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Testing the Structure of Public Service Motivation in Korea: A Research Note

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ABSTRACT

Public service motivation (PSM) assumes that civil servants are characterized by an ethic to serve the public. Perry identified a multidimensional scale to measure PSM with four components: attraction to policy making (APM), commitment to public interest, compassion, and self-sacrifice. But there is little research on the generalizability and applicability of the dimensions and scale of PSM in the other countries. This study tests whether the structure of PSM observed in the United States by Perry can be generalized to Korea. Two independent samples ($n_1 = 294$ and $n_2 = 290$) are used to validate the scale. The statistical analysis applied confirmatory factor analysis (CFA) using *Amos 5.0*. It was found that the four-factor structure of PSM can be generalized in the Korean context, but it is doubtful whether the APM factor in the second-order model is a valid dimension of PSM. Several reasons for this are discussed, including: (1) rational motives might not be related to PSM in the Korean context, (2) rational motives might not be part of PSM at all, (3) scale items measuring APM might not be appropriate to represent a rational base of PSM, and (4) negatively worded scale items from Perry might not be appropriate to assess APM.

INTRODUCTION

It is generally believed that public employees are motivated by a sense of service not found among private employees (Houston 2000; Perry and Wise 1990). They are seen as motivated by a concern for the community and a desire to serve the public interest and are more likely to be characterized by an ethic that prioritizes intrinsic rewards over extrinsic rewards (Crewson 1997). The concept of public service motivation (PSM) is used to explain the difference between public and private employees (Perry 1996; Perry and Wise 1990).

In recent years, a significant amount of research has examined the topic of PSM. The primary focus of recent studies on PSM has been on identifying the nature of PSM and exploring whether it is characteristic of civil servants (Houston 2006). However, the measurement of PSM is not fully examined. Perry (1996) identified a multidimensional

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scale to measure PSM that has four components: attraction to policy making (APM), commitment to public interest (CPI), compassion (COM), and self-sacrifice (SS). Perry's measurement scale represents the generally accepted model of PSM within the United States (Vandenabeele et al. 2004), but there is little research on the generalizability and applicability of the dimensions and scale of PSM in the other countries. National culture may influence the construct of PSM in North American studies, and it is an empirical question whether it is possible to measure PSM in a different cultural context using the same approach.

A major concern about using a scale developed in another country is its validity across societies (Hui, Lee, and Rousseau 2004). An important step in establishing the generalizability of PSM is to assess its applicability in other countries. This study tests whether the structure of PSM observed in the United States by Perry (1996) can be generalized to Korea. The purpose of this empirical investigation is to explore the content and factor structure of PSM in the Korean context and to cross-validate Perry's (1996) scale. Two independent samples ($n_1 = 294$ and $n_2 = 290$) are used to validate the scale.

THE PSM

PSM assumes that civil servants are characterized by an ethic to serve the public. They are committed to the public interest, characterized by an ethic built on benevolence, a life in service of others, and a desire to affect society (Houston 2006). According to Perry and Wise (1990, 368), PSM is defined as "an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations."

PSM has rational, norm-based, and affective motives (Knoke and Wright-Isak 1982; Perry and Wise 1990). Rational motives are grounded in individual utility maximization; norm-based motives are grounded in a desire to pursue the common good and further the public interest; and affective motives are grounded in human emotion. A variety of rational, norm-based, and affective motives appear to be primarily or exclusively associated with public service. Perry (1996) identified four empirical components of the PSM construct, and three of these subscales map directly to motivational foundations (Perry 1996, 2000). APM coincides with rational choice processes, CPI with normative processes, and COM with affective processes. The outcome of Perry's (1996) study was the development of a list of 24 items measuring the four subscales of PSM.

Recently, the components of PSM have been analyzed further. Brewer, Selden, and Facer (2000) found that there are four different conceptions of PSM: Samaritans, communitarians, patriots, and humanitarians. The primary motives common to all these are serving the public, making a difference in society, and ensuring individual and social equity. Note that an interest in politics and policy making is not a characteristic of any of these conceptions of PSM. After reviewing PSM from a comparative perspective, Vandenabeele et al. (2004) concluded that PSM is a universal concept, and all four dimensions of Perry (1996) can be found when describing the French and Dutch variants. Choi (2004) examined the relationship between PSM and ethical behavior and suggested that only the SS component of PSM is related to the critical factors that influence the ethical reasoning level of public servants in the United States. Lee (2005) found that, among Korean public employees, the component of APM did not affect performance levels, but the other three components did. Thus, it is meaningful to empirically explore the four components of PSM in different cultural contexts.

