



Organizational Effectiveness of Korean Information and Communication Industry Employees : Focus on Organization Culture, Job Satisfaction, Organizational Commitment and Turnover Intention

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Abstract

Purpose– The purpose of this study is to give implications on how to decrease employee turnover intention of Korean information and communication industry employees using organization culture, job satisfaction and organizational commitment. To do that this study analyzes relationships among variables and analyses mediating effect of job satisfaction and organizational commitment.

Research design, data, and methodology– To analyze relationships among organization culture, job satisfaction, organizational commitment and turnover intention of employees, this study used the 7th KRIVET's HCCP employee data especially employees working in the information and communication industry who has more than university degree education. The analysis is conducted by using SPSS 21 and frequency analysis correlation analysis, regression analysis and mediating effect are analyzed by using MACRO PROCESS procedure for SPSS.

Result– According to the empirical results, organization culture of innovation, relation and rational directed significantly affect both job satisfaction and organizational commitment. And job satisfaction and organizational commitment significantly affect each other. Turnover intention is significantly affected by job satisfaction, organizational commitment, innovation directed and hierarchy directed. However, the influence of innovation and hierarchy showed conflicting results.

Conclusion– Based on this study result, implications to manage the turnover intention of Korean employees in the information and communication industry are discussed. Especially, the effect of organization culture, job satisfaction and organizational commitment is discussed. And the mediating role of job satisfaction and organizational commitment is also analyzed. Result implicates that cautious approach is needed in managing organization culture to employee attitude of job and organization is needed

Keywords: Organization Culture, Job Satisfaction, Organizational Commitment, Turnover Intention,

JEL Classification Code: M 12, M14, M19

1. Introduction

Ever since the term 'fourth(4th) industrial revolution' appeared at World Economic Forum (Davos Forum) by Klaus Schwab in June of 2016, the world economy, politics and business are swept by its potential. This tremendous concept is composed of hyperconnectivity and superintelligence therefore ICT (Internet Computer Technology) is based on every aspect of the 4th industrial revolution. Therefore, starting from the appearance of the term 4th industrial revolution, the technology approach surround connected technology is the main discussion. Even application in business and scholarly research is also focused on technology approach. It seems the term 4 industrial revolutions is missing out on human, even though the human is the owner, developer and the host of the technology. Therefore, the study of humans in the 4th industrial revolution-related industry is in need. In particular, a strategy to increase the competitiveness of the nation and companies is being promoted based on Korea's excellent ICT technology. Especially now that the ICT industry's share of the national economy is continuously increasing and its impact feels stronger and stronger than ever before, research in ICT field is considered necessary. However, despite rapid demand and job opportunities, there is still not enough research on ICT workers (Korunka et al., 2008; Oosthuizen et al. 2016; Kanwar, et al. 2016) especially in Korea (Hahn & Lee, 2002; Lee & Youn, 2009; Lee & Kwon, 2013). Therefore, this research analyzes the relation among organization culture, job satisfaction, organizational commitment and turnover intention of Korean employees in the information and communication industry who has more than university degree education using KRIVET's 7th HCCP data of 534 employees employed in 36 companies. This study focused on organization culture as an antecedent and includes four constructs; innovation directed culture, relation directed culture, rational directed culture and hierarchy directed culture. And this study includes two mediators job satisfaction and organizational commitment between organization culture and turnover intention. To analyze relationships among variables, this study used frequency analysis, correlation analysis, regression analysis and macro analysis are analyzed by using SPSS 21. Results of this study could give implications on how to decrease turnover intention and increase job satisfaction and organizational commitment by managing organization culture. Therefore, the result of this study could give detailed implications to information and communication employees' human resource management in Korea.

2. Literature Review

2.1. Organization Culture

In general, as Williams (1983) defines, culture is defined as a complex concept that includes values, beliefs, ways of thinking, customs and traditions, knowledge and technology that are learned socially and shared by its members. Therefore, as Schein (1985) and Robbins (1998) define, organization culture is a physical and immaterial aggregate that reflects the shared values and norms of organizations and grants distinct identities. And as Griffin & Moorhead (2009) explain, organization culture is the dominant factor in the formation of the members' behavior and belief system. Organization culture began to attract attention to business management when it was recognized that the organization's management is more influenced by the organization's human resources than the physical assets such as capital or technology (Lee, 1999). Especially, organizational culture is emphasizing its importance as organization employees immerse themselves in the strategic goals and committed to organization directions and facilitate its operation execution (Sims, 2002; Lund, 2003; Deutschman, 2005; Jaskvte & Dressler, 2004; Habib et al, 2014). Based on the idea that organization culture is the source of strengthening competitiveness for business growth (Barney, 1986), research has been carried out to find cultural characteristics for improving business performance, however, types of organization culture classification differ from researcher to researcher (Deal & Kennedy, 1982; Denison, 1984; Gordon & Ditomaso, 1992; Peters et al., 1982; Wallach, 1983; Wilkins & Ouchi, 1983).

