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Development of Occupational Commitment Scale for Government Employee in China

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Abstract

The author is to develop an occupational commitment scale for Chinese government employee. Objects selected in this study were from different government employment levels in Chengdu, Sichuan, China. With consideration of occupational commitment structure, as well as literature study, open interviews and existing classical scales, the occupational commitment scale for government employee in this research was conducted. The scale was composed by five commitments, namely Affective Commitment, Opportunity & Cost Commitment, Social Identity Commitment, Norm & Loyalty Commitment, and Economy & Promotion Commitment, with data analyzed by SPSS and LISERAL. The results of the five dimensions in the Occupational Commitment Scale for Government Employee in China showed good reliability and validity. The results show: Occupational Commitment Scale for Government Employee in China appeared applicable for research on occupational commitment of Chinese government employee.

Key words: Government employee; Occupational Commitment; Scale

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INTRODUCTION

Being as a “secured job”, Government employee in China is currently a heating career option with increasing number

of candidates every year trying to pass the “top one test”-civil service exam. Some of the vacancies attract over ten thousand candidates to compete. On the contrary, the social comments towards Chinese government employee are comparatively low, as they are not acting responsibly as been expected as public servant, that they are with passive work attitude, low work efficiency, even serious professional ethics problems (corruption, malfeasance, omissions, and etc.). In response towards this situation, the author considers it is essential to develop a Government Employee Occupational Commitment Scale, not only for quantitative study in terms of government employee commitment, but also to build and promote professional ethics, which is with notable practical significance as well. Apart from the current theoretical examination, the commitment scale offers occupational commitment level being as another screening criterion, which can be applied among government employees regularly to let related departments be aware of their occupational psychological state.

(a) Situation of Occupational Commitment at Present

Occupational commitment divides to research on definition, and research on measurement. Western countries started research on definition of occupational commitment in 1980's, in terms of defining Attitude and Behavior. Attitude weights occupational emotion in occupational commitment, while Behavior emphasizes cost and return of occupational commitment. Starting late than the West, China began the research of occupational commitment in the early 21st century, and most of occupational commitment definitions defined by Chinese scholars are based on theories from western researchers. With consideration of characteristics of government employee in China, the occupational commitment in the following research is understood as the level of unwillingness of career withdrawal due to personal considerations in terms of career identity or emotional attachment provided

by the employment, cost and alternative to resign, internalized social norms and direct occupational benefits (income and promotion) and indirect occupational benefits (social identity and network) brought with the employment.

There are mature theories from the West regarding research of occupational commitment measurement, summarizing different professional natures, mission requirements, and general characters of the job responsibilities. Among the existed theories, unidimensional measurement is represented by Blau, who considered solely emotional dimension in occupational commitment and based which he developed occupational commitment 8-item scale (Blau, 1985); Representing motive measurement, Hall (Noe wet al., 1990) and London (London, 1993) defined Occupational Commitment as the motive strength of pursuing occupational achievement, based on which they respectively developed 26-item and 17-item occupational motive scale; Three-dimensional measurement is represented by Meyer and Allen who added Continuance Commitment and Normative Commitment on the basis of Affective Commitment, and Meyer developed 18-item scale (Meyer & Allen, 1993) in 1993 based on these three dimensions; Four-dimensional measurement was developed by Meyer on the basis of three-dimensional measurement, in which Continuance Commitment was divided into Cost Commitment and Alternative Commitment (Meyer & Herscovitch, 2001). The four dimensional scale developed by Blau in 2003 contained Affective Commitment, Normative Commitment, Cost Commitment, and Alternative Commitment.

Chinese domestic occupational commitment measurement is mainly three-dimensional scale from Long Lirong and Lian Rong. Long Lirong and Li Xia used factor analysis to conclude that occupational commitment contains Affective Commitment, Normative Commitment, and Continuance Commitment, and based on which the scale conducted among middle school and primary school teachers and nurses has shown good reliability and validity (Li, 2001); based on Allen's scale, Lian Rong and Shao Yali developed four dimensional (Affective Commitment, Alternative Commitment, Cost Commitment, and Normative Commitment) occupational commitment scale for middle school teachers, and combined Cost Commitment and Alternative Commitment to form Continuance Commitment when exploratory factor analysis has been done, which has achieved good reliability and validity (Shao, 2003). Regarding four-dimensional measurement, Liu Shirui proposed four dimensions including Ideal Value Commitment, Obligation Normative Commitment, Alternatives and Cost Commitment, and Social Value Commitment, targeting at middle

school and primary school teachers; additionally, Liu Yaozhong, Kong Qingxiu, and Wang Xue developed different four-dimensional scales respectively for corporate employees in terms of occupational commitment.