THE KOREAN CONTEXT

Korean culture is deeply rooted in Confucian values and ideals, which has heavily influenced Korean government and Korean attitudes toward government (Ro, Frederickson, and Hwang 1997). As a Confucian-oriented society, the Korean people think of themselves "as part of an organic whole that includes human society and the world around it, hierarchically arranged, related in a family-like pattern with eternally ordained responsibilities for everyone" (Macdonald 1996, 13). The people are inclined to respect and honor government officials as members of a class possessing superior benevolence, wisdom, and administrative ability and, therefore, entitled to special status. For centuries, the most honored profession in Korea was government service. Even though the civil service has lost some of its earlier prestige, partly because financially rewarding jobs have become more plentiful in private industry and commerce, civil service is still one of the highest callings in Korea.

Korea's civil service has traditionally been characterized by closed recruiting and a rank-in-person system. The origins of this system date back 1,200 years to the Kingdom of Unified Shilla era (Kim 2006). The government rank-in-person is composed of nine grades, from Grade 9 to Grade 1 (the lower the number, the higher the position), and new entrance through open competition applies to only three kinds of grades: Grade 5, 7, and 9. Once civil servants are appointed, they expect to have life-long job security and periodic promotions. It is difficult to enter the higher grades directly from the outside. Given the high level of job security and social reputation of government employees, the open exams for civil service are highly competitive. Anyone who wishes to be a civil servant is eligible for the exam, regardless of academic background, previous career, gender, or social standing. The exam result is the only criterion that determines who will work for the government. The average rate in 2005 was 81 applicants for every position available (Civil Service Commission 2005). The Korean civil service is divided into national and local governments, but local government follows the general framework of the national civil service system.

Korea and the United States represent substantially different cultures. According to Hofstede (1991), Korea is categorized as a collectivistic and feminine society, with a high level of power distance and uncertainty avoidance, whereas the United States is viewed as an individualistic and masculine society, with a low level of power distance and uncertainty avoidance. Collectivism is frequently discussed when compared with American culture (Riordan and Vandenberg 1994). A recent empirical analysis of cultural influences on the Korean government showed that cultural traits such as Confucian ethics and collectivism may affect public employees' whistle-blowing intentions in degree and direction (Park, Rehg, and Lee 2005).

Therefore, one can expect that the structure of PSM in Korea is influenced by Confucian values, collectivist culture, and the high prestige of public service. Confucian culture has built Korean civil servants' devotion to national development and dedication to prove their professional integrity. They are asked to sacrifice their personal interest for public good. One may expect that the normative and affective motives will be more prominently related to PSM in Korea than the rational motives, and the items related to Confucian values and collectivistic culture will be more valid measures of the dimensions.

METHODS

Samples

Two independent samples of civil servants were used in the study ($n_1 = 294$ and $n_2 = 290$). Data from the first study were used for scale validation, reduction, and for establishing the optimal factor structure of PSM in the Korean context. Data from the second study were used to cross-validate the factor structure derived from the first study. Both samples were used for testing the second-order structure of the PSM scale.

The first survey was conducted in January 2004. Five central government ministries and agencies and three upper-level local governments were randomly selected, and 350 permanent full-time civil servants were selected by stratified sampling. The strata used for this sampling were grade and gender. The participants were given surveys to complete during regular working hours; 315 surveys were returned, yielding a response rate of 90%. To create a data file for statistical analysis, the 21 cases with missing data for any of the PSM indicators were deleted, and 294 cases were retained. Among the respondents, 179 were from the central government and 115 were from the upper-level local governments (provinces and metropolitan cities). Men comprised 80.5% of the respondents and 19.5% of the respondents were women. The positions they held in their respective organizations included general staff (74.2%) and management (25.8%).

The second survey was conducted in October 2004. The questionnaires were distributed to 350 full-time civil servants, selected by stratified sampling, in Seoul Metropolitan Government. The strata used for this sampling were organizational unit (department), grade, and gender. They returned 297 surveys, yielding a response rate of 84.9%. Deleting 7 cases with missing data left a total of 290 cases. Among the respondents, 216 (74.5%) were men, 73 (25.2%) were women, and 1 did not answer. The positions included general staff (87.6%) and management (12.4%).

