Job Satisfaction and Organizational Commitment of White Collars: Focus on Job Title

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Abstract

Purpose - The purpose of this study was to analyze the effects of education & training and organizational culture on job satisfaction and organizational commitment and then examine the difference that would appear depending on the job title in the case of Korean employees in the manufacturing industry.

Research design, data, and methodology - Our sample consisted of 1,013 administrative employees in the manufacturing industry with data extracted from the 4th Human Capital Corporate Panel (2011) survey. Descriptive statistics and multiple regression analysis were conducted.

Results - Results showed that education & training had positive effect only on job satisfaction while organizational culture had positive effect on both job satisfaction and organizational commitment. Components under education & training (duration of the formal learning, efficacy of formal learning and efficacy of informal learning) and organizational culture (equity, communication, talent recognition, innovation) that were found to be affecting job satisfaction and organizational commitment revealed to be different depending on the hierarchical position of the employee.

Conclusions - Different approach and policy for each group of job title could be considered in order to increase job satisfaction and enhance organizational commitment of the employees.

Keywords: Job Satisfaction. Organizational Commitment. Education & Training. Organizational Culture. Job Title.

JEL Classifications: O15, J24, J28, D23.

1. Introduction

Upon the global economic recession and low-rate growth, competition among the global enterprises has became fierce. Recently, depression in various industries such as shipbuilding is casting a dark shadow called restructuring. In such

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circumstances, domestic companies are striving for innovation in organizational cultures. Job satisfaction and organizational commitment have received significant attention not only in the field of organizational behavior but also management as they are believed to be major determinants of organizational performance (Lund, 2003; Moorman, 1991; Silverthorne, 2003; Roh & Kim, 2003). It has been suggested that depending on the degree of satisfaction and commitment, attitudes such as turnover, organizational civil behavior and absenteeism could appear, which in turn can influence the level of performance. As a result, numerous studies have tried to determine the antecedents of job satisfaction and organizational commitment. Many have reported that organizational culture is a factor that influences organizational commitment and job satisfaction (Lok & Crawfors, 1999, 2000, 2003; Mathieu & Zajac, 1990; Sommer, Bae & Luthans, 1996). Organizational culture which can be understood as shared values or common frame of reference in interpreting organizational activities (Plakhotnik & Rocco, 2011), influences

the way how people think, behave and perform within an organization. Our study departs from a suggestion that education & training would also be an important element in predicting satisfaction and commitment in an organization. In the world we live now, individuals are always challenged to adapt themselves to the rapidly evolving environment. This includes workplace environment where new strategies and technologies are introduced to keep up with the latest trends and socioeconomic situations. As a result, workers are more than ever feeling the necessity to adapt themselves to the changing environment and prepare for future opportunities. From this logic, we have come to suppose that employees would consider with high interest various aspects of education & training, such as the total amount of time dedicated to it, the efficacy of education provided depending on its form(formal vs. informal learning). We presumed that education & training offered by the companies would influence the level of job satisfaction and organizational commitment. So in this study, we have selected organizational culture and education & training as independent variables which would predict job satisfaction and organizational culture. To this was added another element of consideration: job title. We were interested in examining the differences that would exist in the relationship between the selected two independent variables (education & training and organizational culture) and the two dependent variables(job satisfaction and organizational commitment) depending on the position that an employee holds within an organization. As the number of researches that explore the relationship between those variables with a special focus on job title is very limited, we were expecting that the present study would provide meaningful insights, especially in the context of Korean companies considered as having a collectivist organizational culture (Sommer et al., 1996) thus, implying that job title can be an important factor in Korean context. Target sample was set on employees in the manufacturing industry which is the largest in Korean industry, representing around 32% of the GDP (Korea Institute for Industrial Economics & Trade, 2011).

The purpose of the study is to assess the effect of education & training and organizational culture on job satisfaction and organizational commitment with a special focus on job title in the case of Korean employees in the manufacturing industry.

2. Review of Literature

2.1. Job Satisfaction

Early theorist like Locke defined job satisfaction as the "pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating one's job values" (1969) and this idea has been widely accepted by scholars as suggested by Cranny, Smith and Stone who explained that

there is a large consensus in defining job satisfaction as "an affective (that is, emotional) reaction to one's job, resulting from the incumbent's comparison of actual outcomes with those that are desired (expected, deserved, and so on.)" (1992). Personal traits are obvious antecedents to job satisfaction(Vroom, 1964; Spector, 1997) where intrinsic differences between people need to be considered (O'Reilly & Roberts, 1975). Beside individual traits are other factors affecting job satisfaction such as a supportive work environment, equitable rewards and challenging work (Spector, 1997). In the Theory of Work Adjustment, Dawis and Lofquist (1984) developed the idea that when people are rewarded with adequate level of compensation, satisfaction which indicates the level of work adjustment is resulted, which in turn leads to tenure. This is one of the reasons why jo satisfaction has received significant attention in work related studies as it can be an important factor in predicting absenteeism and turnover. Job satisfaction has also been often linked with work performance to see whether better satisfied employees are productive workers who display greater motivation for work (Borgogni, Russo, Petitta & Vecchione, 2010; Ng, Sorensen, & Yim, 2009; Ostroff, 1992). These definitions and studies suggest that job satisfaction refers to the individual assessment of the degree of attractiveness of future outcomes that can result from work as well as its environment which in turn can lead to take certain behaviour, that be positive(when satisfied) or negative(when dissatisfied). In other words, the more the work environment is fulfilling personal needs, values and expectations, the greater the level of job satisfaction would be. Training opportunities and organizational culture are among others, important elements that shape the working environment.