With thorough literature review, the author identified that foreign and domestic research objects in terms of occupational commitment included only small number of occupational groups, excluding government employee. While in China, government employee is precisely a significant occupational group that could not be ignored, for its huge population, unique duty requirements, and high social expectation. The development of occupational commitment scale for government employee is thus indispensable.

(b) Research Assumptions and Vision

Foreign and local researchers believed that different careers shall be measured by different models and scales of occupational commitment respectively. Occupational commitment researches conducted on teachers and nurses are mostly three or four dimensional model, while for domestic company employees, Lin Wensheng and other scholars preferred 5 factors, namely Affective Commitment, Continuance Commitment, Normative Commitment, Economy Commitment, and Alternatives Commitment (Luo, 2008).

The following research utilized multifactor theory to develop occupational commitment scale for government employee in China. Based on the characteristics of government employee, the assumption was proposed as: occupational commitment of government employee is multi-dimensional structured, presumably in five-dimension structure.

1. OBJECTS AND METHODS

1.1 Objects

Research objects were all regular government employees selected from different levels of government units, including Chengdu Development and Reform Commission (Deputy Department Level), Chengdu High-Tech Zone Planning Bureau (county level), Chengdu Civil Affairs Bureau (Deputy Department Level), Chengdu CPPCC (Deputy Department Level), Chengdu Financial Bureau (Deputy Department Level), Sichuan Inspection and Quarantine Bureau (Department Level), and Chengdu Transportation Committee (Deputy Department Level). 170 questionnaires were distributed for pre-measurement, of which 151 were recovered, with effective rate of 89%. 300 questionnaires were distributed for repetition measurement, of which 264 were recovered, with effective rate of 88%. The test object reports are respectively as shown in the following Table 1 and Tale 2.

Table 1
Objects Demographic Distribution Statistics in Pre-measurement

Demographic variables		No. objects	%
Gender	Male	97	64.2%
	Female	54	35.8%
Educational background	College	8	5.3%
	Bachelor	82	54.3%
	Master	55	36.4%
	PhD	6	4.0%
Length of service	1-5 years	19	12.6%
	6-10 years	33	21.9%
	11-15 years	23	15.2%
	16-20 years	40	26.5%
	20 years and above	36	23.8%
Work unit level	County level	17	11.3%
	Deputy department level	111	73.5%
	Department level	23	15.2%
Position level	Department level (and deputy)	3	19.9%
	County level (and deputy)	38	25.2%
	Counsel (and deputy)	7	4.6%
	Consultant (and deputy)	27	17.9%
	Clerk and below	76	50.3%

Table 2
Objects Demographic Distribution Statistics in Repetition Measurement

Demographic variables		No. objects	%
Gender	Male	137	59.6%
	Female	93	40.4%
Educational background	College	20	8.7%
	Bachelor	148	64.3%
	Master	55	23.9%
	PhD	7	3.1%
Length of service	1-5 years	38	16.5%
	6-10 years	45	19.6%
	11-15 years	37	16.1%
	16-20 years	78	33.9%
	20 years and above	78	33.9%
Work unit level	County level	30	13.1%
	Deputy department level	165	71.7%
	Department level	35	15.2%
Position level	Department level (and deputy)	7	3.1%
	County level (and deputy)	47	20.4%
	Counsel (and deputy)	12	5.2%
	Consultant (and deputy)	29	12.6%
	Clerk and below	135	56.7%

1.2 Methods

1.2.1 Item Selection for Self-Produced Scale

Prior to developing pre-measurement scale, the author developed government employee occupational commitment questionnaire in open and semi-open forms, which were conducted by interviewing 43 government employees from different government units at different

levels. Interviews involved questions including “Why do you choose government employee as your job”; “Are you willing to work as government employee”; “Are you satisfied with your current job as government employee”; “Do you have plans to change for another job; What if you lose this employment”; “What have you gained from this employment; and what have you paid for this position; Do you think it is proportional, with consideration of your pay and gain”; “Do you have any plans for future occupational development; What factors do you think will affect the development of your career (promote and hinder)”; “What kind of opportunities does this employment offer you”; “Do your family and friends support you for your current job”; “How is your relationship with your colleagues and leaders”.