Measures

To increase the accuracy of responses, each survey was distributed with a cover sheet guaranteeing anonymity. PSM was measured with Perry's (1996) 24-item scale: three items for the subscale of APM, five items for CPI, eight items for COM, and eight for SS. To assure of the measures in the Korean and the English versions were equivalent, all the scales used in this study were translated into Korean, and the researchers and civil servants examined the questionnaires to ensure that the items were interpretable in Korean. All the items were answered to on a 5-point Likert type scale (1 = strong disagreement, 5 = strong agreement).

Analyses

The statistical analysis applied confirmatory factor analysis (CFA) using *Amos 5.0* (Arbuckle 2003) with the maximum likelihood estimation method. CFA was used to assess the fit of the data to the hypothesized measurement model because CFA would be preferred where measurement models have a well-developed underlying theory for hypothesized patterns of loadings.

For model fit assessment, both inferential χ^2 and a group of descriptive goodness-of-fit indices (GFIs) were consulted. Lower values of χ^2 indicate a better fit and should be

nonsignificant, but for large sample sizes, this statistic may lead to rejection of a model with a good fit. Models with many variables and degrees of freedom will have significant chi-squares. Thus, the chi-square statistic needs to be adjusted by the degrees of freedom to assess model fit. This is the normed chi-square measure (χ^2/df) for which values between 1.0 and 5.0 fall within the level of acceptance (Schumacker and Lomax 1998). Several widely used descriptive fit indices were also used for assessing model fit, such as comparative fit index (CFI), GFI, incremental fit index (IFI), and the root mean square error of approximation (RMSEA). Although there are no specific guidelines for assessing the fit of a model, in general, the larger the values of CFI, GFI, and IFI, and the smaller the value of RMSEA, the better the fit of the model (Bollen 1989). The model achieves an acceptable fit to the data when CFI, GFI, and IFI equal or exceed .90, and RMSEA values fall below .08 (Byrne 2001; Kline 2005; Vandenberg and Lance 2000).

As Anderson and Gerbing (1988) pointed out, initially specified models almost invariably fail to provide acceptable fit, and the models must be modified and tested again using the same data. After acceptable fit has been achieved with a series of respecifications, the next step is to cross-validate the final model on another sample. All modifications to the original model were performed in Study 1 ($n_1 = 294$), and an exclusively confirmatory approach was followed in the second study ($n_2 = 290$).

RESULTS

Study 1 ($n_1 = 294$)

The four-correlated-factor model suggested by Perry (1996) was tested using CFA. The CFA model in the first study hypothesized a priori that (1) responses to the 24-item PSM scale could be explained by four factors; (2) each item would have a nonzero loading on the PSM factor, it was designed to measure and zero loadings on all other factors; (3) the four factors would be correlated; and (4) measurement error terms would be uncorrelated (Byrne 2001).

The resulting CFA for Sample 1 suggested that the four-correlated-factor model was not a good fit to the data, χ^2 ($df = 246$) $= 697.9$, $p < .001$; $\chi^2/df = 2.837$; CFI $= .768$; GFI $= .824$; IFI $= .771$; RMSEA $= .079$, because the three fit indices were below the .90 benchmark typically used for acceptable fit. The GFI in Perry's (1996) 24-items four-dimension model was also less than .90. The descriptive statistics, reliabilities, and standardized factor loadings are presented in table 1.

The reliability coefficient (Cronbach's α) for the 24-item PSM scale was .83, and the coefficients for the four subscales ranged from .62 to .74. In Perry's (1996) findings, the reliability coefficient for the 24-item scale was .90, and those for the four subscales ranged from .69 to .74. The coefficient alphas of this analysis are lower than Perry's but acceptable. In Perry's (1996) reports, the factor loadings ranged from .39 to .78, and those in 14 items were greater than .50. But in this sample, the factor loadings ranged from .178 to .776, and those in 16 items were greater than .50. The items with lower factor loadings were mostly negatively-worded items or were less related to Confucian values and collectivistic culture.