Among various culture approaches, this study concentrates on a CTA (culture type approach) which enables empirical exploration of organization culture and organizational problem situations. The CTA organizes organization culture at various levels and focuses on how the organizational effect changes with each type. The CTA has proven useful and is used by many scholars as an analytical framework for organizational and cultural research (Quinn & Kimberly, 1984; Cameron, 1985; Zammuto & Krakower, 1991; Aycan et al. 1999; Parker & Bradley, 2000; Lee & Lee, 2008; Cameron & Quinn, 2011). Quinn & Kimberly (1984) modeled organization culture types as measurement and divided organization culture into four types; innovation directed, relation directed, rational directed and hierarchy directed. The definition and dimension characteristics of each type of culture presented by the model are as follows (Zammuto & Krakower, 1991; Parker & Bradley, 2000; Jassawalla & Sashittal, 2002). First,

innovation-directed culture, also called the open system model, emphasizes flexibility based on change and pursues the adaptation and innovation of the organization to the external environment. It is a culture that focuses on developing new ideas and acquiring resources to support the growth of organizations through adventures and challenges, creative activities of its members. Second, relation-directed culture is, also called the human relation model, pay attention to the human network formed within the organization members. This culture focuses on building trust, teamwork, loyalty, and bonds among its members, and aims to maintain family relationships, create a cohesive atmosphere, and develop human resources through participation and immersion. Third, rational-directed culture, also called the internal process model, considers the achievement of rational goals and competitiveness of organizations, and the increase of productivity through efficient teaching of members as core values. Fourth, hierarchy-directed culture, also called the internal process model, pursues standardized activities and increased efficiency within a stable organizational base. It demonstrates the characteristics of placing importance on integration within the organization based on civilized hierarchical order, public order of command, standardized activities, and strict norms and controls. This is a culture that can lead to abuse of bureaucracy, such as overly complex management systems and vertical administration. This study aims to measure elements of an organization culture based on the level recognized by Korean information and communication industrial employees based on this model and to categorize the structure and present them as subconfiguration of organization culture.

2.2. Organizational Effectiveness: Turnover Intention, Job Satisfaction and Organizational Commitment

Organizational effectiveness is an indicator of the achievement of an organization's goals and the degree of effective management and can be considered as a criterion for evaluating the organization's performance (Etzioni, 1960; Price & Mueller, 1986). There is no agreed-upon view on the scope of measurement of organizational effectiveness, but existing research shows that organizational effectiveness can be largely divided into economic and psychological outcomes (Price, 1972; Campbell, 1977; Steers, 1977; Cameron, 1987). This study, among various organizational effectiveness measurements, will focus on psychological results from the perspective of human resource management. Turnover intention, job satisfaction and organizational commitment are the widely researched organizational effectiveness in managing employees. However, definitions and meanings are diverse from scholars to scholars.

First, turnover intention, although the definition of turnover differs from researcher to researcher, turnover generally means the termination of the working relationship between the worker and the user, namely, the termination of the relationship between the worker and the company. However, measuring turnover directly in the practical aspect is limited therefore turnover intention is measured. The turnover intention is a leading variable of turnover (Mobley, 1977), and turnover intention means that the intention of abandoning one's qualification as a member of an organization and leaving the organization where one wants to work. Of course, not all members turnover just because of their intentions, but considering the negative impact of their intentions on the organization, the fact that the organization has turnover intention but having turnover intention itself can be problematic. The turnover intention lowers the sense of accomplishment of the organization members and consequently negatively affects the development of the organization. Therefore, the turnover intention is very important in terms of corporate performance and organization and human resource management (Carsten & Spector, 1987; Hellman, 1997; Dole & Schroeder, 2001).

Second, job satisfaction generally means a degree of positive emotional state or enjoyment of employees through the job or work experience (Hoppock, 1935; Locke, 1969; Price & Mueller, 1986). It can be said that job satisfaction has a lot to do with the characteristics of the assigned work, individual needs for the work, and the surrounding environment of the job. Typical influencers of job satisfaction include organizational factors such as corporate policy, organizational structure and organization culture, work environmental factors such as relationships with colleagues, job-related factor such as role ambiguity and conflict (Herzberg et al., 1959; Vroom, 1964; Meyer, 1964; Porter & Steers, 1974; Locke, 1976; Ginzberg, 1981). In particular, the influence of organization culture on job satisfaction has been confirmed through numerous studies (Robbins, 1998; Kraut, 1998; Bellou, 2010; Belias & Koustelios, 2014), and job satisfaction closely correlates with turnover intention, innovative behavior, and job performance (Kreitner & Kinichi, 2001).

