influence of organizational commitment on employees' innovative behavior.

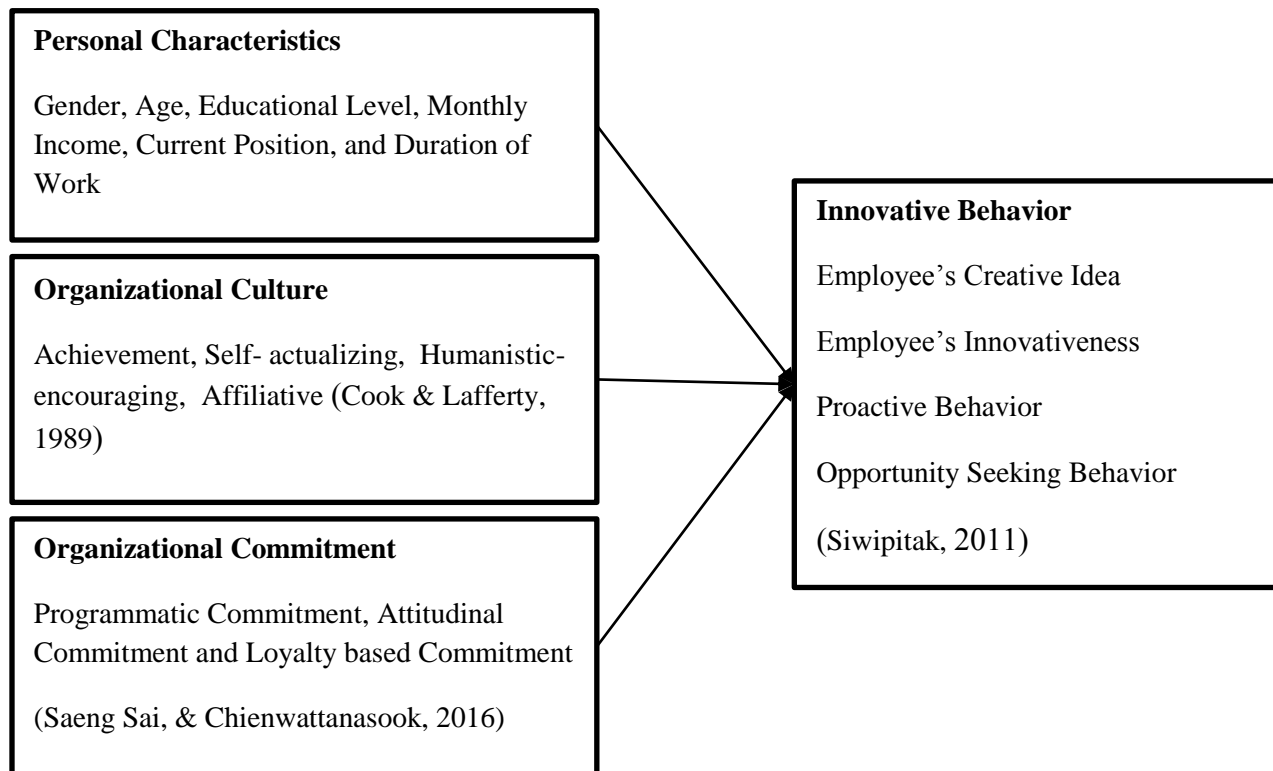


Figure 1 Conceptual Framework

Hypotheses

Hypothesis 1: Different personal characteristics of employees in the electrical and electronic appliance industry had different levels of employees' innovative creation behavior.

Hypothesis 2: Innovative organizational culture affect innovative behavior of employees in the electrical and electronic appliance industry.

Hypothesis 3: Employees' organizational commitment affect innovative behavior of employees in the electrical and electronic appliance industry.

