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The Relationship of Quality Work Life Programs and Organizational Commitment: The Moderating Effects of Personal Traits

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Abstract: This study aims to examine the impact of quality of work life on organizational commitment and further to explore the moderating role of personal attributes (gender, age, and education level) on the relationship between quality of work life programs and organizational commitment. Using a sample of 1229 from a leading DIY retailer in Taiwan, this study achieves some meaningful conclusions. The programs of QWL have significant and positive impact on employees' organizational commitment. Additionally, the effects of QWL practices on organizational commitment for different groups are distinctive. For example, the dimensions of QWL such as 'promotion and career development', 'job characteristics', 'training and learning' and 'leadership quality' have greater influence on male employees' organizational commitment than that of female. On the other hand, the dimensions of 'benefits' and 'salary and bonus' have greater influence on female employees' organizational commitment than male. The findings of this research provide managers a meaningful decision choice on QWL program design to get a better organizational commitment outcome.

INTRODUCTION

Nowadays improving employees' quality of work life (QWL) has become an important issue in human resources management. This is because the improvement of QWL increases organizational communication, productivity growth and job satisfaction (Lukas, 1993). QWL also reduces the possibility of slowdown, absence, turnover, accident, and grievance (Havlovic, 1991). Fields and Thacker (1992) find that the programs of QWL enhance employees' organizational commitment and harmonize industrial relations. However, the dimensions of QWL are multi-aspects includes equal rewards, safety of job environment, job security, benefits, communication, career development, employee participation, and esteem (Cascio, 1998). To find out which QWL practices have stronger effects than other practices on enhancing employees' behavior and attitudes will be more meaningful for human resource managers.

Additionally, different aspects of QWL program may have different attractiveness for different individuals. For example, to factory operators, the needs of salary, benefit and job safety may higher than meaningful and challengeable job characteristics. While for R&D and engineers, meaningful work and opportunities of decision participation are the main consideration for attaching to organization. Another example is that job security and health insurance programs may have higher effects on increasing aged workers' commitment. Contrary, young workers may prefer growth and development programs than equitable rewards and benefits. Hence, it is meaningful to examine the impacts of different practices of QWL on organizational commitment and explore whether there is moderating effects of personal attributes on the relationship between QWL practices and organizational commitment. Findings of this study not only enlarge the knowledge of the impacts of QWL practices, but also brighten the strategic selection of QWL practices for different categories employees.

Quality of Work Life and Organizational Commitment

The term of "quality of work life (QWL)" was first introduced in 1972 and received more attention after United Auto Workers and General Motors initiated a QWL program as part of their work reforms

(May, Lau and Johnson 1999). Danna and Griffin (1999) view QWL as a concept that includes life satisfaction, job satisfaction, and work-specific facet satisfaction such as satisfaction with pay, co-workers, supervisor, among others. May et al., (1999) defined QWL as the favorable conditions and environments of a workplace that support and promote employee satisfaction by providing them with rewards, job security, and growth opportunities. Although there is no formal definition of QWL, industrial psychologists and management scholars agree in general that the construct of QWL deals with the well being of employees (Sirgy et al., 2001). The basic objectives of QWL programs are to improve working conditions and promote organizational effectiveness.

Based on need satisfaction and spillover theories, Sirgy and his colleagues (2001) measured QWL in terms of satisfaction of seven needs (safety and health, economic and family, social, esteem, actualization, knowledge, and aesthetic). They then categorized the sources of rewards into work environment, job requirements, supervisory behavior, and ancillary programs. Batt and Valcour (2003) argue that employers should take a broad range of human resource practices as components of systems to meet work and family demands. Following previous research, QWL in this study is viewed as the favorable conditions and environments of the eight work/life dimensions: promotion and career development, job characteristics, benefits, training and learning, work-family relationship, compensation and incentives, supervisor's leadership and colleague's relationship.

Why is quality of work life important? Findings of previous studies (Andolsek and Stebe, 2004; Danna and Griffin, 1999; Fields and Thacker, 1992; May, Lau, and Johnson, 1999; Parker and Kohlmeyer, 2005) indicated that implementing better work and life quality practices resulted in improved job satisfaction, higher organizational commitment, higher productivity and efficiency, reduced absenteeism, and lower turnover. This study focuses on the impact of QWL on organizational commitment. This is because extensive reviews of literature demonstrate that organizational commitment is related to high job performance (e.g., Mowday et al., 1974), overall organizational effectiveness (e.g., Steers, 1977), and low employee turnover (e.g., Porter et al., 1974).

