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Yang-Kyu Park, Chul-In Lee, Rüdiger Kabst*

Human Needs as Predictors for Organizational Commitment and Job Involvement: An Exploratory Empirical Study**

While the literature on the determinants of organizational commitment (OC) and job involvement (JI) is vast, little has been studied about the impact of human needs. In search for the institutional stars, this study examines whether human needs can serve a predictor for both high OC and high JI. Exploratory empirical results based on quantile regressions suggest that the needs for achievement, belonging, and power are more important than others in predicting OC and JI. In addition, the basic needs profile does not seem different between the institutional star and the average employee, however, differences between the two groups arise from the differences in the intensity of needs. Preliminary evidence also shows that the profile tends to be slightly lower for female workers or senior workers.

Key words: **Organizational commitment, job involvement, institutional stars, human needs**

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1. Introduction

Both of the concepts "Organizational Commitment" (OC) and "Job Involvement" (JI) have contributed to and enriched the scientific discussion since the early 1970ies (Porter et al. 1974; Rabinowitz/Hall 1977; Steers 1977; Kanungo 1979, 1982). Today, in a time in which entrepreneurial action is cost-driven and lean organizational structures seem to be the highest goal even for profitable organizations, the scientific analysis of OC and JI is experiencing a renaissance. Organizations that have downsized their workforce in search of growing profitability have to be able to rely on a highly motivated staff that is willing to take higher responsibility and perform even better (Meyer/Allen 1997: 5). Therefore, organizational and psychological research is turning back to issues of personality and motivation as indicators for superior performance (Brown 1996; Mount/Barrick 1998; Meyer et al. 2002; Arthur et al. 2001).

This study undertakes a first step into identifying a needs profile that predicts OC and JI as well as at differentiating the institutional star from the average employee. As Blau and Boal (1987) suggest, institutional stars, who exhibit both high OC and high JI, are the most valuable employees for an organization. Taking individual needs as starting point of our analysis, we take advantage of the fact that needs are exogenous predetermined or unchanging factors (that are *not* affected by situations).

To implement our approach, we estimate the needs profile for different groups, institutional stars vs. average employees, and test whether the profile differs between them. Second, to better understand the nature of the profile, we examine whether the needs profile is affected by gender and seniority. The remainder of this paper is as follows. Section II sketches previous literature and raises our research questions. The empirical model is presented in Section III. Section IV presents empirical results, and Section V provides for a summary and some concluding remarks.

2. Basic needs and research questions

Need theories suggest that the deficiency of needs can serve as a trigger for work-related behavior (Furnham 2005). In this context needs can be defined as the strength that systematizes human perception, intentional thought, thinking, will, and behavior. Such strength motivates an individual to act in order to resolve the stress, if any, arising from their initial action. Therefore, "need" is commonly defined as the strength to work off an unsatisfactory state and also to induce behavior, consciousness, and other cognitive processes that will lead to a satisfactory state (Murray 1966; Campbell/Pritchard 1976; Franken 2002).

Glasser (1984) suggests five basic needs that motivate human beings to act. First, the need for existence induces the basic behavior to satisfy the currently deficient need for existence. Second, the need for belonging refers to the need to be or have a friend, to love others or to be loved, or to belong to a family, company, or community. Third, the need to gain more strength and dominance is the need for power. Fourth, the human being needs to determine his own life, to express his mind freely, to associate with people of his choice, and to behave freely without being affected by others. This is called the need for freedom. Fifth, whatever the human being does, he/she pursues pleasure. Human beings search for those with whom they can share the pleasure and

spend time together, learn by their own methods, and enjoy their own hobbies. Such pursuit of pleasure is the need for fun.

Existence, belonging, power, freedom, and fun, which are the outcomes established by the analysis of brain mechanisms, can be called the basic human needs. Glasser suggests that all human beings' behaviors are motivated by each of these five needs or by some combination of them. Unlike Maslow (1954) and Alderfer (1969), Glasser (1984) argues that all human needs are desperate because they are perceived instantly. He also mentions that many needs arise at the same time and contradict each other.

However, when taken Glasser's basic needs into the context of work related performance, achievement-oriented needs are missing. Spencer and Spencer (1993) argue that achievement-oriented characteristics serve as predictive indicators of high performers. Thus an analysis that aims at differentiating institutional stars from average employees also has to include the need for achievement. Conceptually, referring back to McClelland (1961) and his conceptualization of needs (achievement, power, and affiliation) provides for a bridge to Glasser's work. Whereas McClelland's need for power and need for affiliation are similar to Glasser's definitions of the need for power and belonging, making both approaches complementary, the need for achievement is not included in Glasser's classification of needs. In addition, also McClelland (1973) argues that the need for achievement is a behavioral characteristic that distinguishes high performers from average ones.

Building on Glasser's and McCelland's work, we raise the following basic research questions:

- **Research Question 1:** Which needs predict OC and JI?
- **Research Question 2:** What are the differences in the needs profile between institutional stars and average employees?