Literature review

Concept of organizational culture

Culture is the thing that people in the organization have together: for example, formulation, methodology, beliefs, values, or a framework of practices. The culture will be forwarded to new members in order to

inherit values (Chienwattanasook, 2014). Organizational culture is considered important to help the organization to operate their works well and effectively encourage the employees' work. Organizational culture is also something that will affect the conduct of people in the organization such as operation, control, decision and so on. Another important aspect is that the organizational culture has an influence on organizational commitment in terms of the willingness that employees are willing to devote for their organization to be committed to the best work. This is because that the culture consists of various people such as gender, diversity, age differences, individual needs, and racial differences, coming to work. These things make the organizational culture so important to help integrate the diversity within the organization. Thus, investors who are planning to invest the business in other

countries should have a cultural study between the home country and host country in order to set up the production base, to adjust the balance and suitability of the organization to respond the organization's objectives and goals. Indeed, there is no one can tell which organization culture is better than any organization; but a strong and appropriate organizational culture for the organization will result in business prosperity, survival, change and success. In this study, the researchers employed the organizational culture dimension from Cook & Lafferty (1989) which this dimension consisted of achievement, self-actualizing, humanistic-encouraging, and affiliative. In addition, these four dimensions can reflect the organizational culture which normally focuses on achievement, individuality, self-need and relationship in the workplace.

Concept of organizational commitment

Employee's organizational commitment is another important aspect of business operations under pressure from this change. It is one thing that will make the organization able to maintain good employees with skill and ability to stay with the organization for a long time. The organizational commitment can refer to the internal relationship of the person with the organization by conforming to the good leadership and fellowship (Chienwattanasook, Onputtha, & Fugkum, 2018), and it has the influence to allow employees to be willing to work with the ability and experience they have to make the best work. The behaviors that show that employees are bound to the organization can include

- 1) being reliable in the organization,
- 2) having a desire to perform better,
- 3) understanding the overall picture of the organization,
- 4) respecting and cooperating with colleagues,

5) having the intention to create more works than usual and

6) having developed the work to be up-to-date, always modern (Chaiyarak, 2012).

The organizational commitment is the emotional relationship of employees with the organization which it can be divided into 3 areas as follows: 1) Perception, which refers to people who are responsible for the workload, understand how to play a role in reaching the organization, and recognize the reputation of the organization; 2) Emotion, which refers to people who are bound to work obligations with the utmost willingness and ability, feel proud to work in the organization and be a part of the organization's success and 3) behavior, which refers to the person who helps maintain the good image of the organization and appreciate to help all organizations as much as possible. Meanwhile, the study of organizational commitment by Saengsai (2016) employed organizational commitment in three dimensions including programmatic commitment, attitudinal commitment and loyalty based commitment. These dimensions can elaborate attitudes towards commitment and demand to continue in the organization.

Concepts of innovative behavior

Innovation is caused by personnel in organizations that have an understanding of organizational culture and have an organizational commitment. Innovation can improve and develop the organization to survive. Innovation refers to ideas that make the organization keep pace with global changes, which is considered to be extremely important for every organization to support strongly. However, if the organization or the person performing the work does not have any new creative ideas, it can result that the organization may not be able to survive this change. To survive, the organization must create the innovation in

itself in order to develop work processes or develop technology in the organization as well as develop products responding the needs of today's consumers. In addition, innovation is considered necessary against the biggest changes that will occur in Thailand. The organization can compete with competitors from both internal and external sources; especially during the time, the world has evolved technologies which make the world smaller and require businesses in Thailand to be supported, created and innovated. With this, the employees in the organization need to behave in creating innovations to benefit to the organization. Studying innovative behavior, Siwipitak (2011) employed the innovative behavior dimension consisting of creative idea, innovativeness, proactive behavior and opportunity seeking behavior because it can include the process and method creating innovation for the organization through the employees in the organization. In lines with this, the researchers therefore include the aforementioned innovative behavior dimension in this study.