When the interview has been done, results were classified by key words and there were approximately five factors appeared to affect government employees’ occupational commitment, namely emotional factor, Continuance Commitment (Alternative & Cost commitment), Social Identity Commitment (indirect benefit commitment), Norm & Loyalty Commitment (Ethical & Political Literacy Commitment), and Economy & Promotion Commitment (direct benefit commitment). Thus, the theoretical structure of government employee occupational commitment scale was primarily formed, including five dimensions: Affective Commitment, Alternative & Cost commitment, Social Identity Commitment, Norm & Loyalty Commitment, and Economy & Promotion Commitment.

Based on the theoretical structure above, and occupational commitment scale from domestically in China and foreign countries, namely 8-item unimeasurement attitudes scale (Blau, 1985), 18-item tree-dimensional occupational commitment scale (Meyer, 1993), and 20-item four-dimensional occupational commitment scale (Blau, 2003), the author evaluated the items and re-arranged the items in a random order to form the occupational commitment scale for government employee which contains 54 items, in which 22 items were reverse scoring. The scale used 5-level scoring from Likert in which 1=strongly disagree, 2=disagree, 3=not sure, 4=agree, 5=strongly agree. Higher score represented higher occupational commitment from the government employee.

1.2.2 Research Process

There were 2 phases adopted in the research: Phase 1, initial exploration for the structure of scale to determine number of dimension; Phase 2, further verification and revision of the primary structure assumption to determine the final scale.

Dispersed survey was adopted in this research that the scale was distributed to the objects and instruction was given to guide objects finish scale. Scale was retrieved upon its completion, and then data processed to prepare for analysis.

1.2.3 Data Collection and Analysis

All data has been inserted and analyzed on SPSS17.0 and LISREL8.51. The statistical methods employed in this research were: Frequency Analysis, Critical Ratio Method, Homogeneity Test, Reliability Test, Confirmatory Factor Analysis, and Correlation Analysis.

2. RESULT

2.1 Item Analysis and Collection in Primary Measurement

2.1.1 Frequency Analysis

To verify item efficiency, frequency analysis was

conducted with the following criteria: If the frequency summation of option 1, 2, 3 or 4, 5, 6 in one item was lower than or equal to 10%, the item would be identified as low variation and low correlation with other items in a general sense, thus it shall be removed. The scale went through the frequency analysis that all items' frequency summation of option 1, 2, 3 and 4, 5, 6 exceeded 10%, and thus no item was to be removed after the frequency analysis.

2.1.2 Critical Ratio Method

The item discrimination in this research was generated via critical ratio method, as in the following Table 3:

Table 3
“Occupational Commitment Scale for Government Employee” Item Analysis Result

Item	Critical value	Item	Critical value	Item	Critical value	Item	Critical value
1	10.463***	15	4.919***	29	.293***	43	1.338***
2	2.642*	16	4.959***	30	.000***	44	12.001***
3	3.085	17	.015***	31	1.553***	45	1.084***
4	11.456**	18	.221***	32	.446*	46	6.408***
5	1.683***	19	6.066	33	2.044***	47	1.489
6	6.274***	20	.575***	34	5.296*	48	.916***
7	5.191***	21	4.067***	35	.470***	49	4.691***
8	.019***	22	5.615***	36	2.668***	50	.095***
9	3.389	23	2.003***	37	.546**	51	.301***
10	.085***	24	1.039	38	3.619***	52	.139***
11	3.677***	25	14.343***	39	3.213***	53	8.756***
12	.532***	26	7.717***	40	.191*	54	.340***
13	.348***	27	.596**	41	.328***		
14	3.730***	28	17.117*	42	.120***		

Note. * $p < .05$; ** $p < .01$; *** $p < .001$.

Based on the table above, the critical value of item 3, 9, 19, 24, and 47 did not achieve the conspicuous level of 0.05, thus these 5 items were removed and 49 items remained.

2.1.3 Homogeneity Test

Commonality and factor loadings were tested to verify the homogeneity of the scale in this research. In general, if commonality rate is less than 0.20 (in the mean time factor loadings is lower than 0.45), this item is seen as in unclear relationship with common factors and should be removed. Thus, in Affective Commitment dimension (item 1, 7, 12, 17, 22, 28, 33, 34, 39, 44, 49, and 53), commonality of item 28, 34, 49, and 53 was less than 0.20, with factor loadings less than 0.45 in the mean time, so they were removed; likewise, in Alternative & Cost Commitment dimension (item 2, 8, 13, 18, 23, 29, 35, 40, 45, and 50), item 29 and 40 were removed; in Social Identity Commitment dimension (item 3, 9, 14, 19, 24, 30, 36, 41, 46, and 51), item 3, 9, 14, 19, and 24 were removed; in Normative & Loyalty Commitment dimension (item 4, 10,

15, 20, 25, 31, 37, 42, 47), item 4 and 47 were removed; in Economy & Promotion Commitment dimension (item 5, 6, 11, 16, 21, 26, 27, 32, 38, 43, 48, 52, and 54), item 27, 32 and 43 were removed.