We are also interested in whether the needs profile is affected by demographic variables. We thus examine the needs profile by gender and seniority. Women are known to experience discrimination or invisible obstacles to promotion within an organization (Li/Wearing 2004). The male-centered corporate culture is disadvantageous to women in job search, compensation, job tenure, and promotion (Oakley 2000). In particular, women show a high turnover rate because they must maintain a balance between family and work (Schwartz 1989), which in turn hinders a firm from investing in human capital because it lowers the expectation level of the female managers (Stroh et al. 1996). Accordingly, gender will greatly influence individual behavioral style in an organization. In this case, the needs profile would differ across gender.

The seniority-based human resource management (HRM) system would also influence individual behavioral style. In Japan, which maintains a life-time employment system, seniority has been considered a critical element that influences wages and promotion (Dirks et al. 2000). Also in South Korea, a seniority-based HRM system was common until the IMF crisis. However, the necessity of a performance-based pay system prevails in Korean businesses, and firms have gradually adopted this system. Wages and promotions are considered a reinforcement that boosts individuals' work incentives in an organization and changes their behavior toward a more productive

style and also toward maintaining it. In the presence of the seniority system, however, it would be difficult to tie pay and promotion to performance. The seniority system is known to be associated with the hierarchical culture and input-oriented management style. These cultural specificities often provide distortionary incentives to workers and would affect the ways in which workers satisfy their needs in a given situation.

- **Research Question 3.** Are there differences in the needs profile attributable to gender and seniority?

3. Methodology

3.1 Model

Empirical specification

Our model postulates a functional relationship between needs and OC as well as JI, respectively. We express the equations for z_i 's, organizational commitment (z_1) and job involvement (z_2), as functions of the need variables, x_1, x_2, x_3,…, x_n.:

$$z_1 = f(x_1, x_2, \ldots, x_n; \theta_1); \tag{1-1}$$

$$z_2 = g(x_1, x_2, \ldots, x_n; \theta_2). \tag{1-2}$$

Here, θ_i indicates the vector of the non-need variables that influence the organizational commitment level z_1 and the job involvement level z_2. From these theoretical relations, we propose an empirical specification that allows various needs to affect commitment level linearly, where randomness is introduced by a disturbance term ε in the basic models for our statistical analysis:

$$z_{1i} = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} + \ldots + \beta_n x_{ni} + \varepsilon_{1i}, \tag{2-1}$$

$$z_{2i} = \alpha' + \beta_1' x_{1i} + \beta_2' x_{2i} + \ldots + \beta_n' x_{ni} + \varepsilon_{1i}'. \tag{2-2}$$

Here, subscript *i* refers to the *i*th individual in the sample to be analyzed. Given the exogenous nature of needs, applying OLS (ordinary least squares) estimation to these equations can give unbiased and consistent estimates of β 's.[1] To test whether there are fundamental differences in the needs profiles between the individual who exhibits high OC/JI and the individual who does not, we first estimate the needs profiles (2-1) and (2-2) at different quantiles of z's, which is called the "quantile regression" (e.g., the top 20% and the lower 20% level), a generalized version of OLS. Then, we conduct tests of the following hypotheses.

H_0 for equation (3-1): $\beta_1^h = \beta_1^l$, $\beta_2^h = \beta_2^l$, …, $\beta_n^h = \beta_n^l$;

H_0 for equation (3-2): $\beta_1'^h = \beta_1'^l$, $\beta_2'^h = \beta_2'^l$, …, $\beta_n'^h = \beta_n'^l$,

where superscripts *h* and *l* are defined as follows: *h*=institutional stars' group, and *l*=average employees' group.

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1 Because the explanatory variables include the need variables listed in existing models, they are not influenced by the dependent variables and thus we can derive the valid moment of E [x ε] = 0.

Our test statistic is the Wald test statistic of $\chi_{N-k,q}$ where N is the number of observations, k is the number of coefficients to be estimated, and q is the number of equality restrictions. If no major differences are found between both groups, the Wald test statistic has a low value of $\chi_{N-k,q}$, and the null hypothesis is not rejected.

After formulating a model for quantitative analysis, we will also test whether gender and seniority, which function as important demographic control variables, influence the needs profile.

Methodology

Quantile regression is a technique that quantifies the effects of explanatory variables at different points in the conditional distribution ("quantiles") of the dependent variable. In the same way that OLS measures the effect of explanatory variables on the conditional mean of the dependent variable, quantile regression measures the effect of the explanatory variables at any point in the conditional distribution, for example, the 80th percentile, the 20th percentile, and so on.