Third, organizational commitment generally refers to the attitude of an employee to support their organizational goals and to maintain their status as members of the organization (Buchanan, 1974; Allen & Meyer, 1990). In other words, organizational commitment is based on the favorable attitude towards the organization (O'Reilly & Chatman, 1986) which includes psychological unity feel toward the organization employee belong. It reflects employees identifying themselves with the organization and actively participating in the organization issues (Osborne et al.,

1980). Organizational commitment is influenced by personal characteristics such as the desire for fulfillment, job characteristics such as autonomy, job identity, and organizational environment characteristics such as organization support, management system, leadership and organization culture, etc. (Steers, 1977; Stevens et al., 1978; Mowday et al., 1979). Higher organizational commitment improves organizational productivity and producing high results (Mathieu & Zajac, 1990; Meyer et al., 2002)

Literature of research on ICT workers, Hahn & Lee (2002) study of organization-level determinants in predicting job stress and physical illness of Korean worker in IT industry. Korunka et al. (2008) study the quality of working life mediates the relations between job and organizational characteristics and turnover intention of Americans and Austrian. Lee and Youn(2009) examine the antecedents of college graduating newcomers' turnover intention and behavior in Korea. Lee & Kwon (2013) explores the effects of organizational identification and regret proneness on satisfaction with life and turnover intention of IT employees of Korea. Oosthuizen et al. (2016) explore the relation between employees' experiences of work-life balance, job satisfaction and turnover intention in South African IT workers. Kanwar, et al. (2016) examine the impact of industry background and gender on job satisfaction organizational commitment and turnover intent of India IT and ITES employees. Therefore, to achieve the research purpose of this study considered a suitable organizational effectiveness measurement as to turnover intention, job satisfaction and organizational commitment. Therefore, through this research, it is expected to understand the relationship among turnover intention, job satisfaction, organizational commitment and organization culture. And mediating role of job satisfaction and organization between organization culture and turnover intention. Also, this study analyze Korean information and communication industrial employees result could give managerial implication to 4th industrial employee management particularly information and communication industrial employees.

3. Methodology

3.1. Research Model and Measurement

In Figure 1, based on the literature, this study research model is built. Two research questions are asked in this study. First, does organization culture affect job satisfaction, organizational commitment and turnover intention? In this study, organization culture includes four constructs: innovation directed, relation directed, rational directed and hierarchy directed. Second, does job satisfaction and organizational commitment mediate between organization culture and turnover intention? is it a complete mediation or partial mediation? To analyze relationships among variables: four organization culture variables (innovation directed, relation directed, rational directed and hierarchy directed), job satisfaction, organizational commitment and turnover intention, this research used SPSS 21 and continue frequency analysis, correlation analysis and regression analysis. Also mediating effect is analyzed by MACRO PROCESS procedure for SPSS.

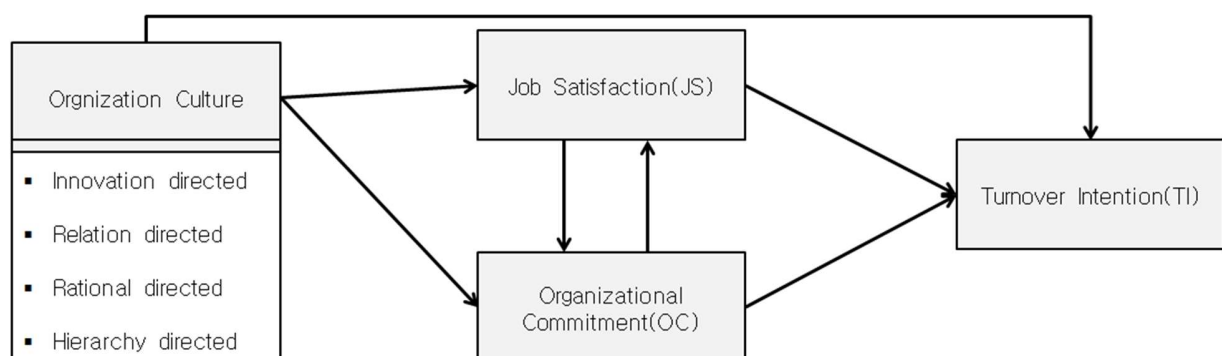


Figure 1: Research Model

The source of this study's data is from KRIVET (Korean Research Institute for Vocational Education & Training) particularly 7th HCCP(Huma Capital Corporate Panel) which is published in 2018. All survey items are measured by a five-point Likert score and self-measured. In this research, the independent variable is organization culture

which includes four constructs, each construct is measured with three survey items: innovation directed, relation directed, rational directed and hierarchy directed. Innovation directed (inn) is measured with company encourage change and new attempt, company gives proper reward to innovation and company treated innovative person than diligence person. Relation directed(rel) is measured with the company has the family hood atmosphere, the company emphasis national peace and unity and the company emphasis teamwork. Rational directed(rat) is measured with company emphasis competitive atmosphere and performance achievement, company emphasis necessary knowledge and skill to implement task and company assessment is based on task implementation ability and result. Hierarchy directed(hie) is measured with a company emphasis on formal procedure and regulation, top-down communication and rank awareness atmosphere. In this research, job satisfaction (JS) and organizational commitment (OC) is the mediator between organization culture and turnover intention. Job satisfaction is measured by four items like the satisfaction of current work, compensation, human relation of job and overall. And organizational commitment is measured by three items like feeling the company's problems as one's own, will lose a lot if one leaves the company, and loyal to the company is worthwhile. Lastly in this research, the dependent variable is the turnover intention (TI) which is measured as a single item, consider turnover if better conditions are offered.