Research methodology

The population is employees who work in the electrical and electronic appliances industry. The total population are 98,231 people. The sample group is 383 samples generated by using the Taro Yamane' formula to calculate the sample size at 95% confidence level (Vanichbuncha, 2014). However, the researchers collected a total of 400 sets. The tools used in this study were questionnaire with closed-end divided into 4 parts. The first is the general information of respondents which included gender, age, educational level, monthly income, current position and duration of work. The second is the organization constructive culture which included achievement, self- actualizing,

humanistic-encouraging, affiliative (Cook & Lafferty, 1989). The third part is the organizational commitment which consisted of attitudinal commitment, programmatic commitment and loyalty based commitment (Saeng Sai, 2016). And, the forth part is employee innovative behavior which consisted of employee's creative idea, employee's innovativeness, proactive behavior and opportunity seeking behavior (Siwipitak, 2011). Likert Rating Scale with 5 levels: Level 5 = extremely agree, Level 4 = very agreeable, Level 3 = moderately Agree, Level 2 = agree less and level 1 = least agree, was used in this study. All of questionnaires were sent out to the electrical and electronic appliances industry through self-walk-in and post by using the purposive and convenience sampling method.

For data inspection, the researcher employed Cronbach's alpha and IOC (Item-objective congruence Index) to inspect the reliability and validity of the data. The study found that the organization constructive culture: achievement, self- actualizing, humanistic-encouraging and affiliative; the organizational commitment: attitudinal commitment, programmatic commitment and loyalty based commitment and the employee innovative creation behavior: employee's creative idea, employee's innovativeness, proactive behavior and opportunity seeking behavior obtained Cronbach's alpha more than 0.7 and IOC score between 0.67-1.00.

For data analysis, the researcher used descriptive statistics including frequency, percentage, mean and standard deviation and inferential statistics including t-test statistics, to compare the mean difference of 2 groups; One-way ANOVA, to compare the difference between the mean of the sample with more than 2 groups and Multiple Regression Analysis, to test the relationship between two independent variables. The

basic assumption and criteria for using Multiple Regression Analysis was tested.

The study of personal characteristics of employees in the electrical and electronic appliances industry

Results

Table 1 The frequency and percentage of personal characteristics of employees in the electrical and electronic appliance industry

Personal Characteristics	Frequency	Percentage
Gender		
Male	186	46.50
Female	214	53.50
Age		
21 - 25 years old	52	13.00
26 – 30 years old	73	18.30
31 - 35 years old	84	21.00
36 - 40 years old	97	24.30
41 – 45 years old	50	12.50
46 – 50 years old	44	11.00
Educational Level		
Lower than Bachelor's degree	135	33.80
Bachelor's degree	190	47.50
Higher than Bachelor's degree	75	18.80
Monthly income		
Lower than 15,000 baht	57	14.20
15,000 – 20,000 baht	102	25.50
20,001 – 25,000 baht	80	20.00
25,001 – 30,000 baht	60	15.00
30,001 – 35,000 baht	46	11.50
More than 35,001 baht	55	13.80
Current position		
Production staff	206	51.50
Office staff	112	28.00
Head of division/department	82	20.50
Duration of work		
Less than 2 years	57	14.20
2 – 5 years	87	21.80
6 – 10 years	110	27.50
11 – 15 years	79	19.80

Personal Characteristics	Frequency	Percentage
More than 15 years	67	16.80
Total	400	100.0

From Table 1, the result found that most of the respondents were female (53.50%), aged between 37–40 years old (24.30%), graduated from the Bachelor's degree

(47.50), earned between 15,000 - 20,000 baht (25.50%), worked as production staff and worked for 6 – 10 years (27.50).

The study of constructive culture, organizational commitment and innovative behavior of employees in the electrical and electronic appliance industry.

Table 2 Mean, standard deviation, interpretation and variable ranking.

Variables	Opinion Level			
	\bar{X}	SD	Interpretation	Rank
Organizational Culture				
Achievement	3.73	0.50	Very agreeable	(4)
Self- actualizing	3.83	0.64	Very agreeable	(1)
Humanistic-encouraging	3.81	0.51	Very agreeable	(2)
Affiliative	3.74	0.50	Very agreeable	(3)
Overall	3.78	0.35	Very agreeable	
Organizational Commitment				
Programmatic Commitment	3.70	0.37	Very agreeable	(1)
Attitudinal Commitment	3.64	0.43	Very agreeable	(3)
Loyalty based Commitment	3.65	0.35	Very agreeable	(2)
Overall	3.83	0.33	Very agreeable	
Innovative Behavior				
Employee's Creative Idea	3.51	0.44	Very agreeable	(4)
Employee's Innovativeness	3.60	0.54	Very agreeable	(3)