As described by Koenker and Bassett (1978), the estimation is done by minimizing equation (4):

$$\min_{\beta \in \Re^K} \sum_{i \in \{i: y_i \geq x_i \beta\}} \theta |y_i - x_i \beta| + \sum_{i \in \{i: y_i < x_i \beta\}} (1-\theta) |y_i - x_i \beta| \tag{4}$$

where y_i is the dependent variable (z_i in our case), x_i is the k by 1 vector of explanatory variables (or regressors) with the first element equal to unity, β is the coefficient vector, and θ is the quantile to be estimated. The coefficient vector β will differ depending on the particular quantile being estimated.

Some questions naturally focus attention on the tails of the distribution rather than on the mean. For example, in this paper we are interested in systematic differences in the needs profile across the conditional quantiles of individual workers' OC/JI, and the question is whether the bottom of the distribution looks different from the top. Traditional techniques that focus on the effects of explanatory variables at the mean are ill-suited to answer such questions. More generally, there are a host of distribution questions (e.g., what causes such differences?, how does the effect of a particular factor vary across different employee groups?), and quantile regressions are a tool for exploring such questions.[2]

For this paper, we use quantile regressions to estimate various empirical specifications of the needs-models where a measure of OC/JI, z_i, is used as the dependent variable and various needs variables are used as key explanatory variables, along with additional controls of demographic variables such as gender and seniority.

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2 For examples of other papers that employ the quantile regression methodology, see Koenker/Bassett (1978) and Buchinsky (1994, 1995).

3.2 Data

A survey was conducted for executive MBA students in major universities located in Seoul/South Korea. The questionnaires were delivered to the students and their colleagues via e-mail from September 1 2001, to June 12 2002. Because the business graduate students are employed in a wide range of industries, they may represent the business sector as a whole and help generalize the results of our study. Our survey questionnaires include 51 questions to measure the intensity of needs and OC/JI: 720 questionnaires were sent out via e-mail and 216 returned questionnaires were collected, a response rate of 30%.

The descriptive statistics of our data are given in Table 1. The sample retains a rough representation of the population workforce in terms of gender, age, duration of job tenure, occupation, department, and firm size. For instance, the male labor force participation rate is much higher than the female counterpart, so that the sample proportions of men and women are 69.9% and 27.3% with some non-respondents.

Table 1 Demographic characteristics

Gender	No Response 2.8%	male 69.9%	female 27.3%						
Age (Years)	2.3%	below 29 31.9%	30-39 52.8%	40-49 13%					
Seniority (Months)	11.1%	below 24 14.8%	25-60 21.8%	61-120 28.2%	over 121 24.1%				
Position	10.6%	Staffs 18.1%	Junior Managers 19.4%	Managers 25.9%	Senior Managers 17.6%	Executi-ves 8.4%			
Department	19.4%	Sales 20.3%	Planning 9.3%	Finance 7.4%	R&D 11.1%	Gen. Sup-porting 14.8%	HR 5.6%	Marketing 9.7%	Operation 2.3%
Organization Size (employees)	11.6%	- 100 23.6%	100-500 16.7%	501-1000 9.7%	1001 + 38.4%				

3.3 Measurement of variables

To measure the variables of interest, i.e., needs and OC/JI, we apply a set of questions to individuals as described in Table 2.

For the measurement of needs, we use the questionnaire developed by Glasser (1984): it measures the needs for fun, belonging, freedom, existence, and power. The need for fun was measured with nine questions, including "Do you like interesting games or activities?" "Do you enjoy learning something new and useful?" The need for belonging was measured with six questions, including "Do you need lots of love and affection?" "Do you want others to like you?" Six questions were asked regarding the need for freedom, including "Do you dislike other people supervising you?" "Do you want to do something according to your schedule only?" The need for existence

was measured with 6 questions, including "Are you concerned about your health?" "Do you save/invest money for your future stability?" The need for power was measured with four questions, including "Do you often direct others to do something?" "Do you often give advice or counseling to others?" To measure the concept of the need for achievement, we apply the questionnaire developed by Spencer and Spencer (1993) for measuring performance-oriented competencies and the questionnaire developed by Stewart et al (1981) with some additional questions. Statements on the questionnaire include: "I make efforts to achieve the standards established by the management" and "I set realistic goals for myself or for others and do my utmost to achieve them." To measure the needs described above, we adopt a five-point scale.

Table 2: Measurement of variables

Variables	Sub dimensions	Number of items	Alpha	Sources
Independent variables (Needs)	Fun	9	0.78	Glasser (1984)
	Belonging	7	0.72	
	Freedom	8	0.65	
	Existence	7	0.60	
	Power	7	0.76	
	Achievement	6	0.87	Spencer (1993) Stewart/Hetherington/Smith (1984)
Dependent variables	Organizational Commitment	7	0.87	Stewart/Hetherington/Smith (1984)
	Job Involvement	5	0.85	

Organizational commitment was measured with seven questions, including "I think my company is a worthwhile organization to work for." "Because a lot of unemployment benefits and the retirement incentive are granted, I like working in my company." Similarly, job involvement was measured with five questions, including "My job activity is like my hobby." "I am enthusiastic about my job." To measure organizational commitment and job involvement, again we use a five-point scale. To measure gender, we use a dummy variable: 1=male vs. 0=female. Job tenure as a measure of seniority is similarly measured with dummy variables: below 24 months, 25-60 months, 61-120 months, and over 121 months.