3.2. Research Data

To analyze relationships among variables, this study used the 7th HCCP (Huma Capital Corporate Panel) of KRIVET (Korean Research Institute for Vocational Education & Training) published in 2018. Among the 7th data of HCCP, this study only included employees in the information and communication industry who has more than university degree education. Therefore, this study includes 534 employees who are employed among 36 companies. Demographic characteristics are summarized in Table 1. By firm size, 212(39.7%) is a small and medium enterprise(SME) which employees less than 300 employees, 193(36.1%) is a small hidden enterprise(SHE) which employees 300 to 999 employees and 129(13.5%) are a middle and big enterprise(MBE) which employees more than 1000 employee. By firm type, 72(13.5%) is listed company, 149(27.9%) is KOSDAQ and 397(74.3%) is Financial Supervisory Service (FSS) /external audit and others. By gender, 137 are Female (25.7%) and 397 are Male(74.3%). The firm business year is minimum 13, middle 26, mean 24.8 and maximum 35 years. Employee age is minimum 23, middle 38, mean 38.75 and maximum 6557 years old. Employed years of current company is minimum 1, middle 7, mean 9.11 and maximum 30 years.

Table 1: Demographic Characteristics

N=534		No.	%			
Firm Size	SME (under 300)	212	39.7			
	SHC (300=999)	193	36.1			
	MBE (upper 1000)	129	24.2			
Firm Type	Listed Enterprise	72	13.5			
	KOSDAQ	149	27.9			
	FSSetc.	313	58.6			
Gender	Female	137	25.7			
	Male	397	74.3			
	Mean	Middle	S.D.	Variance	Minium	Maxium
Firm Biz. Year	24.80	26.00	6.66	44.39	13.00	35.00
Employee Age	38.75	38.00	8.64	74.71	23.00	57.00
Work Year	9.11	7.00	6.67	44.51	1.00	30.00

Note. SME (Small and Medium Enterprise), SHC (Small Hidden Champion), MBE (Middle and Big Enterprise), KOSDAQ (Korea Securities Dealers Automated Quotations), Financial Supervisory Service (FSS) /external audit and others=FSSetc.

4. Empirical Findings

Before analyzing the relation among organization culture, job satisfaction, organizational commitment and turnover intention, this research construct reliability analysis. Generally, if the results of Cronbach's alpha(α) coefficient are larger than 0.6, the measures are acceptable. As for this study, all reliability results showed an acceptable Cronbach's α level. As for organization culture which includes four constructs measured with three survey items, 0.82 for innovation directed, 0.85 for relation directed, 0.787 for rational directed. However, as for hierarchy directed, one item was deleted due to lack of explanatory rate and included only two items and results of Cronbach's α showed 0.768. Job satisfaction show 0.842 with four items and finally for organizational commitment showed 0.716 with three items. And because the turnover intention is measure with a single item, excluded from reliability analysis. All results of reliability analysis show that this study measurement is appropriate and analysis continued.

Also, before analyzing the relationships among variables, correlation analysis is implemented and the result is summarized in Table 2. The correlation result shows that the highest correlation is between employee age and work year which is 0.639.

And all correlations between organization culture, job satisfaction, organizational commitment and turnover intention show statistically significant.

Table 2: Correlation Analysis Results

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1F.Size	1.8446	0.78458	1												
2F.Type	2.4513	0.7199	0.078	1											
3Biz.Y.	24.7959	6.66242	0.041	-.285**	1										
4Gender	0.74	0.437	-0.073	0.023	-0.012	1									
5Age	38.7509	8.64343	0.022	.165**	.108*	.268**	1								
6Work.Y	9.1067	6.67145	.137**	.242**	.239**	.134**	.639**	1							
7cul_inno	3.3165	0.76395	.085*	0.074	0.051	.199**	.151**	.155**	1						
8cul_rel	3.6024	0.70039	0.072	.137**	0.047	.118**	0.057	.152**	.631**	1					
9cul_rat	3.5949	0.6667	.152**	.103*	.175**	.143**	.188**	.210**	.607**	.514**	1				
10cul_hir	3.6835	0.61105	.134**	.114**	.125**	0.054	0.029	.107*	.354**	.421**	.524**	1			
11JS	3.603	0.6237	0.051	0.063	.115**	.102*	.092*	.181**	.526**	.545**	.523**	.378**	1		
12OC	3.3683	0.67693	0.003	.096*	.169**	.223**	.222**	.348**	.482**	.484**	.491**	.310**	.586**	1	
13TI	2.9	0.962	-0.083	-0.044	-0.082	-.166**	-.232**	-.256**	-.323**	-.260**	-.264**	-.092*	-.366**	-.397**	1

Note: job satisfaction=JS, organizational commitment=OC

*** **: $p < 0.000$, * : $p < 0.01$, * : $p < 0.05$, + : $p < 0.1$

To analyze causal relationships among organization culture, job satisfaction, organizational commitment and turnover intention, this research employs a regression approach. There is three regression result. Table 3 shows the regression result of job satisfaction, Table 4 shows the regression result of organizational commitment and Table 5 shows the regression result of turnover intention. Stepwise regression analysis is analyzed. The first is the control variable, in model 1(M1) company control variables are included like firm size, firm type and firm business year. And in model 2(M2) employee demographic variables are included like gender, age and tenure. Second, the independent variable, organization culture is included in model 3(M3). Third, all control and independent variables are included in model 4(M4). And fourth, mediating role variable is included, job satisfaction, organizational commitment, or both.