The concept of organizational commitment is based on the assumption that commitment is comprised of three factors: (1) a strong belief and acceptance of the organizational goals and values; (2) a readiness to exert effort on behalf of the organization; and (3) a strong desire to remain a member of the organization (Mowday et al., 1979). It is expected that a worker who enjoys a better quality of work and life via the QWL practices of his/her employing organization may bearing a positive attitude to the organization, and this attitude results in commitment to the organization. Based on that logic, it is hypothesized that QWL has a positive and significant impact on organizational commitment (Hypothesis 1 or **H1**). Beyond testing H1, this work wants further to investigate which components of QWL are more important in explaining the variance of commitment than other components.

The Moderating Effect of Personal Attributes

As we mentioned that QWL program is the design and implementation of favorable conditions and environments in a workplace that support and promote employee satisfaction by providing them with rewards, job security, and growth opportunities. However, people pursue what kind and what level of needs is contingent on individuals' attributes. Some may prefer pay, job security, and other family needs. Some may hope organization provides him/her the realization of one's potential within the organization and as a professional. Also some others may put knowledge and aesthetics needs as the priority. In general, people will pursue what kind and what level of needs is based on ones' own personal attributes. If one's needs are fulfilled by the organization, he or she may have higher organization identification. Hence, we may infer that personal attributes play the moderating role in the relationship between quality of work life and organizational commitment.

1. Gender Effect

Warr and Payne (1982) mentioned that the source of job satisfaction and concerning aspects are different between male and female. Female pays more attention on interpersonal relationship, health and wellness program, job security, and family activity. On the other hand, male are more concerning job characteristics, promotion and development, salary and compensation. From the viewpoints of needs

theory, it is reasonable to expect that the influence of the object on one's attitude and motivation will be stronger when the person has higher demand on that object. Therefore, it is assumed that:

Hypothesis 2-1: The components of 'promotion & career development' and 'job characteristics' have greater influences on male employees' organizational commitment than that of female; while 'colleague's relationship' and 'work-family balance' have stronger impact on female employees' organizational commitment than that of male (H_{2-1}).

2. Age Effect

Wilcock and Wright (1991) examined Canadian textile industry employees found that the expectation and satisfaction on the aspects of quality of work life varied by ages. Investigated American computer industry employees, Manz (1992) got the same conclusions as Wilcock and Wright did. In Taiwan, Lee's (1999) research result suggested young workers think job achievement, growth and learning opportunity are more important than other QWL aspects. Contrary, aged workers pay more attention on job security, health care and benefits. Thus it is suggested that:

Hypothesis 2-2: The components of 'compensation and incentive', 'training & learning', and 'promotion & career development' have greater influence on younger employees' organizational commitment than that of elder workers; while 'benefits' have stronger impact on elder employees' organizational commitment than that of younger workers (H_{2-2}).

3. Educational Level Effect

Research indicates that low education level workers concerning compensation and benefit, and training and learning than high educational level counterparts. On the other hand, high educational level employees pursue the needs of job characteristics and growth and development more than their low educational level colleagues (Pai, 1997). This may be owing to low educators have difficulty to get a sound job, training and learning opportunity are important for them. In addition, low educators' earning generally lower, which in consequence press them to care more about wage and benefits. High educational level employees may have high employability, self efficacy and self expectation. Therefore, job challenge, growth and learning opportunity, promotion development may be more attractive for high educators than for low educators. Based on needs theory, we may expect that important needs will have stronger effects on attitude than that of less important needs. Thus it is suggested that:

Hypothesis 2-3: The impact of 'training and learning', 'compensation and incentives' and 'benefits' on organizational commitment is stronger for low educators than that of high educators; while 'job characteristics' and 'promotion & development' have greater influence on higher educators' organizational commitment than that of low educators (H_{2-3}).

METHODS

1. Sample

A sample of 1755 from a leading DIY retailer in Taiwan received the questionnaire. Of them, 1229 validated responses were returned, which represents a 70 percent response rate. Among the respondents, 56.9 percent are male and 43.1 percent are female. The average age is 28, respondent age under 25 represents 43.1 percent, 28.6 percent between the ages 26 to 30, and age 31 to 40 represents 23.3 percent, the rest 5 percent are older than 41 years old. College graduated or under represents 73.8 percent. Only 26.2 percent of the respondents are married.