4. Empirical Results

4.1 Reliability and validity of measurement

Table 2 shows decent alpha values, indicating the reliability of the measurement of needs variables: 0.78 for need for fun, 0.72 for belonging, 0.65 for freedom, 0.60 for existence, 0.76 for power, and 0.87 for achievement. For the dependent variables, organizational commitment and job involvement, we obtain alpha values of 0.87 and 0.85, respectively. Table 3 presents the basic statistics for the variables used in the model.

Tables 4 and 5 present the results from the rotated principal factor analysis for the types of needs and performance variables, respectively. Because the factor scores in Tables 4 and 5 are larger than 0.30, they indicate that the concepts are properly measured.

Table 3: Descriptive statistics: Means, standard deviations and bivariate correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7	8
1. Fun	3.68	0.57	1.00							
2. Belonging	3.36	0.54	0.43	1.00						
3. Freedom	3.58	0.47	0.39	0.33	1.00					
4. Existence	3.35	0.49	0.07*	0.12	0.04**	1.00				
5. Power	3.92	0.55	0.40	0.31	0.24	0.04*	1.00			
6. Achievement	3.46	0.66	0.19	0.32	0.25	0.10	0.05*	1.00		
7. Org. commitment	2.83	0.73	0.01**	0.20	0.05*	0.11	-0.15	0.48	1.00	
8. Job involvement	2.93	0.73	0.09	0.28	0.05*	0.13	-0.14	0.63	0.51	1.00

* $p < .10$, ** $p < .05$, *** $p < .01$, n=216, S.D.: standard deviation.

Table 4: The validity test results on various needs

Questions	Factors					
	Fun	Belonging	Freedom	Existence	Power	Achievement
Item1	0.02	0.17	-0.13	0.16	0.07	0.71
Item2	0.02	0.09	-0.04	0.09	0.03	0.80
Item3	0.09	0.03	0.01	0.02	-0.04	0.84
Item4	0.06	0.03	0.15	0.08	-0.09	0.79
Item5	0.09	0.06	0.14	-0.03	-0.16	0.78
Item6	-0.04	0.23	0.13	-0.12	0.13	0.59
Item7	0.23	0.24	0.02	0.03	0.49	-0.10
Item8	0.19	0.16	0.08	-0.03	0.62	-0.05
Item9	0.08	0.16	0.06	-0.03	0.70	-0.03
Item10	-0.08	0.02	-0.10	-0.21	0.74	-0.02
Item11	0.05	-0.20	0.13	0.29	0.53	0.12
Item12	0.16	-0.01	0.06	0.08	0.70	-0.01
Item13	0.20	0.04	0.17	0.17	0.40	0.28
Item14	0.04	0.01	-0.08	0.52	0.06	0.09
Item15	-0.09	0.18	0.28	0.62	-0.02	0.02
Item16	-0.12	0.17	0.26	0.49	-0.22	0.13
Item17	-0.29	0.38	0.23	0.37	0.09	-0.05
Item18	0.14	-0.09	-0.15	0.61	0.09	-0.04
Item19	0.29	-0.02	-0.05	0.55	-0.10	0.07
Item20	-0.14	-0.27	-0.09	0.41	0.11	-0.05
Item21	-0.17	0.08	-0.41	-0.03	0.01	0.32
Item22	-0.03	-0.06	0.61	0.09	0.12	-0.02
Item23	0.12	-0.02	0.76	0.01	0.00	0.04
Item24	0.28	0.05	0.66	0.06	-0.03	0.20
Item25	0.24	0.13	0.48	-0.05	0.42	0.01
Item26	0.00	0.08	0.50	-0.25	0.32	-0.01
Item27	0.10	0.33	0.33	-0.18	-0.03	0.09
Item28	0.07	0.39	0.45	-0.04	0.02	0.31
Item29	0.12	0.59	0.03	-0.07	-0.03	0.04
Item30	0.07	0.67	-0.14	-0.12	0.01	0.10
Item31	-0.10	0.60	-0.01	0.04	0.10	0.21
Item32	0.23	0.61	-0.02	0.07	0.26	-0.05
Item33	0.16	0.42	0.26	0.14	0.33	0.16
Item34	-0.08	0.42	0.01	0.17	0.12	0.34
Item35	0.37	0.51	0.18	0.07	0.05	0.12
Item36	0.50	0.33	-0.11	0.15	0.24	-0.03
Item37	0.59	0.36	0.16	0.14	0.26	-0.05
Item38	0.50	0.31	0.07	0.16	0.27	0.11
Item39	0.48	0.29	0.35	0.02	0.14	0.29
Item40	0.52	0.28	0.14	-0.06	0.05	0.11
Item41	0.40	-0.17	0.34	-0.18	0.04	0.30
Item42	0.69	-0.03	0.06	0.06	0.17	-0.06
Item43	0.61	-0.21	0.07	-0.05	0.08	-0.11
Item44	0.46	0.19	0.22	-0.05	0.05	0.20
Eigenvalues	7.25	4.02	2.62	2.32	2.15	1.97
% of variance	16.47	9.14	5.95	5.27	4.89	4.48
Cumulative %	16.47	25.60	31.56	36.82	41.71	46.18