Proactive Behavior	3.81	0.45	Very agreeable	(1)
Opportunity Seeking Behavior	3.67	0.42	Very agreeable	(2)
Overall	3.65	0.27	Very agreeable	

The Table 2 showed that organizational culture of employees in the electrical and electronic appliance industry was in “very agreeable” level with mean score as of 3.78. When considering into each dimension, it can be found that the self-actualizing gained the highest mean score as of 3.83, followed by humanistic-encouraging with mean score as of 3.81, affiliative with mean score as of 3.74 and achievement with mean score as of 3.73. In terms of organizational commitment, it was also rated in “very agreeable” level with the mean score as of 3.83. When considering into each dimension, it can be found that the

programmatic commitment obtained the highest mean score as of 3.70, followed by the loyalty based commitment with mean score as of 3.65 and the attitudinal commitment with mean score as of 3.64. In terms of Innovative behavior, it was also rated in very agreeable” level with the mean score as of 3.6. When considering into each dimension, it can be found that the Proactive Behavior gained the highest mean score as of 3.81, followed by the opportunity seeking behavior with mean score as of 3.67, the employee’s innovativeness with mean score as of 3.60 and the employee’s creative idea with mean score as of 3.51, respectively.

Hypothesis testing results

Table 3 The analysis of independent sample t-test and One-way ANOVA between personal characteristics and innovative behavior.

Personal Characteristics	Innovative Behavior				
	Employee’s Creative Idea	Proactive Behavior	Employee’s Innovativeness	Opportunity Seeking Behavior	Overall
Gender	t = -0.687 Sig. = 0.492	t = -0.146 Sig. = 0.884	t = 1.703 Sig. = 0.089	t = 1.830 Sig. = 0.068	t = 1.041 Sig. = 0.298
Age	F = 8.780 Sig. = 0.000*	F = 0.852 Sig. = 0.513	F = 2.020 Sig. = 0.075	F = 1.193 Sig. = 0.312	F = 2.877 Sig. = 0.014*
Educational Level	F = 2.347 Sig. = 0.097	F = 1.105 Sig. = 0.332	F = 2.625 Sig. = 0.074	F = 0.822 Sig. = 0.440	F = 4.357 Sig. = 0.013*

Personal Characteristics	Innovative Behavior				
	Employee's Creative Idea	Proactive Behavior	Employee's Innovativeness	Opportunity Seeking Behavior	Overall
Monthly Income	F = 1.730 Sig. = 0.127	F = 0.660 Sig. = 0.654	F = 1.109 Sig. = 0.355	F = 1.1562 Sig. = 0.170	F = 1.819 Sig. = 0.108
Current Position	F = 0.993 Sig. = 0.371	F = 0.173 Sig. = 0.841	F = 0.169 Sig. = 0.845	F = 4.174 Sig. = 0.016*	F = 0.267 Sig. = 0.766
Duration of Work	F = 1.306 Sig. = 0.267	F = 1.699 Sig. = 0.149	F = 0.637 Sig. = 0.636	F = 3.146 Sig. = 0.014*	F = 0.363 Sig. = 0.835

Employees in the electrical and electronic appliance industry with different age had different levels of employees' innovative behavior in terms of employee's creative idea (Sig. =0.000) and overall (0.014). In the meantime, employees in the electrical and electronic appliance industry with different education level had different levels of overall employees' innovative behavior (Sig. =0.013). In addition, employees in the electrical and electronic appliance industry

with different current position had different levels of employees' innovative behavior in terms of opportunity seeking behavior (Sig. =0.016). Lastly, employees in the electrical and electronic appliance industry with different duration of work had different levels of employees' innovative behavior in terms of opportunity seeking behavior (Sig. =0.014) at the statistical significant level as of 0.05.

Table 4 The results of multiple regression analysis between organizational culture and innovative behavior.

