

# **The Relationships among Organizational Climate, Job Satisfaction and Organizational Commitment in the Thai Telecommunication Industry**

Sanguansak Bhaesajsanguan  
Candidate DBA  
Commercial College  
Burapha University  
Bangkok, Thailand

## **Abstract**

Previous service industry research found that Organizational Climate, Organizational commitment, and Job Satisfaction all related to each other and had an impact towards the service industry's success. This study explored behavior of Thai Technicians in The Thai Telecommunication private sector. The study used questionnaire as the method to measure the relationship. A total of 1,200 questionnaires were distributed in December 2551 and 840 completed questionnaires were returned in March 2552; representing 70.0 percent of all distributed questionnaires. The data was analyzed by Structural Equation Modeling (SEM), LISREL programming (Linear Structure RELationship). The study found that the behavior of technicians in private telecommunications company in Thailand had organizational climate go hand in for a positive relationship with job satisfaction. It also disclosed that organizational climate is a positive relationship with organizational commitment through job satisfaction. The results from this study provide significance knowledge for top executives and human resource departments to execute and enhance The Organizational Climate, Organizational Commitment, and Job Satisfaction in Telecommunications business sector in the future.

**Key words:** Organizational Climate, Organizational Commitment, Job Satisfaction, Telecommunications, Technicians, Structural equation Modeling, Linear Structure Relationship, LISREL.

## **1. Introduction**

Telecommunication business plays an extremely important role in the development of the country. Nevertheless, there are limitations in Thailand's government's investment conditions and the regulations hinder the expansion of Telecommunication thus not being able to meet the needs of the populace. The government decided to encourage private enterprises to participate in the service sector under provisions in the 6<sup>th</sup> and 7<sup>th</sup> National Social and Economy Development Plans. Moreover, in 1997 the Kingdom of Thailand's Constitution Act 40 stipulates there must be an independent organization to regulate and control the Telecommunication enterprises by establishing the National Telecommunication Committee (NTC) to carry out duty in setting up a policy and draw up a master plan for the telecommunication business in order to have trade freedom as expressed in the General Agreement on Trade Services of the World Trade Organization, from negotiations since 1994, the private business enterprises participated more in Telecommunication business. At the same time, the Consumer Protection Office including the Consumer Protection Court established more roles to protect consumers due to Telecommunication enterprises rapid increase and close up of government units and independence organizations control consequence there are the high competitive market in Telecommunication industry.

In competitive circumstance, customer satisfaction is the significant factor to achieve service business success (Kim, Leong, Lee, 2005) and Brady & Cronin (2001). The company that

emphasizes customer services must face and meet customer expectations. They relate to the employees service ability, the products quality, and services environment. Brady, Cronin (2001) Service quality perception is defined as the distinguish between the customer's expectations and the real service perception (Gronroos, 1984) and (Parasuraman et al, 1985 ) Brady & Cronin(2001) gave service's quality details as three factors: The Services, Human Relations and The Quality Climate.

By summary: the competitive abilities toward impact which mean organization climate impacts towards job satisfaction and organization commitment. The technicians are the customer contact point is the essential factor towards customer satisfaction. From the study, this issue will be a guiding principle for Telecommunication business top executives and Human Resource department to apply in order to improve the organization and to be good consequence for employees also.

## 2. Hypothesis

The research explores the relationship structure between an organizational climate towards job satisfaction and organizational commitment on the objective to review papers and the related researches, in consequence, to have the following research hypothesis:

The 1<sup>st</sup> Hypothesis: The positive relationship of technicians' perception in organizational climate effect to organizational commitment.

The 2<sup>nd</sup> Hypothesis: The positive relationship of technicians' perception in an organizational climate effect to job satisfaction.

The 3<sup>rd</sup> Hypothesis: The positive relationship of technicians' perception in job satisfaction effect to organizational commitment.

The 4<sup>th</sup> Hypothesis: The positive relationship of technicians' opinion in an organizational climate through job satisfaction effect to organizational commitment.

## 3. Scope of study

The research studied Telecommunication technician behavior in Thailand private enterprise at Bangkok Metropolitan.