Table 5: The validity test results: organizational commitment and job involvement

Questions	OC	JI
Item1	0.19	0.74
Item2	0.28	0.77
Item3	0.25	0.72
Item4	0.14	0.74
Item5	0.16	0.86
Item6	0.68	0.35
Item7	0.83	0.10
Item8	0.73	0.34
Item9	0.78	0.14
Item10	0.70	0.20
Item11	0.70	0.14
Item12	0.67	0.22
Eigenvalues	5.45	1.76
% of variance	45.73	14.70
Cumulative %	45.73	60.43

4.2 Quantile regression results

Pattern of results on organizational commitment z_i

In this section, we examine whether the needs profile differs across employee groups, e.g. for institutional stars vs. average employees. Using organizational commitment as the dependent variable, we apply quantile regression to the sample at various quantiles. We begin with presenting the main results and then move on to discussing the results at various subgroups: the top 40% vs. the lower 40%, the top 30% vs. the lower 30%, and the top 20% vs. the lower 20%. Then, we examine how gender and seniority affect the shape of the needs profile.

The main results are as follows. First, the need for achievement is found to be a more important factor than others with a high statistical significance, and the need for belonging is the next. These results imply that not all of the needs described by the existing theories are equally essential determinants of OC. The needs for fun, freedom, and existence turn out to be statistically insignificant. Also, the need for power is found to be negatively correlated with OC. Second, another interesting result is that the needs profile *per se* is similar across the high and low OC-groups. The estimated coefficients of the needs for achievement, belonging, and power do not seem to change much at various quantiles, which lends support to a conceptually uniform needs profile. As a result, what makes differences in OC is the difference in the absolute *level* of each need, not the difference in *response* to each need. Table 7 shows that the means of the high OC group's needs for achievement and belonging, the most influential predictors, are 3.74 and 3.48, while the counterparts for the average group are all 3.30. In addition, we found that those differences are statistically significant. For other needs, we do not find major differences between two groups, and they are statistically insignificant.

Shape of the needs profile at various quantiles

Table 6 shows the differences in the needs profile between two groups based on organizational commitment. We contrast the high OC-group with the low OC-group at the quantiles of the top and bottom 40%, 30%, and 20%.

Table 6: The needs profiles by group at various quantiles
dependent variable = organizational commitment

Variables		Percentile								
		Upper 40%			Upper 30%			Upper 20%		
		Coef.		P>|t|	Coef.		P>|t|	Coef.		P>|t|
Needs Profile	Achievement	0.75	(6.60)	0.00***	0.66	(3.89)	0.00***	0.60	(3.62)	0.00***
	Belonging	0.30	(2.27)	0.02**	0.28	(1.26)	0.21	0.06	(0.31)	0.76
	Power	-0.25	(-1.65)	0.10	-0.31	(-1.87)	0.06*	-0.34	(-1.89)	0.06*
	Existence	0.09	(0.70)	0.48	0.16	(1.10)	0.27	0.16	(1.05)	0.30
	Freedom	-0.19	(-0.98)	0.33	-0.24	(-1.30)	0.20	-0.05	(-0.46)	0.65
	Fun	-0.24	(-1.98)	0.05**	-0.30	(-1.52)	0.13.	-0.27	(-1.49)	0.14
Tenure		-0.02	(-1.40)	0.16	-0.03	(-1.59)	0.11	-0.01	(-0.71)	0.48
Gender		0.03	(0.22)	0.83	-0.01	(-0.04)	0.96	-0.27	(-2.05)	0.04**
R^2			0.15			0.13			0.15	
Variables		Percentile								
		Lower 40%			Lower 30%			Lower 20%		
		Coef.		P>|t|	Coef.		P>|t|	Coef.		P>|t|
Needs Profile	Achievement	0.71	(5.76)	0.00***	0.71	(5.57)	0.00***	0.72	(4.64)	0.00***
	Belonging	0.18	(1.26)	0.21	0.27	(1.94)	0.05*	0.36	(1.82)	0.07*
	Power	-0.34	(-1.93)	0.06*	-0.18	(-0.99)	0.32	-0.34	(-2.09)	0.04**
	Existence	0.09	(0.62)	0.54	-0.03	(-0.20)	0.84	0.02	(0.16)	0.87
	Freedom	-0.07	(-0.31)	0.76	-0.02	(-0.06)	0.95	0.16	(0.75)	0.46
	Fun	-0.07	(-0.55)	0.59	-0.06	(-0.31)	0.76	-0.16	(-0.88)	0.38
Tenure		-0.01	(-0.57)	0.57	-0.01	(-0.25)	0.80	-0.00	(-0.07)	0.94
Gender		0.15	(1.15)	0.25	0.15	(0.92)	0.36	0.10	(0.52)	0.60
R^2			0.17			0.18			0.20	
equal profile (Wald test)			19.76			24.08			24.32	
P-value (Prob>Wald)			0.00***			0.00***			0.00***	
no influence of gender and tenure (Wald test)			0.10			3.72			8.94	
P-value (Prob>Wald)			0.38			0.12			0.00***	