2. Instrument Measurement

The measure of *organization commitment* adapted from Organizational Commitment Questionnaire (OCQ, Mowday et al., 1979). Respondents express their perception to six statements on a 5 point Likert scale from strongly disagree (1) to strongly agree (5). These statements deal with individual's belief in and acceptance of the values and goals of the organization, and his/her willingness to exert considerable

effort on behalf of the organization. The internal consistency indicator for the construct of organizational commitment (Cronbach Alpha = 0.867) is acceptable. Therefore, the six statements were averaged to create a single measure of an individual's commitment to the organization.

The measure of *quality of work life (QWL)* includes eight components which adapted from the studies of Sirgy et al., (2001) and Batt and Valcour (2003). Each component of QWL practices contains 4 to 8 statements. Respondents express their perception of each statement on a 5 point Likert scale from strongly disagree (1) to strongly agree (5). The eight components and their contents are followings:

1. *Job Characteristics*: Contains 4 statements to deal with the perception and satisfaction on the job characteristics such as the autonomy, integrity, feedback, and importance.
2. *Work-family balance*: Six statements in this construct. The statements deal with the perception on work time, overtime, work and family life balance, work schedule and work-family life balance.
3. *Training and Learning*: Includes 6 statements to deal with the perception on the training programs and mentor systems, and the opportunities of learning and growth in the organization.
4. *Promotion and Career Development*: This construct includes 7 statements to deal with the perception on whether the promotion based on performance and competences, and the opportunity of career development in the organization.
5. *Compensation and Incentives*: Includes 6 statements deal with internal and external equality of compensation, and performance related to pay.
6. *Benefits*: Contains 5 statements deal with the satisfaction perception on the practices of employee benefits such as vacation, traveling subsidiary, workers compensation, wellness programs and so on.
7. *Supervisor's Leadership*: Includes 8 statements which deal with the satisfaction on the leading and managing styles of supervisors such as communication, consideration, job assignment, delegation, and participation management.
8. *Colleague's Relationships*: Contains 4 statements about the perception on the climate in the work department such as cooperation, communication, and automotive assistance between colleagues.

Since each of the eight components of QWL practices contains multiple statements, the reliability analysis is applied to test their internal consistency. The internal consistency indicators for the eight constructs of QWL practices are listed on Table 1. The Cronbach Alpha coefficients for the 8 components range from 0.702 to 0.935. While the coefficient for overall quality of work life is 0.954. All of them higher than the critical of 0.70 and within the acceptable range (Hair, et al., 1995).

Table 1
Results of reliability analysis for QWL programs and commitment

Dimension	Items	Cronbach's α
Overall QWL Programs	46	0.954
Job Characteristics	4	0.702
Work-family balance	6	0.848
Training & Learning	6	0.829
Promotion and Career Development	7	0.904
Compensation and Incentive	6	0.909
Benefits	5	0.806
Supervisor's Leadership	8	0.935
Colleague's Relationship	4	0.770
Organizational Commitment	6	0.867

Multiple regression method is applied to estimate the impacts of the eight QWL components on organizational commitment. The moderating effects are investigated by regressing the perception of the eight QWL practices on organizational commitment for different groups of gender (male vs. female), age (under 30 vs. over 31 years old), and educational level (college graduated or under vs. university graduated or above) respectively. Suppose the influence of QWL practice is significant for one group but insignificant for another, then the differential effect is recognized. If the influential factor on both groups

is significant simultaneously, Chow test will be further applied to examine whether there is a significant difference between the two effects. The formula of Chow test is:

$$F(k, n+m-2k) = \frac{(SSE - SSE1 - SSE2)/k}{(SSE1 + SSE2)/(N+M-2k)}$$

Where,

k: the number of independent variables

n: the number of observations of group 1

m: the number of observations of group 2

SSE: the unexplained variance before splitting into groups

SSE1: the unexplained variance for group 1

SSE2: the unexplained variance for group 2

RESULTS AND DISCUSSIONS

1. Original Full Model

The output of multiple regression analysis for testing hypothesis 1 presents on Table 2. The eight components of QWL practices can explain the variance of employee's organizational commitment 59.2%. The full regression model is significant at $p < 0.01$. This means that the QWL practices do enhance organizational commitment remarkably. The result confirms Hypothesis 1: QWL program has a positive and significant impact on organizational commitment. Findings of this study imply that in case firm wants to promote its workers' commitment to organization, introduces a better design program of QWL is a good strategy.