## 4. Literature reviews

### 4.1. Organizational Climate

Organizational climate concepts are employees' attitude towards their organization which has great impact towards their working ways and contributions; in consequence organizational climate causes organization performance because this relates directly to employees' motivation. Employees perception to organization as defined in six factors Stringer (2002):

- **Structure** : means employees understand clearly about their duties and responsibilities including each rank decision power.
- **Standards** : means employees take their efforts to develop their working quality to proud levels toward quality working.
- **Responsibility** : reflects the employees' feeling in term of courage used in problem solving without taking into consideration of decisions of others..
- **Recognition** : reflects the feeling of employees who receive rewards, blame and appropriate punishment. In addition to this includes balance and consistency.

- **Support** : the trust and the contributing to share with one another as a working team and colleagues and the ability to get the chief's assistance, whenever it is needed.
- **Commitment** : reflects the employees' feeling in sense of integration to the organization and commitment level towards the objectives of the organization.

## 4.2. Organizational Commitment

Meyer and Allen (1990) developed an organizational commitment measurement model called Allen and Meyer Three Components Model : 1. Continuance commitment is the type of commitment that someone feels lost when they resigned from the organization. 2. Affective commitment is the type of commitment that someone feels to be one part of the organization and commits towards the organization objectives. 3. Normative commitment is the type of commitment when someone feels moral commitment as the obligation feeling that the organization advocating in employee mind.

Babakus, Yavas, Karatepe, Avci, (2003) found that organizational commitment is the essential factor in developing the employees service ability toward customers. Jack, F., P. B. Dennis, et al. (2007) sees that organizational commitment is highly related towards organization and to be the factor that effects organization performances, strikes, working results, and turn overs. Wim, J. N., J. d. J. Margriet, et al.(1998) studied the commitment that the employees feel towards the organization is essential organizational tool and has a positive results in quality, the relationship to customers, communications, decreases sick leave in the executives' viewpoint. In employees viewpoint, found that this affects the positive working process adjustment and creates innovation.

## 4.3. Job Satisfaction

The study of Job Satisfaction was found to be an essential factor towards to develop the employees' service ability and still strongly affected the quality of service (Babakus, Yavas, Karatepe,Avci, 2003). Kalleberg A.L.(1977) gave the meaning of working satisfaction as each employee's integration effective results towards working role. Each employee may be satisfied with some aspects of work but at the same time he may not be satisfied with other aspects of the job which may have a total affect on job satisfaction. Locke, E. A. (1996) defined job satisfaction as a satisfactory emotion level that results from the success of the appraisalment working value. Mulige,Mueller,(1998) found that working environments affect job satisfaction level. Snipes, Oswald & Armenakis, (2004) explained that Intrinsic factors effect job satisfaction more than extrinsic factors except in rewards or aspects gained. Karatepe et al, (2006) job satisfaction encouragement is the role to keep employees in long term employment.

## 4.4. Organizational Climate, Organizational Commitment, and Job Satisfaction relationship

The Organizational climate is positive affects job satisfaction in the term of the higher the climate is; the higher the job satisfaction is (Mahajan, Churchill, Ford, & Walker, 1984), (Putti & Kheun, 1986),(Gratto, 2001). There are many studies results: organizational climate is positive affects to the commitment relationship towards organization. The better organizational climate is, the more organizational commitment towards the organization happens. (Clercq & Rius, 2007), (Pati & Reilly, 1977), (Ruth, 1992) moreover some studies showed the reciprocate relationships effect between organizational climate with organizational commitment. (Adela, Scott, & Pace, 2004) Service industry study in hotel business as in Taiwan shows a positive relationship in job satisfaction that has effects positive organizational commitment. (Yi-Jen, 2007) Employees' job satisfaction and organizational climate variables still effect towards organizational commitment as

in (DeCotiis & Summers, 1987), (Welsch & LaVan, 1981) study.

## **5. Methodology**

### **5.1. Population and Sample Groups**

The research population is technicians in private telecommunication enterprise in Bangkok area under the sample groups which is quota randomly drawn from Telecommunication enterprise. This study used combine three instrument to one questionnaire.