*p<.10, **p<.05, ***p<.01, ( ): t Value

In the top 40% group, a one-unit increase in the need for achievement leads to a 0.75-unit increase in the OC-prediction indicator. It is not only the most significant but also has the largest explanatory power in magnitude. The corresponding estimate for the lower group is 0.71, which is not much different from that of the high OC group. This is also consistent with the theoretical result of Yukl and Latham (1978). The next statistically significant variable is the need for belonging. A one-unit increase in the

need for belonging in the top group leads to a 0.30-unit increase in OC. While this is somewhat higher than the 0.18 of the lower group, the large standard error from the lower group should be taken into account in size comparison. Surprisingly, the need for power tends to have a negative effect on OC, when controlling for the other needs variables. Of course, caution is warranted in interpretation because it is statistically significant at a somewhat lower level of 10%. The need for fun is found to be statistically significant in the top group. This result may be interpreted as the need for fun hindering OC, but given the low significance in the low group, it is difficult to make a definite interpretation. For the need for freedom and existence, we do not find statistically significant results. The Wald test rejects the null hypothesis that the coefficients of the top 40% are identical to those of the lower 40% at the 5% significance level. Despite this statistical result, our careful review of the effect of each of the needs reveals that there are no major differences, if any, in the needs profile between the two groups.

Our second analysis examines the case where the top 30% group is compared with the lower 30% group. Applying the same quantile regression, we obtain quite similar results to the previous analysis. In response to a one-unit increase in the need for achievement, organizational commitment increases by 0.71 in the low group. It is not much different from the 0.66 for the top group. The Wald test result on the hypothesis of an equal coefficient for achievement, combined with the large estimated coefficient, reveals a similar and high explanatory power of the achievement need across quantiles. The result is similar to those for the top and bottom 40% groups. A similar pattern is found for the need for belonging: 0.28 in the top group and 0.27 in the low group. Unlike the low group, we obtain an estimate of 0.16 for existence in the top group, with some statistical significance. For the needs for fun, freedom, and power, no significant results are found.

Table 7: Means of needs by group - organizational commitment

Groups		Needs					
		Fun	Belonging	Freedom	Existence	Power	Achievement
Institutional Star	Mean	3.68	3.48	3.57	3.35	3.88	3.74
	S.D.	0.58	0.56	0.48	0.49	0.53	0.54
	n	77	77	76	77	77	77
Average Employee	Mean	3.69	3.30	3.59	3.34	3.94	3.30
	S.D.	0.57	0.52	0.47	0.50	0.56	0.67
	n	139	139	139	139	139	139
Df		1	1	1	1	1	1
F		0.00	5.61	0.08	0.04	0.60	24.71
Sig.		0.95	0.02**	0.79	0.85	0.44	0.00***

*p<.10, **p<.05, ***p<.01, S.D.: Standard Deviation

As for the top 20% vs. the lower 20%, the estimated coefficient of achievement for the low group is 0.72, with a high statistical significance, and it is a bit larger than the

0.60 of the top group. This is largely similar to the result from the 40% and 30% groups. For the need for power, we obtain quite similar negative estimates of -0.34 for both groups, and their statistical significance is supported by the Wald test at the 5% and 10% significance level. We also obtain a similar result for the need for freedom. For the need for fun, we obtain a negative estimate in both groups. Given the statistical insignificance, we would need to be cautious about interpretation. A similar interpretation can be given to the coefficients of the needs for belonging and existence. For brevity, we skip the discussion of further results.

Overall, both groups show largely similar responses to the needs for achievement, belonging, and power with reasonably high statistical significance, and they also show similarly small or insignificant responses to other needs, implying a similar needs profile.

Table 7 compares the means of needs by group. Combined with our earlier results, it suggests that while the two groups share a similar needs profile, the high OC-group has greater needs in level for achievement and belonging.

Sensitivity of the needs profile to gender and seniority

To answer to research question 3, we first test whether the needs profile is gender-neutral. Table 6 shows the estimated coefficients for the gender variable. Gender does not seem to affect the needs profile except for the top 20% group. While most of the results are insignificant with a negligible effect for all other groups, we find a statistically significant result of -0.27 in the top 20% group. We would say that discrimination affects OC more negatively in high percentiles.