For managers, the important information is what kind of practices has more influences than others. The results indicate that the impacts of supervisor's leadership and colleague's relationship on organizational commitment are positive but not significant from zero at $p < 0.05$. This sounds that leadership and interpersonal relationship may increase employee's commitment but not that much. The rest six QWL practices are all have positive and significant effects on commitment enhancement. Among them, promotion and career development is the strongest influential factor ($\text{Beta} = 0.282$) of organizational commitment, followed by job characteristics ($\text{Beta} = 0.278$), benefits ($\text{Beta} = 0.142$), training and learning ($\text{Beta} = 0.124$), work-family balance ($\text{Beta} = 0.070$), and compensation and incentives ($\text{Beta} = 0.065$) in sequence.

The coefficient of Beta is an important indicator for human resource managers in Taiwanese retail industry. In order to get the best result of HR intervention program, to adopt and implement the higher impact treatment is a wiser decision. The effect of one standard deviation progress in 'promotion and career development' on improving employees' commitment is around two times ($0.282/0.142 \doteq 1.97$) of the same scale progress in 'benefits'. Compare to the effect of 'work-family balance', the effect of 'promotion and career development' is around 3 times higher. The managerial implication is that in case resources is limited, focus the QWL program on improving the promotion system, career development, and better job design can get a remarkable enhancement in organizational commitment.

2. Moderating Model

In order to test the moderating effects of gender, the respondents were first separate into male and female samples. Then the eight QWL components are entered the regression to estimate their effects on organizational commitment for male and female groups respectively. Then comparing the individual QWL practices to see whether there is significant difference impact on female and male's commitment. The procedure is the same for testing the moderating effects of age and educational level.

a. The Moderating Effect of Gender

Table 3 shows that for male employees, promotion & career development, job characteristics, training & learning, benefits, and supervisor's leadership (in the sequential order of Beta coefficient) are positively

and significantly influence organizational commitment. As for female employees, promotion & career development, job characteristics, benefits, and compensation and incentive are the significant factors in influencing organizational commitment.

Table 2
Results of multiple regression analysis for the whole samples

Independent Variables	Model 1		
	B	Beta	t-value
Constant	.158		1.468
Job Characteristics	.256	.278	9.195***
Work-family balance	.062	.070	2.583*
Training & Learning	.129	.124	4.702***
Promotion & Career Development	.322	.282	11.221***
Compensation and Incentives	.047	.065	2.353*
Benefits	.138	.142	5.408***
Supervisor's Leadership	.030	.035	1.363
Colleague's Relationship	.004	.004	0.163
R ²	.592		
Adjusted R ²	.589		
F	186.780***		

* p < 0.05 ; ** p < 0.01 ; *** p < 0.001

Since promotion & career development, benefits, and job characteristics have significant effects both on male and female employees' organizational commitment, the chow test is applied to examine whether the impact coefficient between gender groups is different. Column 4 in Table 3 indicated that the three B coefficients for male and female are significant different from zero at $p < 0.05$. Based on the size of B coefficient, it is concluded that promotion & career development and job characteristics have greater influence on male employees' organizational commitment than that of female. This result is consistent with hypothesis 2-1. However, benefits have greater influence on female employees' organizational commitment than that of male. The outcome is contrast to H_{2-1} . The effects of 'work-family balance' and 'colleague's relationship' are not significant for male and female. This result is not consistent with our hypothesis either. Hence, Hypothesis 2-1 is only partly supported.

b. The Moderating Effect of Age

Table 4 shows that for younger employees (Under 30), promotion & career development, job characteristics, training & learning, benefits, and compensation and incentive have significant impact on their organizational commitment. As for elder employees (Above 31), the components of promotion & career development, benefits, and job characteristics are the significant influential factors of organizational commitment. As expected, the components of training & learning and compensation and incentive are more important factors for determining young workers commitment than that of elder workers.

Since promotion & career development, benefits, and job characteristics have significant impacts on both younger and elder employees' organizational commitment, the chow test was further applied to examine whether age has a moderating effect between the two age groups. The result shows that the B coefficients between younger and aged groups are significantly different at $p < 0.01$. According to size of B coefficients, it is concluded that promotion & career development and benefits have greater influence on elder employees' organizational commitment. The outcome of benefits is consistent to our expectation; however, the effect of promotion and career development is contrast to the original hypothesis 2-2. The component of 'job characteristics' has greater influence on younger employees' organizational

commitment than that of elder workers. This result is consistent with H2-2. Thus, Hypothesis 2-2 is also partly supported only.