First, regression results of job satisfaction are summarized in Table 3. All five job satisfaction regression models were significant (as all F score is statistically significant at $p < 0.000$). Model explanatory rate (Ad. R^2) increase gradually, from M1 1.9%, M2.6%, M3 39.2%, M4 39.5% and M5 46.6% which imply job satisfaction is explained more from control variable of company and employee demographic to organization culture and all included control, independent and mediating variable. All of the control variables were not significant. Results show by and large that organization culture contributes positively and significantly in explaining job satisfaction. Relation directed (.198) influence effect was big among culture than rational (.144) and innovation (.140). Hierarchy directed (.066)'s positive contribute need discreet construe as $p < 0.1$. However, the biggest influence effect was from organizational commitment (.347). Which implicates managing and increasing employee's job satisfaction, increasing organization commitment and increase organization culture's innovation, relation and rational directed atmosphere.

Table 3: Regression Analysis Result of Job Satisfaction

JS (St. B)	M1	M2	M3	M4	M5
Firm Size	.028			-.053	-.013
FTdumListed	-.003			.052	.032
FTdumKOSDAQ	•			-.030	-.001
FTdumFSSetc.	.104*			•	•
Firm Business Year	.127**			.000	-.005
Gender		.092*		-.006	-.042
Age		-.068		-.060	-.036
Tenure		.212**		.103*	.007
Innovation			.184**	.204**	.140*
Relation			.280**	.276**	.198**
Rational			.227**	.211**	.144*
Hierarchy			.076†	.067	.066†
OC					.347**
Ad.R ²	.019	.036	.392	.395	.466
F	3.562**	7.646**	87.079**	32.595**	39.696**

Note: Financial Supervisory Service (FSS) /external audit and others=FSSetc., innovation directed=innovation, relation directed=relation, rational directed=rational, hierarchy directed=hierarchy, job satisfaction=JS, organizational commitment=OC, turnover intention=TI, •=deleted variable

*** **: p < 0.000, *: p < 0.01, †: p < 0.05, †: p < 0.1

Second, regression results of organizational commitment are summarized in Table 4. All five organizational commitment regression models were significant (as all F score is statistically significant at p < 0.000). Model explanatory rate (Ad. R²) increase gradually, from M1 5%, M2 15%, M3 32.3%, M4 40.3% and M5 47.3% which imply organizational commitment is explained more from control variable of company and employee demographic to organization culture and all included control, independent and mediating variable. In the company control variable, firm size (-.097) had a negative and significant effect. Which means organizational commitment level decrease as the firm size grows. KOSDAQ firm seems to have lower organizational commitment than other company types. In the employee demographic control variable, as for gender, male employee's organizational commitment shows higher than female. And as the tenure of employee increase, organizational commitment increased. Results show by and large that organization culture contributes positively and significantly in explaining organizational commitment, Relation directed (.130), rational directed (.122) and innovation directed (.115). Hierarchy directed was not significant. However, the biggest influence effect was from job satisfaction (.342). Which implicates managing and increasing employee's organizational commitment, increasing job satisfaction and increase organization culture's innovation, relation and rational directed atmosphere.

Table 4: Regression Analysis Result of Organizational Commitment

OC (St. B)	M1	M2	M3	M4	M5
Firm Size	-.036			-.115**	-.097*
FTdumListed	.013			.058	.040
FTdumKOSDAQ	•			-.082*	-.072*
FTdumFSSetc.	.178**			•	•
Firm Business Year	.183**			.016	.016
Gender		.191**		.103*	.105*
Age		-.060		-.069	-.048
Tenure		.361**		.279**	.243**
Innovation			.171**	.185**	.115*

Relation			.237**	.224**	.130‡
Rational			.262**	.194**	.122‡
Hierarchy				.005	-.018
JS					.342**
Ad. R ²	.050	.150	.323	.403	.473
F	7.982**	32.367**	64.573**	33.747**	40.893**

Note: Financial Supervisory Service (FSS) /external audit and others=FSSetc., innovation directed=innovation, relation directed=relation, rational directed=rational, hierarchy directed=hierarchy, job satisfaction=JS, organizational commitment=OC, turnover intention=TI

*** **: p < 0.000, ‡: p < 0.01, *: p < 0.05, †: p < 0.1

Lastly third, regression results of turnover intention are summarized in Table 4. All five turnover intention regression models were significant (as all F score is statistically significant at p < 0.000). Model explanatory rate (Ad. R²) increase gradually, from M1 1.4%, M2 8.1%, M3 11.4%, M4 16.4% and M5 22.1% which imply turnover intention is explained more from control variable of company and employee demographic to organization culture and to all included control, independent and mediating variable. The result showed that no control variables were significant. As for organization culture, innovation and hierarchy affect statistically significant yet relation and rational were not. Furthermore, the conflicting result between innovation directed (-.147) hierarchy directed (.117) was shown. This means, increase in organization innovation culture decreases turnover intention however increase in hierarchy culture increase turnover intention. As for mediators, both job satisfaction (-.195) and organizational commitment (-.192) affect negatively and significantly. Which implicates managing and decreasing employee turnover intention, increasing job satisfaction, organizational commitment and increase organization culture's innovation directed atmosphere. Also, decrease organization culture's hierarchy directed atmosphere is necessary.