Job training which takes a meaningful part in one's job experience and future career planning, constitutes a valuable advantage that the workplace can offer. Job training is defined as "a set of planned activities on the part of an organization to increase the job knowledge and skills or to modify the attitudes and social behaviour of its members in ways consistent with the goals of the organization and the requirements of the job (Landy, 1985)". Offering training that matches employees' needs and expectations are considered to be the ways of improving their levels of satisfaction within the organization (Choo & Bowley, 2007; Jones, Jones, Latreille & Sloane, 2009; Schmidt, 2007). Jones et al.(2009) who have mentioned that most of the literature in this area focused on the influence of the workers' the level of education and skills on job satisfaction rather than the effect of training itself, have found in their research on British employees, a clear evidence that training is positively and significantly associated with job satisfaction. Schmidt has also found a high correlation between the level of satisfaction with the employer-provided workplace training and overall job satisfaction among employees in customer contact positions(2007). It can be noted in his study that three variables relating to job training experience were

considered, namely time spent in training, training methodology and content. Our research is also including time spent, efficiency of formal learning and efficiency of informal learning as components of training.

Job satisfaction is also known to be closely related with organizational culture. The notion of organizational culture is used interchangeably with corporate culture and there isn't any strong consensus on the definition but in the present study, the following definition has been adopted to define organizational culture: "the pattern of shared values and belief that help individuals understand organizational functioning and thus provide them with norms for behavior in the organization (Deshpande & Webster, 1989)". Researchers have proposed different forms or types of organizational cultures. Wallach(1983) identified three main forms of organizational cultures, namely bureaucratic, supportive and innovative. A study on the relationship between organizational culture and job satisfaction has shown that innovative and supportive cultures had positive effects on job satisfaction (Lok & Crawfors, 2003). Silverthorne(2003) has found that bureaucratic organizational culture resulted in the lowest level of job satisfaction while a supportive culture had the highest level of employee job satisfaction followed by an innovative culture. In our study, equity, communication, innovation and talent recognition are included as sub-components of organizational culture.

Meanwhile, not many researches relating to job satisfaction have been found with a special focus on the differences depending on the position that one holds within the organization. There are many studies that examined job satisfaction based on tenure(time on the job) or age (Lee & Wilbur, 1985; Bedeian & Ferris, 1992) and the results could give insights as they are connected with the position within the organization. It has to be noted though that longer tenure or higher age does not necessarily mean that the person in question holds a higher position, so considering the job titles is definitely a different approach that deserves to be explored.

<Hypothesis 1> Education & training(time spent on formal learning, efficiency of formal learning, and efficiency of informal learning) will be positively related to job satisfaction.

<Hypothesis 2> Organizational culture(equity, communication, talent recognition, innovation) will be positively related to job satisfaction.

<Hypothesis 3> Depending on the job title, the effect of education & training, and organizational culture on job satisfaction will differ.

2.2. Organizational Commitment

Organizational commitment refers to the psychological state of attachment and assimilation that a member holds with the organization he/she belongs to (Mowday et al., 1982). It is defined as a personal attitude that reflects the degree of assimilation and willingness to sacrifice for the organization. Studies with multidimensional approach on organizational commitment suggest that members develop ties and solidarity for various reasons and from there result different forms of organizational commitment (Kim, 2003).