As for job tenure (a measure of seniority), our results show a small negative estimate in all groups. Given the small magnitude combined with low statistical significance, we believe that the needs profile would be negatively affected by seniority but its effect is not large.

Our Wald test result also shows that except for the comparison between the upper 20% group and the lower 20% group, gender and seniority do not affect the profile substantially at different quantiles. Accordingly, it can be said that the need for achievement, belonging, and power are notable at all quantiles of the high and average OC-groups, and other needs along with gender and seniority do not make much difference in profile.

Results on job involvement z_2

Table 8 presents the estimated needs profile for job involvement. We will repeat similar analyses for various quantiles as before: the top and average groups at quantiles of 40%, 30%, and 20%. In the lower 40% group, job involvement increases by 0.71 in response to a one-unit increase in the need for achievement; the counterpart figure for the top group is 0.65. These estimates are statistically significant, and achievement has the largest explanatory power. Regarding the need for power, both groups show negative estimates, implying that the need for power would not help enhance JI. The need for existence has a positive influence on the top and low groups. However, in the low group, the estimate of the need for existence is greater in both magnitude and statisti-

cal significance, compared to the top group. The estimates for freedom, belonging, and need are small in magnitude and statistically insignificant.

Table 8: The needs profiles by group at various quantiles
dependent variable = job involvement

Variables		Percentile								
		Upper 40%			Upper 30%			Upper 20%		
		Coef.		P>|t|	Coef.		P>|t|	Coef.		P>|t|
Needs Profile	Achievement	0.65	(4.00)	0.00***	0.62	(4.33)	0.00***	0.62	(3.75)	0.00***
	Belonging	0.03	(0.16)	0.88	0.11	(0.70)	0.48	0.19	(1.05)	0.30
	Power	-0.25	(-2.11)	0.04**	-0.23	(-1.84)	0.07*	-0.38	(-2.80)	0.01**
	Existence	0.12	(1.27)	0.21	0.02	(0.13)	0.90	0.04	(0.39)	0.70
	Freedom	-0.13	(-0.68)	0.50	-0.18	(-1.29)	0.20	-0.17	(-1.42)	0.16
	Fun	0.02	(0.17)	0.86	0.09	(0.69)	0.49	0.08	(0.62)	0.54
Tenure		-0.03	(-1.65)	0.10	-0.03	(-1.46)	0.15	-0.04	(-2.0)	0.05*
Gender		-0.16	(-1.39)	0.17	-0.23	(-1.75)	0.08*	-0.17	(-1.2)	0.23
R^2			0.25			0.24			0.28	
Variables		Percentile								
		Lower 40%			Lower 30%			Lower 20%		
		Coef.		P>|t|	Coef.		P>|t|	Coef.		P>|t|
Needs Profile	Achievement	0.71	(6.61)	0.00***	0.74	(6.34)	0.00***	0.88	(5.43)	0.00***
	Belonging	0.10	(0.54)	0.59	0.03	(0.17)	0.86	-0.08	(-0.61)	0.54
	Power	-0.20	(-1.52)	0.13	-0.25	(-2.63)	0.01**	-0.23	(-2.02)	0.05*
	Existence	0.21	(2.96)	0.00***	0.19	(1.96)	0.05*	0.09	(0.73)	0.47
	Freedom	-0.02	(-0.13)	0.90	0.06	(0.45)	0.65	0.06	(0.47)	0.64
	Fun	-0.02	(-0.14)	0.89	0.07	(0.42)	0.68	0.00	(0.03)	0.98
Tenure		-0.04	(-2.67)	0.01**	-0.05	(-3.47)	0.00***	-0.06	(-2.67)	0.01**
Gender		-0.02	(-0.13)	0.90	0.05	(0.43)	0.07*	0.04	(0.37)	0.71
R^2			0.25			0.26			0.30	
equal profile (Wald test)			9.20			20.16			42.80	
P-value (Prob>Wald)			0.32			0.00***			0.00***	
no influence of gender and tenure (Wald test)			8.52			8.26			3.04	
P-value (Prob>Wald)			0.00***			0.00***			0.20	

*p<.10, **p<.05, ***p<.01, ( ): t Value

For the top 30% and lower 30% groups, the need for achievement has similar estimates of 0.62 and 0.74, respectively, which are not much different from those for the top 40% group. The need for power seems to have a negative effect on JI with statistically significant estimates of -0.23 and -0.25. The effect of freedom varies across groups with an insignificant estimate and may be negligible in size. In addition, the needs for fun, belonging, and existence have positive effects in two groups with small and insignificant estimates. Overall, the results are largely similar to those for the 40% group.

We will skip the comparison between the top 20% group and the lower 20% group for brevity. Overall, the top and average groups show roughly similar responses to the needs for achievement and power, implying that they share a similar needs profile. Table 9 presents the mean of each need by group classified in terms of job involvement. With no substantial differences in the needs profile for both groups, we see that what makes a difference here is the level of the need for achievement, since there are no major differences in other needs.