Table 3
Results of multiple regression analysis for moderating effect — Gender

Independent Variables	Male (A)			Female (B)			Chow Test F-value
	B	Beta	t-value	B	Beta	t-value	
Supervisor's Leadership	.085	.089	2.519*	.003	.003	.079	-
Promotion & Career Development	.301	.303	7.449***	.243	.287	5.712***	10.095*** (A>B)
Compensation and Incentive	.012	.016	.438	.099	.143	3.051**	-
Work-Family Balance	.065	.069	1.932	.035	.040	.891	-
Training & Learning	.193	.180	5.169***	.021	.022	.481	-
Benefits	.116	.110	3.152**	.161	.184	4.153***	5.069* (B>A)
Job Characteristics	.312	.279	6.522***	.266	.223	6.153***	6.120** (A>B)
Colleague's Relationship	.046	.038	1.109	.035	.037	.884	-

*p < 0.05 ; **p < 0.01 ; ***p < 0.001

Table 4
Results of multiple regression analysis for moderating effect — Age

Independent Variables	Under 30 (A)			Above 31 (B)			Chow Test F-value
	B	Beta	t-value	B	Beta	t-value	
Supervisor's Leadership	.048	.055	1.747	.022	.025	.446	-
Promotion & Career Development	.261	.284	7.788***	.340	.357	5.316***	11.865*** (B>A)
Compensation and Incentive	.060	.083	2.442*	.018	.023	.401	-
Work-Family Balance	.051	.057	1.708	.064	.064	1.249	-
Training & Learning	.140	.134	4.223***	.109	.109	1.869	-
Benefits	.094	.097	3.011**	.264	.265	4.806***	7.480** (B>A)
Job Characteristics	.330	.280	8.855***	.210	.176	3.291**	6.162** (A>B)
Colleague's Relationship	.031	.029	.916	.071	.059	1.132	-

*p < 0.05 ; **p < 0.01 ; ***p < 0.001

c. The Moderating Effect of Education

As expected, the impact of benefits program on organizational commitment is positive and significant for lower educated (college graduated and under) but not for high educators (university graduated and above). As to the effects of compensation and incentives on organizational commitment for

both groups are not significant (see Table 5). The result is contrast to our hypothesis that salary and bonus influence lower educators' commitment stronger than that of higher educated.

Among other factors, 'promotion and career development', 'job characteristics', and 'training & learning' are all have significant effects on lower-educated and higher-educated employees' organizational commitment. We further adopt chow test to examine whether the impacts are different for the two groups. The result shows that the effects of the three QWL components for different educational groups are significantly different at $p < 0.01$. Based on the size of B coefficient, it is suggested that training & learning has greater influence for lower-educated employees' organizational commitment than higher educators; while promotion and career development and job characteristics have stronger influence on higher-educated employees' organizational commitment than that of lower educators. Findings are consistent with Hypothesis 2-3 proposed.

Table 5
Results of multiple regression analysis for moderating effect — Education

Independent Variables	College graduated and under (A)			University graduated and above (B)			Chow Test F-value
	B	Beta	t-value	B	Beta	t-value	
Supervisor's Leadership	.036	.042	1.299	.065	.072	1.352	-
Promotion & Career Development	.269	.293	7.780***	.290	.308	4.935***	5.375** (B>A)
Compensation and Incentive	.039	.054	1.594	.054	.074	1.261	-
Work-Family Balance	.040	.044	1.338	.070	.078	1.335	-
Training & Learning	.140	.130	3.893***	.109	.113	2.218*	6.175** (A>B)
Benefits	.165	.169	5.051***	.069	.070	1.359	-
Job Characteristics	.288	.246	7.587***	.293	.260	4.868***	6.173** (B>A)
Colleague's Relationship	.010	.009	.278	.099	.091	1.718	-

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Employing the survey data of 1229 validated responses from a leading DIY retail firm in Taiwan, this study investigated the influences of QWL practices on employees' commitment to organization. Findings indicate that QWL programs have strong power in predicting organizational commitment. Altogether, QWL practices explained 59.2% variance of organizational commitment in the equation model.

A further contribution of present study is to identify the differential influences of QWL programs on commitment. According to Beta coefficients, the strongest impact factor for respondents' organization commitment is promotion and career development program, following by job characteristics, benefits, training and learning, work-family balance, and compensation and incentives in consequence. In case firm's resource is limited, manager may invest in improving the promotion system and establishing a better career development program first. This is because that the bright decision choice will yield twice result with half the effort.