There are scholars who explain organizational commitment with two factors and others with three. Angle and Perry (1981) included within the spectrum of organizational commitment the state of unity resulting from the acceptance of the organization's goals and willingness to be at its service as well as the desire to remain, a decision that comes after consideration of positive and negative consequences that may result from leaving. Angle and Perry(1981) designated those two subscales of organizational commitment as 'value commitment' and 'commitment to stay' and suggested psychological background for each where 'value commitment' refers to the desire of maintaining unity and bond with the organization because members 'want to' while in the case of 'commitment to stay' they do so because they 'need to'. Mowday and his colleagues(1982) asserted that there are three characteristics of organizational commitment: "(1) a belief in and acceptance of the organization's goals and values, (2) exertion of effort on behalf of the organization, and (3) a desire to maintain membership in the organization". They have also added that there is a correlation in between the characteristics but each alone can also contribute to organizational commitment. A study of Meyer and Allen(1991) also conceptualized organizational commitment as following: "(1) affective attachment to the organization, (2) perceived costs associated with leaving the organization and (3) obligation to remain with the organization" and named each component respectively as affective commitment, continuance commitment and normative commitment. According to Meyer and Allen's study, this notion of 'affective commitment' can be considered as corresponding to 'value commitment' previously introduced by Angle and Perry(1981) and similar to the idea of organizational commitment developed by Mowday et al. (1982) as resulting from the belief in and acceptance of the organization's goals and values. The second component which is 'continuance commitment' can also be viewed as reaffirming the concept of 'commitment to stay' developed in the work of Angle and Perry(1981). It is also similar to one of the characteristics explained by Mowday et al.(1982) as a desire to maintain membership in the organization. In this context, organizational commitment can be understood as an organizational motivation deriving from the conclusion that remaining in the organization can bring more benefits after assessing the positive and negative consequences of a turnover. Mowday et al.(1982) developed and concretized the third component 'normative commitment' which was not clearly categorized in the works of Meyer and Allen(1991) and Angle and Perry (1981). Normative commitment is more an obligation where an employee decides to stay based on the individual internal norms. This idea of 'normative commitment' has relatively not been utilized in related studies but Mowday et al.(1982) mentioned that it is an

important facet of organizational commitment as it is a form of lifelong motivation.

In sum, organizational commitment can be considered as being composed of two or three components depending on scholars. In the present study, we consider the 'value commitment' explained by Angle and Perry(1981) to be similar to the belief and acceptance of goals and values of the organization as suggested by Mowday and his colleagues (1982); and that the affective commitment based on value as mentioned by Angle & Perry(1981) can be included in the notion of 'value commitment'. We also view the 'commitment to stay' (Angle & Perry, 1981) to be similar to the concept of 'continuance commitment (Meyer & Allen, 1991). In this research, organizational commitment will be studied in terms of affective commitment and continuance commitment, putting aside the normative commitment, a component that was found to not be widely used in other works.

In many of the studies related to this topic, organizational commitment is used as a predictor variable of organizational performance because there are evidences that organizational commitment has significant effect on turnover, absenteeism, variables related to behaviours (social behaviours) and variables related to attitudes such as job satisfaction and job commitment (Chang, 1997). Also, organizational culture, leadership, job and personal characteristics are variables that are often studied as factors influencing organizational commitment.

Organizational culture is the antecedent that is the most frequently studied when it comes to organizational commitment. The size of the organization, human resource management policy (rewards & promotion), and democratic environment for communication are often considered as major components (Seo, 2005). On their study on the relationship with supervisors, Park and Hong(2007) found that higher organizational commitment was recorded when the level of interpersonal trust with supervisors was stronger. Equity in reward related decisions (Moorman, 1991; Roh & Kim, 2003) and fairness in human resource management system(Min & Cho, 2002)

have all been found to influence organizational commitment.

There are various studies that analysed how individual level (sex, age, tenure, etc.) and organizational(size) factors can influence organizational commitment (Kim & Chang, 2009; Beck & Wilson, 1999; Cohen, 1993). While limited number of works was found when it comes to the relationship between organizational commitment and training or organizational culture, based on the job title, an interesting study by Sommer, Bae and Luthans(1996) attracted our attention. According to their research done on Korean employees on the relationship between age, job tenure, and organizational position, it was found that the higher the employees rise in the ladder of hierarchy, the more likely they internalize organizational values and are invested in their organization.

<Hypothesis 4> Education & training(time spent on formal learning, efficiency of formal learning, and efficiency of informal learning) will be positively related to organizational commitment.
<Hypothesis 5> Organizational culture(equity, communication, talent recognition, innovation) will be positively related to organizational commitment.
<Hypothesis 6> Depending on the job title, the effect of education & training, and organizational culture on organizational commitment will differ.