### **5.2. Survey Design**

After the questionnaires had been translated from English into Thai and the translation back had been rechecked for accuracy. The translated test was divided into 2 aspects consisting of language format harmonization and the similar of content for correct translation. However 2 aspects were considered in order to prevent a mix up between similar wording and content correctness. Indeed the correctness is more important than the similar format (Sperber, 2004). The questionnaires were taken to panel of qualified persons to assess Validity of the questionnaires by Index of item Objective Congruence: IOC. The panel of experts consisted of two professor in related Human Behaviors study and another two PhD who are an executive in Human Resources development division and has experiences in private Telecommunication enterprise. After they had evaluated, commented and suggested to improve the questionnaires; the questionnaires were adjusted. They were taken to use in depth interviewing with ten technicians for assessment to the technician understood the questions and adjustment had to be made in order to reach the clearly understanding of the questionnaire. After that they were used as a pilot survey with thirty technicians. Then the results were appraised for reliability in aspects of organizational climate, organizational commitment and job satisfaction.

### **5.3. Research Instruments**

The questionnaires are for measuring the organizational climate, the organizational commitment, and the job satisfaction. All are in the type of points ranking as Likert-scale under the highest rank is 5 points and the lowest rank is 1 point. The questionnaire is applied from questionnaires used in the previous studies. The organizational climate measurement questionnaire is applied from Organizational climate Measure (OCM) which was developed in field of 6,869 factory employees (Malcolm, et al., 2005) under 4 quadrants as Human Relations, Internal Process, Open systems, and Rational Goal. The questionnaires reliability test result by Cronbach's alpha is higher than 0.73 in all aspects. Under ACNCS (Affective, Continuance, and Normative Commitment) Commitment Scale the adjustment to measure the organizational commitment was developed by Meyer and Allen (1997). Its contents are: 1. affective commitment, 2. continuance commitment, 3. normative commitment. The questionnaire is for measurement the job satisfaction that are applied from Measure of job satisfaction (MJS). It was developed by (Michael Traynor, 1993) under five aspects measurements as Personal Satisfaction, Satisfaction with Workload, Satisfaction with Professional Support, Satisfaction with Training, and Satisfaction with Pay and Prospects which have Cronbach's alpha degrees of questionnaires reliability at higher than 0.84 in all aspects. The study compared the research tool in job satisfaction by using a total of 29 instruments, the result was Measure of job satisfaction (MJS) was the most appropriate questionnaire under Reliability, Construct validity comparisons and the content validity consideration (van Saane, Sluiter, Verbeek, & Frings-Dresen, 2003).

## **6. Research Results**

### **6.1. Data Reliability Test**

The sample data from questionnaire collection, their value of Cronback's Alpha reliability are 0.85, 0.80, and 0.94 respectively which are high and acceptable. Then 1200 questionnaires were taken to Telecommunication enterprise Human Resources Development Division in Bangkok area on December 2008. A number of 840 respondents returned the questionnaires on March 2009, representing 70% of the total questionnaires. After examining the 840 questionnaires, At the final 700 questionnaires are complete and appropriate to be used in the research study. It represents 58% of the total questionnaires.

### **6.2. Demographic Profiles.**

Over all demographic profiles of respondents summarized in the respondents' gender classified (presented in table 3). The majority of respondents were male 99.4 percents and 0.6 percents were female. Most of the respondents were in the age range of 56.0% 31-40 years. The marital status of respondents 46.6 % single and 53.4 % married. The majority of respondents educational level were 62.1 % diploma, 37.4 % Bachelor degree. The most of respondents work at Zone Operation Dept. 61.3 %, 16.3 % Network Construction Dept., 11.9 % Public Phone Dept, and 10.6 % Inside Plant Department respectively.

### **Organizational Climate**

From Table 4 showed that base on t-test and ANOVA test no significant differences in demographic profiles effect to organizational climate.

### **Organizational Commitment**

In difference position level, the t-value reach the significant level ( $<0.05$ ). This confirmed that the organizational commitment is impacted by position level. The mean senior technician has higher organizational commitment than technician. The company should provide training to senior technician as a role model for the technician in organizational commitment. This clearly confirms there are significant difference in organizational commitment among technicians at different levels of education, salary, service years in current company and all service years. In education level, lower education technician has higher commitment and higher salary level, service years in current company and service years after graduation has higher commitment. The company should focus on defining the scope of work in accordance with the knowledge of employees to enable employees fully utilize their knowledge. In addition, companies should determine incentive for result of work. Also company should define the appropriate role and activities for experienced employees to create organizational commitment strengthen.