Constructive Culture	Innovative Behavior of Employees in the Electrical and Electronic Appliance Industry				
	Unstandardized Coefficients		Standardized Coefficients	t-test	Sig.
	B	Std.Error	Beta		
Constant	2.103	0.124		16.985	0.000*
Achievement	0.008	0.026	0.015	0.326	0.744
Self- actualizing	0.042	0.021	0.098	2.027	0.043*
Humanistic-encouraging	0.139	0.024	0.256	5.871	0.000*
Affiliative	0.324	0.022	0.584	14.848	0.000*
R = 0.643, R ² = 0.413, Adjusted R ² = 0.407, F = 69.494, p = 0.000					

The Table 4 showed that organizational culture influenced innovative behavior of employees in the electrical and electronic appliance industry in terms of self-actualizing ($\beta = 0.098$) humanistic-encouraging ($\beta = 0.256$) affiliative ($\beta = 0.584$) with the accurate prediction as of 40.7 percent (Adjusted $r^2 = 0.407$). The

other remains (59.3 percent) can be explained by other variables. In addition, the equation with unstandardized coefficients can be generated as follows:

$$\text{Innovative Behavior} = 2.103 + 0.098 (\text{Self-actualizing}) + 0.256 (\text{Humanistic-encouraging}) + 0.584 (\text{Affiliative})$$

Table 5 The results of multiple regression analysis between employee organizational commitment and innovative behavior.

Organizational Commitment	Innovative Behavior of Employees in the Electrical and Electronic Appliance Industry				
	Unstandardized Coefficients		Standardized Coefficients	t-test	Sig.
	B	Std.Error	Beta		
Constant	1.873	0.147		12.748	0.000*
Programmatic Commitment	0.333	0.036	0.456	9.348	0.000*
Attitudinal Commitment	0.087	0.033	0.138	2.655	0.008*
Loyalty based Commitment	0.62	0.035	0.080	1.778	0.076
R = 0.570, R ² = 0.325, Adjusted R ² = 0.320, F = 63537, p = 0.000					

The Table 5 showed that organizational commitment influenced innovative behavior of employees in the electrical and electronic appliance industry in terms of Programmatic Commitment ($\beta = 0.456$) and Programmatic Commitment ($\beta = 0.138$) with the accurate prediction as of 32 percent (Adjusted $R^2 = 0.320$). The other remains (68 percent) can be explained by other variables. In addition, the equation with unstandardized coefficients can be generated as follows:

$$\text{Innovative Behavior} = 1.873 + 0.456 (\text{Programmatic Commitment}) + 0.138 (\text{Attitudinal Commitment})$$

Conclusion and discussion

The study about “Organizational Culture and Organizational Commitment Affecting Innovative Behavior of Employees in the Electrical and Electronic Appliances Industry” can be concluded and discussed as follows:

Objective 1: To determine the differences of employee’s personal characteristics in electrical and electronic appliance industry affecting employees’ innovative behavior.

The different gender of the employees in the electrical and electronic appliance industry obtained different level of employees’ innovative behavioral. This study is not consistent with the research of Champa (2011) who found that the different gender of employees in the industry do not generate the different innovative behavior. Also, the study found that different age of employees in electrical and electronic industries will obtain the different levels of behavior showing the innovative behavior of employees. The study is consistent with the research done by Champa (2011) and Carmeli, Meitar and Weisberg, (2006), who found that the different ages of employees can generate the different level of innovative behavior.

The different education levels of employees in different electrical and electronic industries will have different levels of employee’s innovative behavior. The study is consistent with Carmela, Mete, and Wisberg (2006) who found that the education level was not correlated with innovative behavior. In the meantime, the different average monthly income of employees in the electrical and electronic appliance industry will have the different levels of employee’s innovative behavior, which the study is not consistent with the hypothesis and is not consistent with Champa (2011) who indicated that the different income can influence the different level of innovative behavior.

In addition, the different current job positions of employees in electrical and

electronic industries will have different levels of behavior showing the innovative behavior of the employees, which is consistent with the hypothesis of Champa (2011) who indicated that the different job positions can generate different level of innovative behavior. Lastly, the different duration of the work of employees in the electrical and electronic appliances industry will have the different level of showing the innovative behavior of employees, which study is consistent with Champa (2011) and Doren Busz Agen and Verhagen (2005) who found that different jobs can have the different level of innovative behavior.