3. Methodologies

3.1. Research Design

To test the hypotheses 1, 2, 3 with job satisfaction as the dependent variable, the following research design was set as depicted in <Figure 1>. Then, to test the hypotheses 4, 5, 6 with organizational commitment as dependent variable, we followed the research design shown in <Figure 2>.
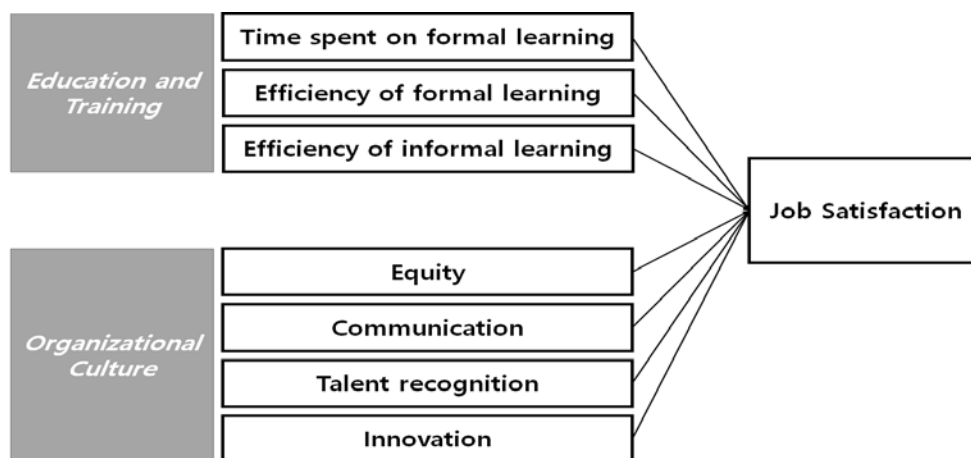
<Figure 1> Effects of education & training, and organizational culture on job satisfaction
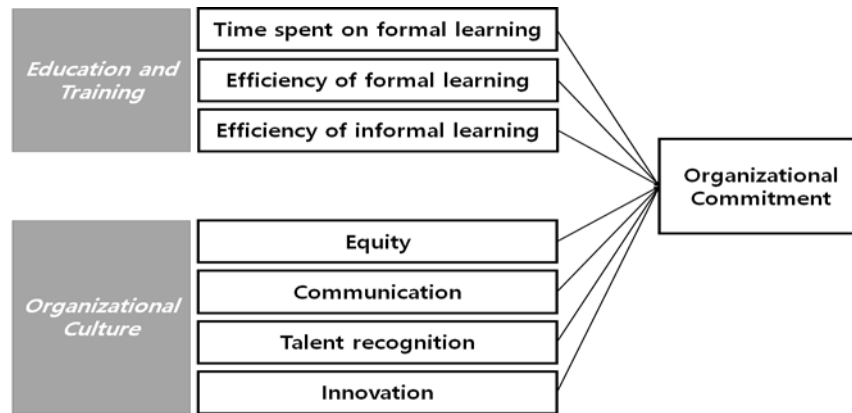
<Figure 2> Effects of education & training, and organizational culture on organizational commitment

3.2. Data

Data used in this study is the Human Capital Corporate Panel(HCCP) developed by the Korea Research Institute for Vocational Education and Training(KRIVET) which is a national policy research institute affiliated with the National Research Council for Economics, Humanities and Social Sciences under the Prime Minister's Office. The HCCP is a mid-and long-term survey conducted every two years with the purpose of assessing the actual state of human resource management and development of Korean corporate. The first survey was conducted in 2005 and the 4th panel survey was completed in 2011.

The survey is comprised of two parts, one on corporate which includes matters related to management in general, manpower status, human resource development and management; and another one on employees which includes topics on the position held within the company, participation status at human resources development activities, qualifications and skills, job satisfaction, organizational commitment,

organizational culture, personal information, etc. In the present study, the 4th panel survey(2011) was used and across-sectional study was undertaken. The target sample was employees who hold an administrative job (team manager and team members) in the manufacturing industry. Data of 1,013 employees were analyzed.

3.3. Measures

Variables used in this study are education & training, organizational culture, job satisfaction and organizational commitment. Following components were included under 'education & training': time spent on formal learning, perception of efficiency of formal learning and efficiency of informal learning; and for 'organizational culture', equity, communication, talent recognition and innovation were included as components. Gender, marital status, education and annual revenue were used as control variables. Explanation of the variables used is shown in <Table 1>.

<Table 1> Variable components

Variable			Variable Explanation	# of item	Reliability (Cronbach's α)
Control variables	Gender, marital status, education, annual revenue		-	6	-
Independent variables	Education & Training	Time spent on formal learning	-	1	-
		Efficiency of formal learning	Relatedness of training to actual task, the applicability of	3	.765
		Efficiency of informal learning	Efficiency of self-learning, peer to peer learning and On-the-Job-Training	3	.679
	Organizational culture	Equity	Fairness of evaluation and rewards, consideration given to official procedures and rules, perception of fairness on promotion and HR related policy	4	.696
		Communcation	Expression of opinions to supervisors, communication between departments	2	.743
		Talent recognition	Recognition of talented and outstanding employees, offer a clear vision on HRM policy, importance given to	3	.861
		Innovation	Encouragement and rewards given to innovation, recognition of innovative employees	3	.764
Dependent variables	Job satisfaction		Satisfaction on the job itself, Relational satisfaction, Compensation satisfaction, Overall satisfaction	4	.788
	Organizational commitment		Continuance commitment, Affective commitment	4	.734

3.4. Data Analysis

The SPSS(version 18.0) statistical software for Windows was used to analyze the data and we conducted a descriptive analysis (means, standard deviations, frequency, and percentage), correlation analysis and a regression analysis. All results were considered with a significance level of 5%.