### **Job Satisfaction**

In education level are clearly difference on the job satisfaction in telecom technicians field (F-value = 4.85, p-value = 0.008). The higher education level is less job satisfaction among

telecom technicians. The same as education level issue in organizational commitment company should provide suitable job for higher education technicians and incentive for performance.

### 6.3. Path Analysis

This research is developed towards path structure model that effect to private Telecommunication enterprise technicians' organizational commitment. Under the hypothetical setting which is set from the previous studies, we take the covariance value among variables to analyze by path analysis technique. The objective is the structural validity testing in order to confirm the path structure relationship follow what the theory indicates or not. To determine the size and direction of both direct and indirect effect of various factors effecting technicians' organizational commitment under the confirmed structural. It comprises three latent variables as the organizational climate, the organizational commitment and the job satisfaction including twelve observed variables. The path analysis model of two exogenous variables effects towards the organizational commitment in consist of the organizational climate and the job satisfaction. Both of them are latent variables which are measured by the twelve observed variables. The organizational commitment variables is measured by three observed variables as Affective Commitment, Continuance Commitment, and Normative Commitment. The organizational climate latent variables are measured by four observed variables as Human Relations, Internal Process, Open System, and Rational Goal. The job satisfaction latent variables are measured by five observed variables as Personal Satisfaction, Satisfaction with workload, Professional Support, Pay and Prospects, and Satisfaction with Training. The sample group is 700 technicians who work in the private Telecommunication enterprise in Bangkok area. The research instrument has four parts in one questionnaire. SPSS 11.0 program is used to analyze the data. The researcher analyzed the path relationship's the model fitness with LISREL 8.80 (Linear Structure Relationship). PRELIS is used to prepare the covariance data then LISREL 8.80 (Linear structure Relationship) estimated parameter value in path analysis model. There is the effect analyzing towards each variable that effect other variables as direct effect, indirect effect, and total effect. Factor loading is regression coefficient value will be measured the latent variable can be predicted by the observed variables and path coefficient value shows the effect between the latent variables.

### 6.4. Construct Reliability and Average Variance Extracted

Reliability means consistency of measurement or free residual. The reliability of the variables considered in the analysis result of the square multiple correlation. It is proportion of variable variance explained by the latent variable, which is equal value of communality in exploration factor analysis.

**Table 1. Construct Reliability of latent variable ( $\rho_c$ ), Average Variance Extracted ( $\rho_v$ ) and Reliability of observed variable ( $R^2$ )**

Latent Variables	Observed Variables	$\rho_c$	$\rho_v$	$R^2$
Organizational Climate		0.324	0.416	
	Human Relations			0.51
	Internal Process			0.03
	Open Systems			0.77
	Rational Goal			0.35
Organizational commitment		0.755	0.511	
	Affective Commitment			0.49
	Continuance Commitment			0.35
	Normative Commitment			0.69

Job Satisfaction		0.926	0.715	
	Personal Satisfaction			0.80
	Satisfaction with Work			0.78
	Professional Support			0.76
	Pay and Prospects			0.71
	Satisfaction with Training			0.53

Construct Reliability of latent variable :  $\rho_c$

$$\rho_c = \frac{(\sum\lambda)^2}{(\sum\lambda)^2 + \sum(\Theta)}$$

Average Variance Extracted:  $\rho_v$

$$\rho_v = \frac{\sum\lambda^2}{\sum\lambda^2 + \sum(\Theta)}$$

From table1 found that the Organizational Climate latent variable has low Construct Reliability:  $\rho_c$ (should less than 0.60) and low Average Variance Extracted:  $\rho_v$  (should less than 0.50). The Organizational Commitment and job satisfaction latent variable has high Construct Reliability:  $\rho_c$ ( greater than 0.60, 0.75, 0.92 ) and high Average Variance Extracted:  $\rho_v$  ( greater than 0.50, 0.51, 0.71 ). This confirmed that the organizational commitment latent variable and job satisfaction latent variable can be highly described by observed variables. However organizational climate has been less capable explained by observed variables (Affective Commitment, Normative Commitment, Continuance Commitment).The observed variables consist of Internal Process and Rational Goal can be lowly described to organizational climate. Also Continuance Commitment can poor explained to organizational commitment because low Reliability of observed variable ( $R^2$ ) value.