To test research question 3, we estimate the needs profile with gender included as an additional regressor. In Table 9, gender is statistically insignificant for both groups, but the point estimate seems a bit more negative in the top group, suggesting that discrimination would lead to a somewhat low job involvement for female workers. As in the result for organizational commitment, we find that discrimination lowers the intercept of the needs profile to some extent.

Table 9: Means of needs by group - job involvement

Groups		Needs					
		Fun	Belonging	Freedom	Existence	Power	Achievement
Institutional Star	Mean	3.74	3.49	3.62	3.42	3.85	3.83
	S.D.	0.60	0.52	0.43	0.50	0.53	0.45
	n	96	96	96	96	96	96
Average Employee	Mean	3.64	3.26	3.56	3.29	3.97	3.16
	S.D.	0.55	0.54	0.50	0.48	0.57	0.65
	n	120	120	119	120	120	120
Df		1	1	1	1	1	1
F		1.55	9.47	0.81	3.48	2.67	74.17
Sig.		0.22	0.00***	0.37	0.06*	0.10	0.00***

*p<.10, **p<.05, ***p<.01, S.D.: Standard Deviation

As for seniority, the estimated coefficient of tenure is -0.03 in the top 40% group, and -0.03 in the top 30% group, with both estimates statistically insignificant. We see some statistical significance in some cases, but the magnitude is found negligible for most of the other groups: -0.04 in the top 20% group, -0.04 in the lower 40% group, -0.05 in the lower 30% group, and -0.06 in the lower 20% group. Accordingly, it can be said that the needs profile would be negatively affected by seniority, but its effect is not large.

5. Summary and concluding remarks

While the literature on the determinants of organizational commitment (OC) and job involvement (JI) is vast, little has been studied about the impact of human needs. In search for the institutional stars, our exploratory study examines whether human needs can serve a reliable predictor. Empirical results based on quantile regressions suggest that the needs for achievement, belonging, and power are more important than others in predicting OC and JI. In addition, the basic needs profile does not seem different between the institutional star and the average employees, however, differ-

ences between the two groups arise from the differences in the intensity of needs. We also found evidence that the profile tends to be slightly lower for female workers or senior workers.

Regarding the first finding that the institutional stars show a stronger need for achievement than average employees, many studies show similar evidence that individuals who have a strong need for achievement exhibit more positive and challenging attitudes for goal-orientation and tend to achieve a higher level of performance than otherwise comparable individuals (Yukl/Latham 1978; Steers 1975; Steers/Spencer 1977). Our exploratory study goes beyond that. First, institutional stars and average employees share a similar needs profile. The need for achievement is more important than other needs. Second, institutional stars have a stronger need for achievement than the average employee.

The second finding suggests that the institutional star in terms of organizational commitment has a stronger need for belonging than the average employee. Nyambegera et al. (2001) emphasized that human resource practices can be affected by cultural context. Korean companies have carried out human resource practices based on seniority for a long while, and they have demanded strong organizational loyalty from their employees. In a culture that emphasizes seniority, it is not surprising that the need for belonging turns out to be a major determinant in all groups, compared with other needs.

Our third finding is that the results for achievement and power are similar regardless of measures, OC (z_1) and JI (z_2). Regarding the need for power, we obtain the result that the stronger the need for power, the lower the OC/JI. McClelland (1961) defined the need for power as the need to strive for influence over others. In Korea, the hierarchal mind-set in organizations has been prevalent, especially before the economic crisis of 1997. After the crisis, the values of a performance-centered system started to become the basis of corporate culture. To become more competitive in a rapidly changing environment, creative and innovative mind-sets are required, and such attitudes are possible only in a horizontal culture. Perhaps for this reason, institutional stars exhibit a low level of the need for power.

Gender-based discrimination is present in many important areas of HRM, ranging from recruiting and compensation to performance management. How this type of discrimination affects the needs profile is an empirical question. Our result lends some support to this common belief: discrimination lowers the needs profile. Meanwhile, given the practical importance of seniority at least in Korea, we can view seniority as another factor. Empirical results suggest that seniority does not make significant differences in the needs profile across groups, perhaps because of the rapidly changing HRM.

Our study is not without limitations. We only provide for a first exploratory step in dismantling the relationship between selected needs and Organizational Commitement as well as Job Involvement. Further research is essential in order to provide for a stronger theoretical reasoning underlying the proposed relationship between needs and OC/JI. Furthermore, the empirical dataset needs to be extended to different countries in order to see empirical evidence from outside Confucian cultures as well as

to allow for a cross-cultural analysis. In addition, different populations of the labor force need to be included into the analysis in order to allow for a broader focus. It is much more to explore in order to learn about the needs profile and its impact on OC and JI. We encourage to undertake further steps down the scientific road in order to gradually increase our understanding.

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