4. Results

4.1. Descriptive Statistics

The general characteristics of the data used in this study are as shown in <Table 2>. A large number of the sample were men who represented 887(83%) and the number of married people being 739(73%), they outnumbered singles who were 274 people(27%). When it comes to educational level, high school graduates constituted 51(5.0%), while community college graduates were 129(12.7%). University graduates represented the majority in this sample and were 719(71%). The remainders were master's degree holders with 114(11.3%). For annual revenue, those earning below 30 Million Korean won were 142 people(14%), 295(29.1%) people with a wage of over 30 M won and below 40 M won, 236(26.0%) in the range of over 40 M won and below 50 M won and 340 people who represent the highest percentage(33.6%) were earning over 50 M won. As far as the position held within the organization was concerned, 132 people(13.0%) were junior associate and there were 74

senior associates(7.3%), 263 assistant managers(26.0%), 230 managers(22.7%), 159 deputy general managers(15.7%), 155 general managers(15.3%).

4.2. Correlation Analysis

The results showing the means, standard deviations and correlations between the independent variables and dependent variables are presented in <Table 3>. Correlation between the variables were found to be between .080~.660. In order to assess the effects of education & training and organizational culture on job satisfaction and organizational commitment using the multiple regression analysis, multicollinearity was first checked. The results showed a tolerance range of .440~.948 and 1.055~2.258 for the Variance Inflation Factor (VIF), inferring that the correlation between the variables are not high to the point of causing multicollinearity.

4.3. Regression Analysis

4.3.1. Results of hierarchical regression analysis for variables predicting job satisfaction

In order to determine the effect of education & training and organizational culture on job satisfaction in the case of employees holding an administrative work in the manufacturing industry, gender, marital status, education level and annual revenue were first controlled. Then, a regression analysis was used to explore the relationship between education & training(time spent on formal learning, efficiency of formal learning, and efficiency of informal learning) and organizational

<Table 2> Demographic information of the employees

Classification		Frequency (person)	Percentage (%)
Gender	Male	887	87.6
	Female	126	12.4
Marital Status	Single	274	27.0
	Married	739	73.0
Education	High school graduates	51	5.0
	Community College graduates	129	12.7
	University graduates	719	71.0
	Master's degree holders	114	11.3
Annual Revenue	Under 30,000,000 (KRW)	142	14.0
	30,000,000~40,000,000 (KRW)	295	29.1
	40,000,000~50,000,000 (KRW)	236	23.3
	Over 50,000,000 (KRW)	340	33.6
Job level	Junior associate	132	13.0
	Senior associate	74	7.3
	Assistant Manager	263	26.0
	Manager	230	22.7
	Deputy General Manager	159	15.7
	General Manager	155	15.3
Total		1,013	100.0

<Table 3> Means, standard deviations, and correlations among the studied variables

Variable	1	2	3	4	5	6	7	8	9
①	1								
②	.184***	1							
③	.137***	.250***	1						
④	.084**	.442***	.291***	1					
⑤	.080*	.400***	.216***	.569***	1				
⑥	.131***	.451***	.254***	.660***	.555***	1			
⑦	.144***	.420***	.226***	.641***	.579***	.659***	1		
⑧	.118***	.388***	.251***	.568***	.499***	.526***	.478***	1	
⑨	.104***	.271***	.185***	.501***	.429***	.488***	.432***	.610***	1
Mean	5.10	10.68	8.82	14.17	6.73	10.75	10.33	14.65	13.88
Standard Deviation	3.73	1.78	2.28	2.26	1.44	2.27	2.10	2.30	2.45

① Time spent on formal learning ② Efficiency of formal learning ③ Efficiency of informal learning ④ Equity ⑤ Communication
⑥ Talent recognition ⑦ Innovation ⑧ Job satisfaction ⑨ Organizational commitment
*p<.05. ** p<.01. *** p<.001

culture(equity, communication, talent recognition, innovation) with job satisfaction. In Model 1, F was found to be significant with a value of 21.351 (p<0.001) and the coefficient of determination (R2) was .078.

In Model 2 with education & training and organizational culture, F revealed to be significant with a value of 67.662 (p<0.001) while the coefficient of determination(R2) of .426 had increased compared to Model 1. In overall, within education & training, the component on efficacy of formal learning and in the case of organizational culture, equity, communication and innovation components were found to positively affect job satisfaction thus partly supporting <hypothesis 1> and <hypothesis 2>.

As for the differences found depending on job title, in the case of junior associate, communication was found to affect job satisfaction while in the case of senior associate, efficacy of formal learning and communication were found to positively affect job satisfaction. When it comes to assistant manager group, efficacy of formal learning, equity, communication had positive influence on job satisfaction. For managers, talent recognition was the component that had positive effect on job satisfaction. For the deputy general manager group, equity was found to be predicting job satisfaction while time spent on formal learning and communication were revealed to be so in the case of general managers. All these results support hypothesis 3 that depending on the job title, the effect of education & training, and organizational culture on job satisfaction would differ.