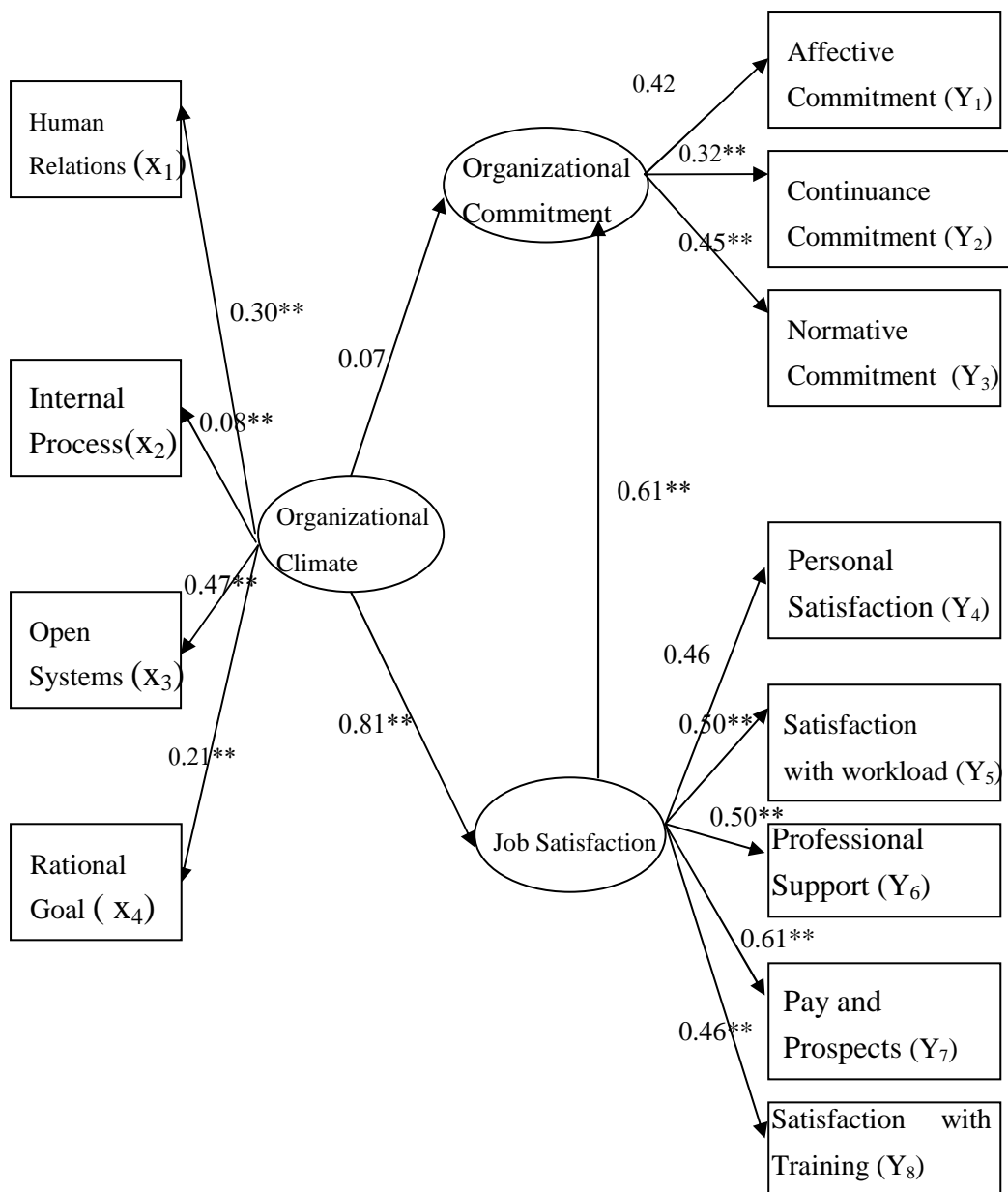
### 6.5. Path Analysis in Structural Equation Model

Path analysis described that each latent variable is influenced by each as shown on table 2 to be displayed below. This table showed the direct impact and indirect impacts of each latent variable. Organizational climate has insignificant direct effect to organizational commitment but has significant indirect effect 0.50 to organizational commitment through job satisfaction. Total effect from organizational climate to organizational commitment is 0.57. Organizational climate has significant direct effect 0.81 to job satisfaction. Job satisfaction has significant direct effect 0.61 to organizational commitment.