Table 5: Regression Analysis Result of Turnover Intention

TI(St. B)	M1	M2	M3	M4	M5
Firm Size	-.059			-.020	-.052
FTdumListed	-.044			-.088†	-.067
FTdumKOSDAQ	•			.072	.050
FTdumFSSetc.	-.104*			•	•
Firm Business Year	-.071			.032	.035
Gender		-.119**		-.068	-.049
Age		-.079		-.065	-.090†
Tenure		-.189**		-.157*	-.084
Innovation			-.216**	-.222**	-.147*
Relation			-.094†	-.103†	-.006
Rational			-.134‡	-.057	.021
Hierarchy			.094†	.102*	.117*
JS					-.195**
OC					-.192**
Ad.R ²	.014	.081	.114	.164	.221
F	2.839*	16.730**	18.180**	10.494**	12.647**

Note: Financial Supervisory Service (FSS) /external audit and others=FSSetc., innovation directed=innovation, relation directed=relation, rational directed=rational, hierarchy directed=hierarchy, job satisfaction=JS, organizational commitment=OC, turnover intention=TI

*** **: p < 0.000, ‡: p < 0.01, *: p < 0.05, †: p < 0.1

To analyze mediating effect, this study conducts MACRO PROCESS procedure for SPSS and Model 4 is applied and the results are summarized in Table 6. When results come down to it, culture decrease turnover intention. In detail, three cultures (innovation, relation, rational) are completely mediated by job satisfaction and organizational commitment. This mean innovation, relation and rational do not give a direct effect on turnover intention but through job satisfaction and organizational commitment. However, hierarchy is partially mediated by job satisfaction and organizational commitment. This means hierarchy culture significantly affects turnover intention directly and indirectly through job satisfaction, organizational commitment.

Table 6: Mediating Effect Analysis Result of SPSS Macro Model 4

Independent V.	Mediator	Dependent V.	Total Indirect Effect	BootSE	BootLLCI	BootULCI
Innovation	JS	TI	-.0833(completely)	.0295	-.1429	-.0270
Relation	JS	TI	-.1062(completely)	.0299	-.1649	-.0481
Rational	JS	TI	-.1004(completely)	.0304	-.1638	-.0436
Hierachy	JS	TI	-.1413(partially)	.0367	-.2172	-.0733
Innovation	OC	TI	-.1183(completely)	.0269	-.1726	-.0671
Relation	OC	TI	-.1316(completely)	.0266	-.1855	-.0801
Rational	OC	TI	-.1320(completely)	.0282	-.1876	-.0773
Hierachy	OC	TI	-.1463(partially)	.0340	-.2189	-.0859

Note: Financial Supervisory Service (FSS) /external audit and others=FSSetc., innovation directed=innovation, relation directed=relation, rational directed=rational, hierarchy directed=hierarchy, job satisfaction=JS, organizational commitment=OC, turnover intention=TI (completely)(partially)

*** **: p < 0.000, *: p < 0.01, †: p < 0.05, ‡: p < 0.1

5. Conclusion

5.1. Discussion of the Findings

This research analyzes the relation between organization culture, job satisfaction, organizational commitment and turnover intention. To do that this study used KRIVET's 7th HCCP data and 534 employees employed in 36 companies of Korean employees in the information and communication industry who has more than university degree education used. This study focused on organization culture as an antecedent and four constructs included; innovation directed, relation directed, rational directed and hierarchy directed. And this study includes two mediators job satisfaction and organizational commitment between organization culture and turnover intention.

This study's findings can be summarized in three ways. First, among four organization cultures (innovation, relation, rational and hierarchy), hierarchy was the only insignificant variable and the other three give a positively significant influence on job satisfaction. And organizational commitment gives a positive influence on job satisfaction. Second, like in job satisfaction, among four organization cultures (innovation, relation, rational and hierarchy), hierarchy was the only insignificant variable and the other three give a positively significant influence on organizational commitment. And job satisfaction gives a positive influence on organizational commitment. Third, among four organization cultures (innovation, relation, rational and hierarchy), two, relation and rational were insignificant variables and the other two, innovation and hierarchy were significant. However, innovation contributes significantly decreasing and hierarchy contributes significantly increasing turnover intention. And both job satisfaction and organizational commitment significantly decreasing turnover intention.