If we give a closer look at all the components under each variables, time spent on formal learning under 'education & training' was found to be affecting job satisfaction only at the general manager group. The efficiency of formal learning had positive effect only in the case of senior associate and assistant managers, with larger effect at the

<Table 4> Result of hierarchical regression analysis on job satisfaction

ID	All M1 β	All M1 t	All M2 β	All M2 t	Junior Associate M1 β	JA M1 t	JA M2 β	JA M2 t	Senior Associate M1 β	SA M1 t	SA M2 β	SA M2 t	Assistant Manager M1 β	AM M1 t	AM M2 β	AM M2 t	Manager M1 β	Mgr M1 t	Mgr M2 β	Mgr M2 t	Deputy General Manager M1 β	DGM M1 t	DGM M2 β	DGM M2 t	General Manager M1 β	GM M1 t	GM M2 β	GM M2 t
Demographic variables																												
constant	-	17.342	-	5.570	-	6.830	-	2.249	-	4.351	-	-.131	-	7.984	-	2.004	-	6.485	-	2.753	-	3.42	-	.963	-	2.716	-	1.251
①	.049	1.556	.034	1.330	-.086	-.992	-.047	-.730	-.001	-.011	.071	.866	.057	.931	.039	.846	.061	.953	.061	1.088	.155	1.882	.083	1.227	.100	1.297	.062	.906
②	.004	.128	-.019	-.703	.185*	2.222	.067	1.075	-.084	-.682	-.019	-.226	.021	.334	-.02	-.43	-.035	-.550	-.033	-.593	.116	1.399	.107	1.566	.027	.352	-.039	-.586
③	.023	.745	.017	.687	-.097	-1.124	-.088	-1.325	.005	.041	.009	.105	.044	-.705	-.032	-.697	.088	1.364	.065	1.127	-.019	-.231	-.039	-.576	.114	1.478	.125	1.872
④	.281***	8.363	.168***	6.199	.284**	3.203	.149*	2.215	.294*	2.393	.174*	2.056	.267***	4.32	.169***	3.65	.309***	4.732	.213***	3.645	.134	1.671	.081	1.215	.287***	3.711	.170*	2.499
Education & Training variables																												
⑤			.027	1.090			.057	.854			.066	.813			-.03	-.661			.074	1.299			-.068	-1.016			.159*	2.275
⑥			.095**	3.330			.115	1.508			.217*	2.277			.186***	3.732			-.020	-.294			.042	.54			.054	.655
⑦			.044	1.704			.106	1.462			.083	.929			.017	.369			.031	.534			.068	.949			-.032	-.419
Organizational culture variables																												
⑧			.266***	7.386			.130	1.520			.098	.829			.427***	6.654			.159	1.836			.332**	3.019			.203	1.900
⑨			.182***	5.735			.318**	3.536			.287**	2.726			.213***	3.767			.081	1.116			.134	1.529			.261**	2.695
⑩			.140***	3.864			.145	1.501			.172	1.539			.069	1.047			.185*	2.290			.109	1.015			.065	.643
⑪			.032	.894			.042	.440			.132	1.216			-.049	-.752			.137	1.642			.058	.572			.026	.249
Statistic	R²=.078 F=21.351 p=.000		R²=.426 F=67.662 p=.000		R²=.137 F=5.025 p=.001		R²=.565 F=14.152 p=.000		R²=.079 F=1.484 p=.217		R²=.634 F=9.776 p=.000		R²=.072 F=4.991 p=.001		R²=.517 F=24.447 p=.000		R²=.113 F=7.153 p=.000		R²=.339 F=10.087 p=.000		R²=.044 F=1.756 p=.141		R²=.397 F=8.789 p=.000		R²=.122 F=5.224 p=.001		R²=.410 F=9.045 p=.000	

① Gender ② Marital status ③ Education ④ Annual Revenue ⑤ Time spent of formal learning ⑥ Efficiency of formal learning
⑦ Efficiency of informal learning ⑧ Equity ⑨ Communication ⑩ Talent recognition ⑪ Innovation
*p<.05. ** p<.01. *** p<.001

\<Table 5\> Result of hierarchical regression analysis on organizational commitment