Upon the completion of analysis of commonality factor and factor loadings, 38 items remained. In terms of overall variation, Affective Commitment valued 27.543%, Alternative & Cost Commitment valued 30.569%, Social Identity Commitment valued 29.684%, Normative & Loyalty Commitment valued 32.835%, and Economy & Promotion Commitment valued 30.085%.

2.2 Repetition Measurement, Reliability & Validity Test

2.2.1 Reliability Test

Reliability tests used commonly in Likert Attitude Scale were homogeneity reliability and split-half reliability. In General, when α in homogeneity reliability is higher than 0.80, the scale is with high reliability; when factor analysis is complete, the α of each concept shall be lower than that of the total scale (Li, 2011). Table 4 illustrates

the homogeneity reliability of this scale achieving ideal criteria:

Table 4
Cronbach's α of Sub-Scales and Total Scale

Scale name	No. of item	Cronbach's α
Total scale	38	0.895
Affective commitment	8	0.722
Alternative and cost commitment	8	0.626
Social identity commitment	5	0.815
Norm & loyalty commitment	7	0.748
Economy & promotion commitment	10	0.702

Split-half reliability refers to the consensus degrees achieved by the objects in two evenly split halves' measurement respectively. The corresponding halves can be regarded as two parallel measurements tested within minimum time. The scale of this research was divided evenly into two sub-scales, among which sub-scale 1 contained item 1, 12, 22, and 44 (Affective commitment sub-scale 1); 2, 13, 23, and 45 (Alternative & Cost Commitment sub-scale 1); 30, 41, and 51 (Social Identity Commitment sub-scale 1); 10, 20, 31, and 42 (Norm & Loyalty Commitment sub-scale 1); 5, 11, 21, 38, and 52 (Economy & Promotion Commitment sub-scale 1); Sub-scale 2 contained item 7, 17, 33, and 39 (Affective commitment sub-scale 2); 10, 20, 31, and 42 (Alternative & Cost Commitment sub-scale 2); 36 and 46 (Social Identity Commitment sub-scale 2); 15, 25, and 37 (Norm & Loyalty Commitment sub-scale 2); 6, 16, 26, 48, and 54 (Economy & Promotion Commitment

sub-scale 2). Sub-scale 1 contained 20 items while sub-scale 2 contained 18 items with the reason of both Social Identity Commitment sub-scale and Social Identity Commitment sub-scale 2); 15, 25, and 37 (Norm & Loyalty Commitment sub-scale contained odd number of items which is not able to be split evenly. In this case, sub-scale 1 was with more items than sub-scale 2, and the split-half reliability of this research is in table 5 below:

Table 5
Split-Half Reliability of Sub-Scales and Total Scale

Scale name	No. of item	Split-half reliability
Total scale	38	0.921
Affective commitment	8	0.731
Alternative and cost commitment	8	0.674
Social identity commitment	5	0.796
Norm & loyalty commitment	7	0.763
Economy & promotion commitment	10	0.736

2.2.2 Validity Test

In terms of content validity, the primary items selected in this scale were based on interviews on government employees and large number of detailed relative researches from domestic China and overseas. For the scale itself, it has been modified in several rounds to ensure the content validity. In terms of construct validity, this research adopted correlation method and confirmatory factor analysis to report the validity, referred in Table 6 and Table 7 as below:

Table 6
Correlation Between Dimensions and Total Scale in "Government Employee Occupational Commitment Scale"

	Affective commitment	Alternative and cost commitment	Social identity commitment	Norm & loyalty commitment	Economy & promotion commitment
Affective commitment					
Alternative and cost commitment	.638**				
Social identity commitment	.378**	.422**			
Norm & loyalty commitment	.629**	.675**	.372**		
Economy & promotion commitment	.576**	.580**	.391**	.541**	
Total scale	.843**	.844**	.609**	.808**	.822*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The correlation analysis showed correlation between each dimension and the total scale achieved minimum correlation (.372-.843), indicating significant correlation, thus, the construct validity was satisfactory.