Based on this study's finding three managerial implications to management could be made. First, to manage and increase the job satisfaction and organizational commitment of employees, managing and increasing organization culture of relation, rational and innovation are crucial. To increase relation directed organization culture, organization and management should emphasize family hood atmosphere, emphasize national peace and unity and also teamwork. To increase rational directed organization culture, organization and management should emphasize competitive atmosphere and performance achievement, necessary knowledge and skill to implement the task. Also built company assessment based on task implementation ability and result. And to increase innovation directed

organization culture, organization and management should encourage change and new attempt, give proper reward to innovation and company treated innovative person than diligence person. Second, to manage and increase the job satisfaction and organizational commitment of employees, the manager should understand that job satisfaction and organizational commitment are mutually interrelated. Therefore, managers need to pay attention to how much employees are satisfied with their work, compensation, job-related human relation and overall. And try to make employee feel company's problems as one's own, will lose a lot if one leaves the company, and loyal to the company is worthwhile. Third, to manage and decrease turnover intention, organization and management should try to increase job satisfaction and organizational commitment. And manage organization culture especially innovation and hierarchy. However, these two, innovation and hierarchy culture influence show conflict way therefore the cautious approach is need. To decrease turnover intention, an increase of innovation directed organization culture is need. Therefore, organization and management should encourage change and new attempts, give proper reward to innovation and the company treated innovative person than diligence person. On the other hand, a decrease in the hierarchy-directed organization culture is needed. Therefore, organization and management should lose and less emphasis on formal procedure and regulation, top-down communication and rank awareness atmosphere.

This study gives and academic contributions to the information and communication industry field. Despite the growth and importance of the information and communication industry, academic and empirical research were limited. This study fills the gap in need.

5.2. Limitations and Future research

Despite its managerial implications and academic contributions, this study has two limitations. And based on limitations suggested future research. First, in future research latest update of data is in need because this study used the 7th HCCP of KRIVET published in 2018. Therefore, update of data is in need. Second, this study considered one independent variable, organization culture therefore in future research other expended antecedent analysis is in need. Independent variable like job and organization characteristics (Korunka et al., 2008; Lee & Youn, 2009), job stress (Hahn & Lee, 2002), quality of working life/work-life balance (Korunka et al., 2008; Lee & Kwon, 2013; Oosthuizen et al., 2016) and others are possible.

References

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), 1-18.
- Aycan, Z., Kanungo, R. N., & Sinha, J. B. (1999). Organizational culture and human resource management practices: the model of culture fit. *Journal of Cross-Cultural Psychology*, 30(4), 501-526.
- Barney, J. B. (1986). Organizational culture: can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656-665.
- Buchanan, B. (1974). Building organizational commitment: the socialization of managers in work organizations. *Administrative Science Quarterly*, 19(4), 533-546.
- Cameron, K. S. (1978). Measuring organizational effectiveness in institutions of higher education. *Administrative Science Quarterly*, 23(4), 604-632.
- Cameron, K. S. (1985). Cultural congruence, strength, and type: relationships to effectiveness. ASHE 1985 Annual Meeting Paper.
- Cameron, K. S., & Quinn, R. E. (2001). *Diagnosis and changing organizational culture: based on the competing values framework* (3rd edition ed.) San Francisco, CA: Jossey-Bass.
- Campbell, J. P. (1977). On the nature of organizational effectiveness, in P. S. Goodman, J. M. Pennings & Associates (Eds.), *New perspectives on organizational effectiveness*, CA: Jossey-Bass.
- Carsten, J. M. & Spector, P. E. (1987). Unemployment, job satisfaction, and employment turnover: a meta-analytic test of Muchinsky model. *Journal of Applied Psychology*, 72, 374-381.
- Deal, T. E., & Kennedy, A. A. (1982). *Corporate cultures*. MA: Addison Wesley.
- Denison, D. R. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamics*, 13(2), 5-22.
- Deutschman, M.T. (2005). An ethnographic study of nursing home culture to define organizational realities of culture change. *Journal of Health and Human Services Administration*, 28(1), 246-281.
- Dole, C., & Schroeder, R. G. (2001). The impact of various factors on the personality, job satisfaction and turnover intentions of professional accountants. *Managerial Auditing Journal*, 16(4), 234-245.