ID	All M1 β	t	All M2 β	t	Junior assoc. M1 β	t	Junior assoc. M2 β	t	Senior assoc. M1 β	t	Senior assoc. M2 β	t	Assistant Mgr M1 β	t	Assistant Mgr M2 β	t	Manager M1 β	t	Manager M2 β	t	Deputy GM M1 β	t	Deputy GM M2 β	t	General Mgr M1 β	t	General Mgr M2 β	t
	\<All\>				Junior associate				Senior associate				Assistant Manager				Manager				Deputy General Manager				General Manager			
Demographic variables																												
constant	-	15.17	-	5.571	-	6.313	-	1.693	-	5.539	-	2.332	-	6.816	-	3.135	-	5.783	-	2.305	-	3.787	-	2.363	-	3.808	-	2.249
①	-.037	-1.203	-.047	-1.79	-.149	-1.645	-.098	-1.533	-.193	-1.62	-.087	-.946	-.037	-.601	-.062	-1.192	.077	1.184	.076	1.274	.066	.791	.001	.017	-.162*	-2.092	-.189*	-2.722
②	.079*	2.466	.057*	2.059	.098	1.130	-.021	-.335	.099	.813	.155	1.623	.107	1.734	.049	.931	.052	.805	.063	1.052	.067	.798	.055	.701	.025	.323	-.036	-.530
③	.023	.762	.019	.72	-.035	-.393	-.017	-.262	-.162	-1.347	-.152	-1.604	.015	.234	.013	.254	.092	1.401	.069	1.12	-.016	-.195	-.053	-.685	.111	1.424	.101	1.492
④	.316***	9.704	.218***	7.713	.155	1.688	.001	.011	.102	0.836	-.018	-.187	.229***	3.722	.178**	3.385	.234**	3.512	.15*	2.408	.147	1.814	.110	1.435	.287***	3.692	.179**	2.585
Education & Training variables																												
⑤			.037	1.447			.066	1.004			.034	.382			-.058	-1.110			.089	1.472			.086	1.117			.033	.464
⑥			.001	.031			-.011	-.149			-.043	-.405			-.046	-.818			.052	.733			-.040	-.450			.089	1.054
⑦			.001	.033			.131	1.814			-.072	-.719			-.003	-.064			-.05	-.818			.027	.328			.004	.050
Organizational culture variables																												
⑧			.228***	6.078			.216*	2.546			.255	1.947			.213**	2.925			.241**	2.619			.205	1.629			.275*	2.533
⑨			.135***	4.095			.319**	3.563			.142	1.213			.227***	3.536			-.01	-.132			.085	.849			.084	.847
⑩			.177***	4.699			.278**	2.903			.424**	3.423			.138	1.850			.074	.87			.221	1.799			.177	1.732
⑪			.043	1.151			-.052	-.554			.033	.271			.118	1.577			.13	1.469			-.033	-.283			-.006	-.053
Statistic	R2=.136 F=39.744 p=.000		R2=.379 F=55.471 p=.000		R2=.068 F=2.331 p=.059		R2=.568 F=14.356 p=.000		R2=.103 F=1.978 p=.107		R2=.55 F=6.883 p=.000		R2=.075 F=5.212 p=.000		R2=.376 F=13.750 p=.000		R2=.078 F=4.766 p=.001		R2=.257 F=6.853 p=.000		R2=.027 F=1.064 p=.376		R2=.209 F=3.522 p=.000		R2=.118 F=5.020 p=.001		R2=.390 F=8.318 p=.000	

① Gender ② Marital status ③ Education ④ Annual Revenue ⑤ Time spent of formal learning ⑥ Efficiency of formal learning
⑦ Efficiency of informal learning ⑧ Equity ⑨ Communication ⑩ Talent recognition ⑪ Innovation
*p<.05. ** p<.01. *** p<.001

senior associate group(β=.217) compared to assistant manager group(β=.186). Meanwhile, no effect was found for the efficacy of informal learning in any of the job title group. Equity under 'organizational culture' was found to have positive effect only in the case of assistant managers and deputy general managers. Communication had positive effect at the group of junior associate, senior associate, assistant manager and general manager; and talent recognition was affecting in the case of managers. However, no influence was found for innovation in any of the positions.

4.3.2. Results of hierarchical regression analysis for variables predicting organizational commitment

To determine the effect of education & training and organizational culture on organizational commitment, similar process was undertaken. First, elements such as gender, marital status, educational level, annual revenue were controlled. Then, a regression analysis was used to explore the relationship between education & training(time spent on formal learning, efficiency of formal learning, and efficiency of informal learning) and organizational culture(equity, communication, talent recognition, innovation) with organizational commitment. In Model 1, F was found to be significant with a value of 39.744(p<0.001) and the coefficient of determination(R^2) was .136. In Model 2 where education & training and organizational culture were put, F revealed to be significant with a value of 55.471(p<0.001) while the coefficient of determination(R^2) of .379 increased compared to Model 1. In overall, components of organizational culture

such as equity, communication, talent recognition were found to be positively affecting organizational commitment, thus partly supporting \<hypothesis 4\>. Meanwhile, none of the variables related to education & training was found to be influencing organizational commitment, in other words, \<hypothesis 5\> could not be supported.

When comparing on the basis of hierarchical position(job title), in the case of junior associate, factors positively influencing organizational commitment were equity, communication and talent recognition. For senior associate, it was talent recognition. At the group of assistant manager, equity and communication were found to have positive influence on organizational commitment and at the manager group, it was equity. When it comes to deputy general manager, positive influence was found with none of the components. For general managers, equity revealed to have positive effect on organizational commitment. It can be concluded that \<hypothesis 6\> suggesting that depending on the job title, the effect of education & training, and organizational culture on organizational commitment would differ is supported.