**Table 2. Regression analysis result in structural model**

Dependent Variables	$R^2$	Effect	Independent Variables	
			Organizational Climate	Job Satisfaction
Organizational Commitment	0.46	DE	0.07	0.61**
		IE	0.50**	0.00
		TE	0.57**	0.61**
Job Satisfaction	0.65	DE	0.81**	
		IE	0.00	
		TE	0.81**	

DE = Direct Effect, IE = Indirect Effect. TE = Total Effect, \* $p < 0.05$ , \*\*  $p < 0.01$



**Figure1. Result of path analysis effect to Organizational commitment**

From Table 2 and figure 1 explained the path analysis's overview analysis result: technicians' organizational commitment is mainly the result of the job satisfaction. The organizational climate does not direct effect to the organizational commitment. However the organizational climate still plays an important role and has much effect towards job satisfaction through job satisfaction. Therefore the organization will encourage the organizational commitment; it must encourage both the organizational climate and the job satisfaction. Consider Table 1 it helps the executive to know that the answer to encourage and improve working climate is to emphasize the observed variables' high  $\rho_c$  value because it effects directly to the organizational climate that is in the part of Human Relations, Open System and Rational Goal factor. Except the Internal Process factor has lowest effect because this process strict in rule and tradition not flexible.

There is encouragement and improvement of good working conditions, this will effect much towards the job satisfaction. Some observed variables such as Personal Satisfaction factor



which means technicians work in self-value working type and Satisfaction with work factor means there is time enough in working and the appropriate work amount. Professional Support factor means to get excellent working suggestions and support. Satisfaction with training factor means technicians get adequate chance and time to be trained in their works. Finally is appropriate Pay with Prospects factor.

## **7. Conclusion**

### **7.1. Results Discussion**

Developing the path structural model of factors which influences relationship of technicians to the private Telecommunication enterprise technicians' their organizational commitment, which structural model has goodness of fit in the high degree. The structure model harmonizes with the good evidence data as shown in table 5 (Goodness of fit index GFI) = 0.99, Adjusted Goodness of Fit Index (AGFI) = 0.98, Root mean square error of approximation (RMSEA) = 0.016, Chi-square = 36.03, Probability (P value) = 0.24, degree of freedom = 31, Relative Chi-square (Chi-square/df = 36.30/31 or = 1.17), Comparative fit index (CFI) = 1.00, Standardized root mean square residual (SRMR) = 0.34 Total variables in model are able to explain the variance of organizational commitment equal 46 percentages by structure equation. Organizational Climate is able to explain the variance of job satisfaction equal 65 percentages.

From empirical data studies using Structural Equation Model (SEM). This research support the 2nd hypothesis: The positive relationship of technicians' perception in an organizational climate effect to job satisfaction. The 3rd Hypothesis: The positive relationship of technicians' perception in job satisfaction effect to organizational commitment. The 4th Hypothesis: The positive relationship of technicians' opinion in an organizational climate through job satisfaction effect to organizational commitment. But not support to the 1<sup>st</sup> Hypothesis: The positive relationship of technicians' perception in organizational climate effect to organizational commitment as to be shown in figure 1 and table 2.

### **7.2. Managerial Implications**

This research found that the technicians' organizational commitment development besides the observed variable's factor development is still developed simultaneously with the job satisfaction development. Including the organizational climate development is very important also as there is the positive effect both direct and indirect result. Its effect is more than the job satisfaction therefore it affects both directly and indirectly which study the effect from the path structure diagram.

The executives must clearly understand the factors that reinforce organizational climate, organizational commitment and job satisfaction. This study results provide knowledge of influence degree of each factor that impact to them building. This will support management to use the limited resources to strengthen factors that highly affect to build the organizational climate, organizational commitment and job satisfaction.