- Etzioni, A. (1960). Two approaches to organizational analysis: a critique and a suggestion. *Administrative Science Quarterly*, 5(2), 257-278.
- Ginzburg, E. S. (1981). *Within the whirlwind*. NY: Harcourt Brace Jovanovich.
- Gordon, G. G. & Ditomaso, N. (1992). Predicting corporate performance from organizational culture. *Journal of Management Studies*, 29(6), 783-798.
- Griffin, R. W., & Moorhead, G. (2009). *Organizational behavior: managing people and organizations* (9th ed.). Boston: Houghton Mifflin.
- Habib, S., Aslan, S., Hussain, A., Yasmeen, S., & Ibrahim, M. (2014). The impact of organizational culture on job satisfaction, employee commitment and turnover intention. *Advances in Economics and Business*, 2(6), 215-222.
- Hahn, D. W., & Lee, S. W. (2002). Organization-level determinants of job stress and physical illness in information technology (It) industry. *The Korean Journal of Health Psychology*, 7(3), 369-389.
- Hellman, C. M. (1997). Job satisfaction and intent to leave. *Journal of Social Psychology*, 137(6), 667-689.
- Herzberg, F., Mausner, B. & Snyderman, B. B. (1959). *The motivation to work*. NY: John Wiley & Sons. Inc.
- Hoppock, R. (1935). *Job satisfaction*. NY: Harper & Row.
- Jaskye, K., & Dressler, W. W. (2004). Studying culture as an integral aggregate variable: organizational culture and innovation in a group of nonprofit organizations. *Field methods*, 16(3), 265-284.
- Jassawalla, A. R., & Sachittal, H. C. (2002). Cultures that support product-innovation processes. *Academy of Management Perspectives*, 16(3), 42-54.
- Kanwar, Y. P. S., Singh, A. K., & Kodwani, A. D. (2016). A study of job satisfaction, organizational commitment and turnover intent among the IT and ITES sector employees. *The Journal of Business Perspective*, 16(1), 27-35.
- Korunka, C., Hoonakker, P., & Carayon, P. (2008). Quality of working life and turnover intention in information technology work. *Human Factors and Ergonomics in Manufacturing*, 18(4), 409-423.
- Kraut, A. (1998). Job satisfaction: application assessment, causes, and consequences. *Personnel Psychology*, 51(2), 513.
- Kreitner, R., & Kinicki, A. (2001). *Organizational Behavior* (5th ed.). NY: McGraw-Hill.
- Lee, G. & Kwon, S. J. (2013). An exploratory study on satisfaction with life and turnover intention of information technology professionals, *The Journal of Internet Electronic Commerce Research*, 13(2), 41-64.
- Lee, J. E., & Lee, Y. J. (2008). The effect of organizational culture types on organizational commitment: Kimberly & Quinn's model. *Korea Policy Journal*, 8(8), 60-80.
- Lee, Y. M., & Youn, K. J. (2009). Analysis of influential factors that impact the turnover intention and turnover behavior of newcomers in information technology industries. *Korean Journal of Learning and Performance*, 11(1), 59-77.
- Locke, E. A. (1969). What is job satisfaction? *Organizational Behavior and Human Performance*, 4(4), 309-336.
- Locke, E. A. (1976). *The nature and causes of job satisfaction in Dunnette. Handbook of Industrial & Organizational Psychology*. IL: Rand McNally.
- Lund, D. B. (2003). Organizational culture and job satisfaction. *Journal of Business & Industrial Marketing*, 18(3), 219-236.
- Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedent's correlate, and consequences of organizational commitment. *Psychological Bulletin*, 108(2), 171-194.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: a meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61(1), 20-52.
- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2), 237-240.
- Mowday, R. T., Steers, R. M. & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.
- Oosthuizen, R. M., Coetzee, M., & Munro, Z. (2016). Work-life balance, job satisfaction and turnover intention amongst information technology employees. *Southern African Business Review*, 20(1), 446-467.
- O'Reilly, C. A. & Chatman, J. (1986). Organizational commitment and psychological attachment: the effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71(3), 492-499.
- Osborne, R. N., Hunt, J. G., & Cauch, L. R. (1980). *Organization theory*. NY: John Willey & Sons.
- Parker, R. & Bradley, L. (2000). Organizational culture in the public sector: evidence from six organizations. *International Journal of Public Sector Management*, 13(2), 125-141.

- Peters, T. J., Waterman, R. H., & Jones, I. (1982). In search of excellence: lessons from America's best-run companies. New York: Harper & Row.
- Porter, L. W., & Steers, R. M. (1974). Organizational commitment, job satisfaction and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5), 603-615.
- Price, J. L. (1972). The study of organizational effectiveness. *The Sociological Quarterly*, 13(1), 3-15.
- Price, J. L., & Mueller, C. W. (1986). On the causal ordering of job satisfaction and Turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(4), 847-858.
- Quinn, R. E., & Kimberly, J. R. (1984). *Paradox, planning, and perseverance: guidelines for managerial practice, Managing Organizational Transitions*. Homewood, IL: Richard D. Irwin.
- Robbins, S. P. (1998). Organizational behavior: concepts, controversies, and applications. Ni: Prentice Hall.
- Schein, E. H. (1985). Defining Organizational culture. *Classics of Organization Theory*, 3(1), 490-502.
- Sims, R. R. (2002). *Organizational success through effective human resources management*. Greenwood Publishing Group.
- Steers, R. M. (1977). Antecedents and outcomes of organizational commitment. *Administrative Science Quarterly*, 22(1), 46-56.
- Stevens, J. M., Beyer, J. M., & Trice, H. M. (1978). Assessing the personal, role and organizational predictors of managerial commitment. *Academy of Management Journal*, 21(3), 380-396.
- Wallach, E. J. (1983). Individuals and organizations: the cultural match. *Training & Development Journal*, 27(2), 28-36.
- Wilkins, A. L., & Ouchi, W. G. (1983). Efficient cultures: exploring the relationship between culture and organizational performance. *Administrative Science Quarterly*, 28(3), 468-481.
- Williams, R. (1983). *Keywords: a vocabulary of culture and society* (Rev. ed.) London: Flamingo.
- Zammuto, R. F., & Krakower, J. Y. (1991). *Quantitative and qualitative studies of organizational culture*. CT: JAI Press Inc.