To sum up, it was found that education & training had no effect on organizational commitment. Meanwhile, within the components of organizational culture, equity was found to have positive effect on organizational commitment at the group of junior associate, assistant manager, manager and general manager. Positive influence was found for communication in the case of both junior associate and assistant manager, with the effect size higher at the junior associate group(β=.319) than at the assistant manager group(β=.227). Talent recognition had positive influence both

in the case of junior associate and senior associate with a higher value for the latter(β=.424) than for junior associate(β=.278). Meanwhile, no influence was found for innovation in any of the position.

5. Conclusion and Discussion

5.1. Conclusion and Implication

The purpose of this study was to analyze the effects of education & training and organizational culture on job satisfaction and organizational commitment and then examine the difference that would show depending on the job title in the case of Korean employees in the manufacturing industry. Our sample consisted of 1,013 administrative employees in the manufacturing industry with data extracted from the 4th Human Capital Corporate Panel(2011). Descriptive statistics and multiple regression analysis were conducted.

Following results were found from our analysis. Education & training had positive effect on job satisfaction; organizational culture had positive effect on both job satisfaction and organizational commitment. When looking at variables related to education & training, perception of efficiency of formal learning had positive effect on job satisfaction but this relationship was found to be valid only at the group of senior associate and assistant manager. At the group of general managers, time spent on formal learning had positive effect on job satisfaction. In the case of variables related to organizational culture, equity, communication and talent recognition all had positive effects on job satisfaction and organizational commitment. Communication had positive influence on job satisfaction at the group of junior associate, senior associate, assistant manager and general manager; and positive effect on organizational commitment in the case of junior assistant, assistant manager. Equity had positive effect on job satisfaction at the group of assistant manager and deputy general manager; and positive effect on organizational commitment in the case of junior associate, assistant manager, manager and general manager. Talent recognition was found to have positive effect on job satisfaction at the group of manager; and positive effect on organizational commitment at the group of senior associate. Meanwhile, no effect was found in the case of innovation.

Several conclusions were drawn from the above explained results. First, education & training and organizational culture were found to have positive effect on job satisfaction, which is consistent with results from earlier findings (Choo & Bowley, 2007; Mushtaq et al., 2014; Jones et al., 2009; Georgellis & Lange 2007; Schmidt, 2007; Yang et al., 2015). The fact that job satisfaction was found to be more affected by the variable related to the perceived efficacy of formal learning rather than by the duration, suggests that priority

should be given to efficacy when designing education & training programs. Meanwhile, no relation was found between education & training and organizational commitment. Such result could come from the fact that education & training is often considered at the individual group. Therefore, efforts to integrate education & training in the organizational context should be envisaged.

Second, organizational culture and job satisfaction both have positive influence on organizational commitment. This is consistent with existing studies (Lok & Crawfors, 2003; Silverthorne, 2003; Yang & Tasnuva, 2013). Equity was revealed to be the variable under organizational culture which had the greatest effect on organizational commitment. This result supports the interpretation of a previous study which asserted that fair treatment increased motivation and loyalty towards the organization (Cropanzano, et al., 2001). It implies that in order to enhance organizational commitment, a system where importance is given to rules and transparent decision procedure should be implemented.

Third, it was revealed that depending on the job title, variables that were influencing job satisfaction and organizational commitment differed. This is to be taken into account when designing education & training programs and in promoting organizational culture.

5.2. Limitation and Suggestion

As our study and analysis were based on data from a panel survey, limitation exists especially when selecting the variables. In our study, the three components under education & training were duration of the formal learning, perception of efficacy of formal and non-formal learning. Future research could examine more in detail aspects of education & training by adding variables such as the budget allocated to education & training as well as the types of training provided. Similar observation applies to organizational culture where additional variables such as trust and level of control could be considered. It is to be noted that informal learning which has been at the center of recent HRD discussions revealed to have no effect on job satisfaction and organizational commitment. At the contrary of formal learning which is clearly determined in terms of space and time, workplace learning can take place anytime during a conversation with a supervisor or while communicating with various members of the organization. This is the reason why we expect that a more significant result could be drawn if informal learning were analyzed with organizational culture (especially supportive culture). Future researches could explore the effects of informal learning by developing a more sophisticated tool to measure it.

As mentioned in the discussion part, variables that affect job satisfaction and organizational commitment all differ depending on the position of the employee. This implies that different types of education & training should be provided

based on the job title. Formal learning destined for senior associate and assistant manager should be designed to enable the employees to apply the acquired skill and knowledge directly to their work. Also, while maintaining an overall equitable environment within the organization, policy of talent recognition could be particularly enhanced at the senior associate group. As such, different approach and policy for each group of the organizational hierarchy could to be considered by HRD practitioners in order to increase job satisfaction and enhance organizational commitment of the employees.

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