The factors of organizational climate which that companies should focus on is the most open system factor including innovation and flexibility, outward focus, reflexivity. Human relations factor including autonomy, integration, involvement, supervisory support, training, welfare and. rational goal factor including clarity of organizational goals, efficiency, effort, performance feedback, pressure to produce, quality. The Internal process factor has minimal effect consist of formalization, tradition.

For the organizational commitment, company should focus on Normative commitment, company should strengthen by building positive relationships between employees and between companies with employees. For affective commitment, to be created by let employees to realize the

benefits that employees receive from their companies and the comparison to shows that no less than other company in the same industries. The continuance commitment has less effect than other, company should reinforce with employees involved in the decision. Let employees are aware that their role and their importance to the company.

Companies can enhance job satisfaction by creating personal satisfaction by enabling employees to work fully employees' competency. Let the employees understand the value in their job. Company should have been continuously developing employees' potential. The factor of satisfaction with workload, company should allocate time suitable to workload. Satisfaction with professional support factor, company should provide well training for supervisor to coaching and supervise their subordinate and setup course for team building. Satisfaction with pay and prospects factor, company should have yearly salary evaluate compare other company in the same industry and develop career path for employees. Satisfaction with training, company should provide sufficiency training for their job and regular assess the knowledge needed to work.

### **7.3. Limitations**

Firstly, this search study is only for private business communications in the capital area in Thailand. This could not be compared to other organizations in other businesses or other areas of the country. However, results from the study will be practically developed to be used in the same types of organization and same regions.

Secondly, this study covers a large organization that employs over than four thousand people. Generally a large company will have different characteristics from medium-small companies. This research study and organizations are under the Thai management and major shareholders are Thai (local people), which may have a different corporate culture from organization managed by foreigners.

### **7.4. Future Research Suggestion**

Firstly, Should analyze the comparison by different research methods in order to assess the research precision such as quality research for getting the deep viewpoints and having guidelines to implement and improve the organization's quality in each aspect.

Secondly, Should conduct research in the private Telecommunication Organization's for each employees level therefore if the organization wants to develop more efficiently, it should improved the integrated factors. Along with being co-developed simultaneously thus it will provide much more than only one level development.

Thirdly, Should study the comparison in different organizations within the same industry such as in the organization which is public enterprises in order to comprehend in the difference and application.

Finally, Should study and adjust the questionnaire for being higher validity in content and more reliability aspects.

**Table 3. Demographic profile of samples.**

<b>Variable</b>	<b>Frequencies</b>	<b>Percentages</b>
Gender		
Male	696	99.4
Female	4	0.6
Age		
20-30 years	252	36.0
31-40 years	392	56.0
41-50 years	54	7.7
51-60 years	2	0.3
Marital status		
Single	326	46.6
Married	374	53.4
Education level		
Under bachelor degree	435	62.1
Bachelor degree	262	37.4
Master degree or higher	3	0.4
Department		
Zone operation	429	61.3
Inside plant	74	10.6
Network construction (NWC)	114	16.3
Public phone operation	83	11.9
Salary		
Less than 15,000 baht	191	27.3
15,001-20,000 baht	293	41.9
20,001-25,000 baht	155	22.1
25,001-30,000 baht	43	6.1
30,001-35,000 baht	13	1.9
Over 35,000baht	5	0.7
Position		
Technician	471	67.3
Sr. Technician	229	32.7
Service years in current Dept.		
1-5 years	304	43.4
6-10 years	219	31.3
11-15 years	169	24.1
Over 15 years	5	0.7
Service years in current company		
1-5 years	147	21.0
6-10 years	196	28.0
11-15 years	340	48.6
Over 15 years	17	2.4
All Service years		
1-5 years	91	13.0
6-10 years	206	29.4
11-15 years	261	37.3
16-20 years	105	15.0
Over 20 years	37	5.3