Table 7
Fit Index of "Government Employee Occupational Commitment Scale" Confirmatory Factor Analysis

Fit Index	χ^2/df	GFI	AGFI	SRMR	NFI	NNFI	CFI	IFI
	2.743	0.867	0.862	0.056	0.875	0.841	0.887	0.893

Guo Qingke and other scholars believed that confirmatory factor analysis on the measurement

data collected from a 250-object sample demands determination of the goodness of fit of the sample and reduction of two types of error rate. If any of the indexes from NNFI, CFI, or IFI values is at 0.90, SRMR shall be equal to or less than 0.05 (Guo & Wang, 2007). In Table 7, CFI and IFI valued at approximately 0.90 but SRMR is over 0.05. However, Guo Qingxiang suggested appropriate enlargement of the SRMR value standard can be adopted in real data analysis. As a result, the author believed when CFI and IFI value are at 0.90, and SRMR is 0.056, the fit goodness of sample is feasible.

Through the reliability and validity analysis, this scale is feasible for formal measurement research.

3. DISCUSSION

Government Employee Occupational Commitment Scale is developed by reference of existing occupational scales in China and overseas. Being as an essential dimension of occupational commitment research, the emotional dimension applied in this research follows completely what been used by previous scholars which is determined as unwillingness to leave the current employment because government employment is the ideal career to one individual which help the object realize personal value as well as bring delights to his/her life. Alternative & Cost Commitment (referred as Continuance Commitment as well) combines two existing dimension, namely Alternative Commitment and Cost Commitment, into one dimension. The reason of this combination is that during preliminary interviews, it turned up that many interviewees mentioned “the chance to be government employee at present is precious and very difficult to obtain; losing this opportunity will mean a high price to pay”, which illustrates the idea that “good opportunity” and “high price to pay” are in fact the positive and negative sides of one single issue which cannot be completely split into two dimensions. The combined Alternative & Cost Commitment is determined as unwillingness to leave government employment due to the reason that the career is satisfying, and a lot efforts have been devoted to it; it will be difficult to find another job with the same satisfactory as from the government employment; and the effort devoted previously will be wasted if leaving the employment. Similar to Social Identity Commitment, Social Value Commitment has already existed in researches. However, to reflect the occupational characteristics of government employment in China, this research focus not only on social recognition towards Chinese government employee, but the social network established along with the recognition and the collateral benefits potentially brought by the social network. This indirect benefit also explains the reason why government employment has been favored in China. As been explained above, social identity is determined as unwillingness to leave government employment because of social recognition from various communities, and returns brought by the social network established upon the social identity. Norm & Loyalty Commitment is based on the Normative Commitment in existing researches, adding the loyalty concept. The existing Normative Commitment refers to the unwillingness to leave an employment because of constraints from social and ethical norms. Government employment in China requires the employee to fulfill lawful government duties which

is with higher requirement in terms of social norms than the other ordinary careers. In addition to the norm requirement, there is particular requirement of political beliefs towards government employment candidates in China (most of Chinese government employees are Communist Party member). As a result, the factor of political loyalty has been taken into consideration as one aspect of the dimension and thus formed norm & Loyalty Commitment, in order to reflect unwillingness to leave the employment as being constrained by social norms and political loyalty requirements. Similarly as explained above, the factor of promotion has been added to the existing Economy Commitment to form Economy & Promotion Commitment, as being discovered during early stage of surveys and interviews that stable income, satisfying welfares (economy factor), and promised career path (promotion factor) are all vital factors that makes government employment so attractive, which bring direct benefit to employees as well. This explains the reason to determine Economy & Promotion Commitment as unwillingness to leave government employment due to be satisfied with income and promotion opportunities.

With detailed preliminary researches and further data analysis, ideal results have been achieved but there are some deficiencies in terms of object sample, which can be generated as the following three aspects respectively:

All objects are from the same city who can be influenced by the particular political, economic and cultural factors in this city and consequently affect the result, causing the inapplicability of this research result in towns and rural areas.

It is still to be further investigated to confirm whether the sample is adequately representative, for it selected only the employees from Inspection and Quarantine Bureau of Sichuan Province, to represent special government employees from public security departments.

It is still uncertain to confirm the similarity of occupational commitment structure of special government employees (from public security departments) with that of the general government employees or the appropriateness of studying these types of government employees in a merged way.

CONCLUSION

Occupational Commitment Scale of Chinese Government Employee in China contains five dimensions: Affective Commitment, Alternative and Cost Commitment, Social Identity Commitment, Norm & Loyalty Commitment, Economy & Promotion Commitment.

Verified by series data analysis tests, Occupational Commitment Scale for Government Employee in China has ideal homogeneity reliability and constructs validity.

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