Findings of this investigation also confirm that personal attributes moderate the relationship of QWL programs and organizational commitment. Supervisor's leadership style and training and learning improve male's commitment but no effect for female. Contrary, compensation and incentive have significant impact on female's commitment but not for male. In addition, the influences of promotion and

development and job characteristics on commitment are stronger for male than for female. On the other hand, the impact of benefits on females' commitment is higher than that of males. For Taiwanese retail managers, they may design the QWL programs for different gender groups follow our findings to achieve the best cost-benefit ratio outcomes.

As to the moderating effect of age, this work finds that better training and learning practices and higher compensation and incentives have positive and significant impact on younger Taiwanese retail employees' commitment, while no effects for elder workers'. The contents of job characteristics have stronger influence for young workers' commitment than elder ones. However, the effects of promotion and career development and benefits in elder workers' commitment equation are significant higher than that in younger worker's model.

As expected, benefits improved low educators' organizational commitment but not for high educators'. In addition, the impact of training and learning on commitment is significantly higher for low educated than that of high educated. Contrary, the effects of promotion and career development and job characteristics are more important in determining high educators' commitment than that of low educators. The findings of this research provide managers a meaningful decision choice on QWL program design to get a better organizational commitment outcome.

REFERENCES

- Andolsek, D. M. & Stebe, J. 2004. Multinational Perspectives on work values and commitment. *International Journal of Cross Cultural Management*, 4(2), 181-209.
- Batt, R. & Valcour, P. M. 2003. Human resource practices as predictors of work-family outcomes and employee turnover. *Industrial Relations*, 42(2), 189-220.
- Danna, K. & Griffin, R. W. 1999. Health and well-being in the workplace: A review and synthesis of the literature. *Journal of Management*, 25(3), 357-384.
- Fields, M. W., & Thacker, J. W. 1992. Influence of quality of work life on company and union commitment. *Academy of Management Journal*, 35(2), 439-451.
- Hair, J.F. Jr., Anderson, R.E., Tatham, R.L. & Black, W.C. 1995. *Multivariate Data Analysis with Readings*. New York: MacMillan Publishing Company.
- Havlovic, S. J. 1991. Quality of Work Life and Human Resource Outcome, *Industrial Relations*, 30, 469-479.
- Lee, C. J. 1999. The antecedents and consequences of young workers' needs type on quality of work life. Chunyun University unpublished master thesis (in Chinese).
- Lukas, J.A. 1993. Improving the project controls work environment at Kodak, *Transactions of AACE International*, Q.1.1-Q.1.8.
- Manz, 1992. Is the Work Force Vanguard to the 21th Century a Quality of Work Life Deficient-Pron Generation, *The Quality of Working Life and Enterprise Development Conference*, Taipei.
- May, B. E., Lau, R. S. M., & Johnson, S. K. 1999. Alongitudinal study of quality of work life and business performance. *South Dakota Business Review*, 58(2), 3-7.
- Mowday, R. T. Porter, L. W. & Dubin, R. 1974. Unit performance, situation factors, and employee attitudes in spatially separated work units. *Organizational Behavior and Human Performance*, 12, 231-248.
- Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment, *Journal of Vocational Behavior*, 14, 224-247.
- Pai, C. W. 1997. How firms use the concept of job satisfaction in managing human resources, *Human Resource Development Monthly*, 118, 1-9. (In Chinese).
- Porter, L. W. Steers, R. M. Mowday, R. T., & Boulian, P. V. 1974. Organizational commitment, job satisfaction, and turnover among psychiatric technicians, *Journal of Applied Psychology*, 59, 603-609.
- Parker, R. J. & Kohlmeyer, J. M. 2005. Organizational justices and turnover in public accounting firms: a research note. *Accounting, Organizations and Society*, 30, 357-369.
- Sirgy, M. J., Efraty, D. Siegel, P., & Lee, D. J. 2001. A new measure of quality of life (QWL) based on need satisfaction and spillover theories. *Social Indicators Research*, 55(3), 241-302.

- Seashore, S. E. 1975. Defining and Measuring the Quality of Working Life: in the Quality of Working Life Vol. 1: Problems, Prospects and State of the Art, Louis E. Davis, Albert B. Chems and Associates, New York: The Free Press.
- Steers, R. M. 1979. Antecedents and outcomes of organizational commitment, *Administrative Science Quarterly*, 22, 46-56.
- Warr, P. & Payne, R. 1982. Experience of strain and pleasure among British adults, *Social Science Medicine*, 16, 1691-1697.
- Wilcock, A. & Wright, M. 1991. Quality of work life in the Knitwear Sector of the Canadian textile industry, *Public Personnel Management*, 20 (4), 457-469.