**Table 4 ANOVA analysis and t-test**

Variables	Items	Organizational climate				Organizational commitment				Job satisfaction			
		Mean	S.D	F/t-value	P-value	Mean	S.D	F/t-value	P-value	Mean	S.D	F/t-value	P-value
Gender	M	4.12	.52	-1.206 t	.228 t	3.86	.45	-.635 t	.526 t	4.12	.52	-.492 t	.623 t
	F	4.25	.61			4.00	.45			4.25	.61		
Age	20-30 years	3.42	.28	0.484	0.694	3.81	.46	1.874	0.133	4.11	.51	0.173	0.915
	31-40 years	3.45	.31			3.89	.45			4.13	.53		
	41-50 years	3.42	.32			3.91	.41			4.14	.54		
	51-60 years	3.39	.58			3.56	1.08			4.02	.71		
Marital status	Single	4.11	.50	-.011 t	.991 t	3.83	.44	-1.780 t	.076 t	4.11	.50	-.663 t	.508 t
	Married	4.14	.55			3.89	.46			4.14	.55		
Education level	Under bachelor degree	3.45	.30	2.783	0.063	3.90	.45	5.362	0.005	4.15	.52	4.853	0.008
	Bachelor degree	3.41	.31			3.81	.45			4.08	.52		
	Master degree or higher	3.13	.13			3.33	.23			3.33	.36		
Department	Zone operation	3.43	.31	0.599	0.616	3.85	.46	2.028	0.109	4.14	.54	1.048	0.371
	Inside plant	3.43	.28			3.79	.43			4.03	.54		
	Network construction (NWC)	3.44	.32			3.94	.46			4.14	.53		
	Public phone operation	3.48	.29			3.89	.41			4.13	.44		
Salary	Less than 15,000 baht	3.43	.28	1.701	0.132	3.82	.45	2.468	0.031	4.08	.52	1.694	0.134
	15,0001-20,000 baht	3.42	.30			3.83	.45			4.11	.53		
	20,001-25,000 baht	3.48	.31			3.92	.46			4.21	.53		
	25,001-30,000 baht	3.49	.35			4.03	.41			4.18	.54		
	30,001-35,000 baht	3.32	.28			3.08	.46			4.00	.49		
	Over 35,000 baht	3.23	.41			4.00	.46			3.80	.30		
Position	Technician	4.11	.53	-1.174 t	.241 t	3.83	.45	-2.524 t	.012 t	4.11	.53	-1.167 t	.244 t
	Sr.Technician	4.16	.52			3.92	.45			4.16	.52		
Service years in current Dept.	1-5 years	3.43	.29	0.697	0.554	3.82	.43	2.553	0.054	4.09	.53	1.061	0.365
	6-10 years	3.46	.32			3.88	.45			4.15	.50		
	11-15 years	3.41	.31			3.88	.48			4.15	.55		
	Over 15 years	3.40	.26			4.31	.21			4.35	.23		
Service years in current company	1-5 years	3.39	.26	1.683	0.169	3.79	.43	1.563	.0197	4.07	.52	1.314	0.269
	6-10 years	3.47	.31			3.87	.48			4.16	.52		
	11-15 years	3.43	.31			3.88	.45			4.12	.53		
	Over 15 years	3.45	.29			3.91	.45			4.29	.42		
All Service years	1-5 years	3.38	.26	0.960	0.429	3.73	.39	2.646	0.033	4.05	.53	0.832	0.505
	6-10 years	3.44	.29			3.85	.47			4.13	.49		
	11-15 years	3.45	.32			3.89	.45			4.12	.55		
	16-20 years	3.45	.31			3.88	.47			4.18	.52		
	Over 20 years	3.41	.34			3.96	.44			4.13	.50		

**Table 5. Index to investigate Model fitness**

Fit indices	Statistic
Chi-square with 5 degrees of freedom	36.03 (p = 0.24)
Goodness of fit index (GFI)	0.99
Standardized root mean square residual (SRMR)	0.34
Root mean square error of approximation (RMSEA)	0.16
Expected cross-validation index (ECVI)	0.19
ECVI for saturated model	0.22
ECVI for independence model	14.43
Adjusted goodness of fit index (AGFI)	0.98
Chi-square with 66 degrees of freedom	10079.96
Non-Normed fit index (NNFI)	1.00
Normed fit index (NFI)	1.00
Comparative fit index (CFI)	1.00
Incremental fit index (IFI)	1.00
Relative fit index (RFI)	0.99
Parsimony Normed fit index (PNFI)	0.47
Parsimony goodness of fit index (PGFI)	0.39
Independence AIC	10103.96
Model AIC	130.30
Saturated AIC	156.00
Critical N (CN)	1013.61

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