Given the disconfirmation of the initial model, an effort was made to estimate an alternative model. Using factor loading as a criterion, the items with the lowest factor loading in each subscale were deleted, and a CFA model with the remaining scale items was tested again and again until it achieved an acceptable fit to the data. The outcome of this item-reducing process was a 14-item scale of four factors: The three measures of APM are the same as those in Perry's (1996) scale, two community-related CPI items are deleted, the

Table 1
Descriptive Statistics and Standardized Estimates of the 24-Item PSM Scale (Sample 1)

Factors and Items	Mean	SD	Factor Loading	Alpha
APM				
PSM1: Politics is a dirty word. (R)	2.95	0.881	0.460	.62
PSM2: The give and take of public policy making doesn't appeal to me. (R)	2.94	0.846	0.601	
PSM3: I don't care much for politicians. (R)	2.67	0.969	0.739	
CPI				
PSM4: It is hard for me to get intensely interested in what is going on in my community. (R)	3.24	0.862	0.317	.68
PSM5: I unselfishly contribute to my community	3.17	0.780	0.390	
PSM6: I consider public service my civic duty.	3.82	0.666	0.722	
PSM7: Meaningful public service is very important to me.	3.90	0.598	0.776	
PSM8: I would prefer seeing public officials do what is best for the whole community even if it harmed my interests.	3.96	0.707	0.650	
COM				
PSM9: It is difficult for me to contain my feelings when I see people in distress.	4.00	0.563	0.762	.73
PSM10: Most social programs are too vital to do without.	3.75	0.750	0.431	
PSM11: I am often reminded by daily events how dependent we are on one another.	3.85	0.649	0.702	
PSM12: I am rarely moved by the plight of the underprivileged. (R)	3.80	0.763	0.627	
PSM13: To me, patriotism includes seeing to the welfare of others.	3.68	0.617	0.567	
PSM14: I have little compassion for people in need who are unwilling to take the first step to help themselves. (R)	2.89	0.850	0.178	
PSM15: There are few public programs that I wholeheartedly support. (R)	3.19	0.737	0.302	
PSM16: I seldom think about the welfare of people I don't know personally. (R)	3.54	0.698	0.566	
SS				
PSM17: Doing well financially is definitely more important to me than doing good deeds. (R)	3.45	0.785	0.269	.74
PSM18: Much of what I do is for a cause bigger than myself.	3.42	0.800	0.291	
PSM19: Serving other citizens would give me a good feeling even if no one paid me for it.	3.74	0.650	0.633	
PSM20: Making a difference in society means more to me than personal achievements.	3.48	0.733	0.607	
PSM21: I think people should give back to society more than they get from it.	3.50	0.728	0.535	
PSM22: I am prepared to make enormous sacrifices for the good of society.	3.33	0.727	0.715	
PSM23: I am one of those rare people who would risk personal loss to help someone else.	2.93	0.738	0.554	
PSM24: I believe in putting duty before self.	3.46	0.713	0.646	

Note: (R), reversed coding. All factor loadings are significant at $p < .001$.

three negatively-worded items and an item related to social programs are deleted from COM, and the four items emphasizing contribution to society are selected in SS.

The reliability coefficient for the 14-item PSM scale in Sample 1 was .79, and the coefficients for the four subscales ranged from .62 to .74. The four-correlated-factor model was tested with 14 scale items, and the resulting CFA showed that it fit the data, χ^2 ($df = 71$) = 178.4, $p < .001$; $\chi^2/df = 2.513$; CFI = .910; GFI = .916; IFI = .911; RMSEA = .072. The result showed a clean four-factor structure with all scale items loading significantly onto their a priori dimensions. The results also provided support for convergent validity because all factor loadings were statistically significant with critical t values ranging from 4.976 ($p < .001$) to 10.914 ($p < .001$), and the standardized factor loadings values ranging from .466 to .774. The correlation estimates between the two factors ranged from −.013 to .806 and the confidence intervals (±2 standard errors) around the correlation estimate between the two factors did not include 1.00, supporting the discriminant validity of this four-factor model (Anderson and Gerbing 1988). The standardized factor loadings of items and correlations among the latent factors of the 14-item PSM scale are shown in table 2.

Study 2 ($n_2 = 290$)

After performing the CFA on Sample 1, the four-factor 14 items identified in Sample 1 were used as a basis for conducting a CFA in Sample 2. If the CFA with a four-factor structure yields an acceptable fit in Sample 2, it indicates the presence of four distinguishable dimensions of PSM in Korea. The reliability coefficient for the 14-item PSM scale in Sample 2 was .76, and the coefficients for the four subscales ranged from .60 to .74. The resulting CFA showed that the four-correlated-factor structure fit the data, χ^2 ($df = 71$) = 159.9, $p < .001$; $\chi^2/df = 2.252$; CFI = .911; GFI = .923; IFI = .913; RMSEA = .066. All standardized loadings were statistically significant, providing support for convergent validity, and latent factor correlations provided support for discriminant validity. Thus, the results of CFA on Samples 1 and 2 indicated the presence of four distinct dimensions of PSM in Korea.