Objective 2: To study the influence of organization culture on employees’ innovative behavior.

The results of the research showed that the organizational culture in terms of Affiliative ($\beta = 0.584$) had an effect on innovative creation behavior. This is because that the organizations with a focus on interpersonal relationship will consist of employees who are friendly, opened, sincere and sensitive to the feelings of colleagues and teammates, they can accept and understood each other's feelings. Also, the organizational culture in terms of affiliative can allow the employees to be willing, dedicate to work and help learn together to achieve organizational goals. But in this study, the result showed that the organizational culture characteristics in the dimension of Achievement ($\beta = 0.015$) have little impact on employee’s innovative behavior. This is because the organization may still have ambiguous goals, or employees in the organization cannot perceive the goals of organization, which it can result that the employees will not feel as a part of the work, or they will lack of looking at the challenging and important works. Then, the organization should have clearly defined job goals and create job challenges for employees so that employees can recognize and feel importance of the work they are working on. In addition, when the employees can

reach the organizational goal, they should also be rewarded.

Objective 3: To study the influence of organizational commitment on employees' innovative behavior.

In respect of programmatic commitment ($\beta = 0.456$), employees have good attitude towards the organization, there is a relationship between the employee and the organization. This can create the good experience for the employees which finally can encourage the employees to dedicate themselves to achieve the goals of the organization effectively. In the meantime, the loyalty based commitment ($\beta = 0.080$) has very little effect. This can happen when the organization cannot see the importance and understand the needs of the employees. For example, the organization assigned their employees to work and compensate their employees with less rewards as the employees expected or as it should be. In other word, the organization does not give special rewards when employees can achieve the organization's goals. This can lead to the employees' feeling that they did not have their values or their ability cannot match with the organization, then they perhaps decided to leave the organization. They will find out the organization where they can be compensated and promoted well. Therefore, the management should focus on this matter because at present, there is high business competition and it forces the organization to keep and occupy the talented employees with knowledge, ability and matched values with the organization. When the organization consists of this kind of employees, the organization should keep and retain them in the organization. By that, the management can perhaps set the compensation or rewards that employees need and in the meantime the organization can provide.

Suggestions from the research

The organization should set a common goal with effective planning to create challenges in the assignment for employees to have a rational thinking process, to work together with other organization members and to work cross-functional teams in order to accept the opinions of employees, exchange knowledge and create new works, products or methods.

The organization should allow employees to recognize and understand their duties and roles assigned by the organization in accordance with the organizational goals and objectives. The organization should have a good policy with ethics, social responsibility and reputation in order to strengthen employees to have creative behavior. In addition, the organization should create employees' positive attitude towards the organization

The organization should pay attention to employees' need and encourage the employees help the organization in all matters that they are capable of. With that, the organization can do such as assign the challenging assignments, announcing the good working behavior, or providing a higher position in the organization as for example.

The organization should have a survey of employee needs and try to provide such a need they employees have. However, if the organization cannot respond to the needs of employees, the organization must find the other way to substitute them. For example, the employees need higher salaries and the organization cannot provide that, the organization can provide other things such as good welfares, good food, good learning, good environment, or good accommodation for instances. Therefore, the organization should have a plan ahead.

Suggestions for the future research

This study about “Organizational Culture and Organizational Commitment Affecting Innovative behavior of Employees in the Electrical and Electronic Appliances Industry” can recommend to have the future researches as follows.

1. There should be a study of problems and obstacles in the performance of employees in the electrical and electronic appliances industry because problems and obstacles may affect the employees’ operation. If an employee is willing to work, he or she creates a thought process or develops work to create new innovations or new work processes for the organization.

2. There should be a study about the stability and progress in the operation of the electrical and electronic appliances industry because if the organization is stable, the employee who works there will also be stable.

3. There should be a study about the development of employee in the electrical and electronic appliances industry to support the changing technology in the future; because at present, the competitors in every industry will use more technology to maximize benefits.

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