Testing Second-Order Model

The good fit of the first-order model is a prerequisite for the tenability of the second-order PSM model, which is nested within the first-order model. PSM is conceived as a superordinate multidimensional construct because it represents a general concept that is manifested by specific dimensions (Edwards 2001). Multidimensional constructs and their dimensions are better treated as latent variables in structural equation models. A superordinate construct is best viewed as a second-order factor with its dimensions as first-order factors. PSM is, thus, treated as a second-order latent construct composed of the four latent dimensions: APM, CPI, COM, and SS. The second-order model of PSM uses the four first-order factors as indicators of one second-order factor (PSM), giving more degrees of freedom. If the model is correct theoretically, it should be able to explain the six covariances between the four factors with only four parameters (Bratt 2005). Second-order CFA would be appropriate to test the structure of the PSM construct because it assesses the loading of items on their first-order latent construct as well as the loading of the first-order constructs on the second-order latent construct (Boudrias, Gaudreau, and Laschinger 2004). Unfortunately, Perry (1996) did not verify the second-order latent structure of PSM.

Table 2
Standardized Factor Loadings and Correlations for the 14-Item PSM Scale (Sample 1)

Factors and Items	Factor Loading	Alpha
APM		
PSM1: Politics is a dirty word. (R)	0.466	.62
PSM2: The give and take of public policy making doesn't appeal to me. (R)	0.606	
PSM3: I don't care much for politicians. (R)	0.729	
CPI		
PSM6: I consider public service my civic duty.	0.683	.74
PSM7: Meaningful public service is very important to me.	0.773	
PSM8: I would prefer seeing public officials do what is best for the whole community even if it harmed my interests.	0.684	
COM		
PSM9: It is difficult for me to contain my feelings when I see people in distress.	0.774	.74
PSM11: I am often reminded by daily events how dependent we are on one another.	0.732	
PSM12: I am rarely moved by the plight of the underprivileged. (R)	0.587	
PSM13: To me, patriotism includes seeing to the welfare of others.	0.535	
SS		
PSM19: Serving other citizens would give me a good feeling even if no one paid me for it.	0.688	.73
PSM20: Making a difference in society means more to me than personal achievements.	0.564	
PSM22: I am prepared to make enormous sacrifices for the good of society.	0.659	
PSM24: I believe in putting duty before self.	0.638	

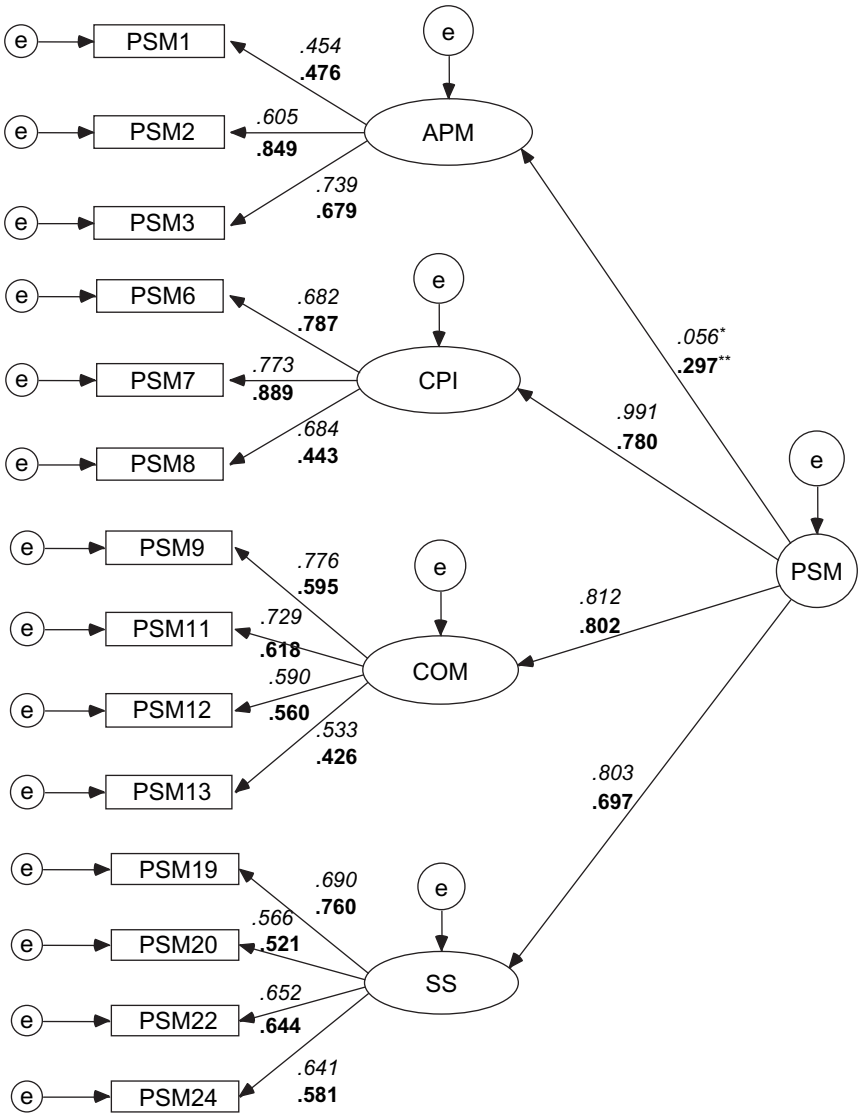
Interfactor Correlations

	1	2	3
1. APM			
2. CPI	.054		
3. COM	−.013	.806***	
4. SS	.128	.794***	.651***

Note: (R), reversed coding. All factor loadings are significant at $p < .001$. ***$p < .001$.

The second-order CFA model was tested using Samples 1 and 2. Using Sample 1, the resulting CFA showed that the second-order four-factor model fit the data, χ^2 (df = 73) = 181.3, $p < .001$; $\chi^2/df = 2.484$; CFI = .909; GFI = .915; IFI = .910; RMSEA = .071, and provided adequate support for the existence of the second-order structure of PSM. Using Sample 2, the resulting CFA showed that the second-order four-factor model fit the data, χ^2 (df = 73) = 161.7, $p < .001$; $\chi^2/df = 2.214$; CFI = .911; GFI = .923; IFI = .913; RMSEA = .065. Thus, the second-order model of PSM was confirmed in the Korean context. A pictorial representation of these second-order models is shown in figure 1.

Figure 1
Second-order four-factor model of PSM. Standardized factor loadings of PSM model for Sample 1 (italic characters) and Sample 2 (bold characters). All standardized factor loadings except (^{a}) or (**) are significant at $p < .001$. $^{*}p > .05$, $^{**}p < .01$.



As shown in figure 1, the standardized second-order factor loadings of CPI, COM, and SS ranged from .803 to .991 in Sample 1 and from .697 to 802 in Sample 2; the paths from the second-order factor of PSM to the three first-order factors, except the dimension of APM, were all significant. However, the APM loading on the PSM higher order factor was rather problematic. It had a standardized loading of .056 in Sample 1 and .297

Table 3
Standardized Factor Loadings and Correlations for the 14-Item PSM Scale (Sample 2)

Factors and Items	Mean	SD	Factor Loading	Alpha
APM				
PSM1	2.97	0.872	0.478	.71
PSM2	2.96	0.942	0.855	
PSM3	2.79	1.019	0.673	
CPI				
PSM6	3.70	0.653	0.788	.74
PSM7	3.74	0.609	0.887	
PSM8	3.80	0.712	0.444	
COM				
PSM9	3.99	0.573	0.594	.60
PSM11	3.84	0.570	0.617	
PSM12	3.78	0.796	0.561	
PSM13	3.59	0.711	0.428	
SS				
PSM19	3.79	0.654	0.766	.72
PSM20	3.40	0.806	0.518	
PSM22	3.24	0.727	0.639	
PSM24	3.46	0.716	0.581	

Interfactor Correlations

	1	2	3
1. APM			
2. CPI	.252**		
3. COM	.269**	.615***	
4. SS	.142	.550***	.571***

Note: (R), reversed coding. All factor loadings are significant at $p < .001$. $^{**}p < .01$, $^{***}p < .001$.

($p < .01$) in Sample 2. The square of the standardized second-order factor loading is equal to the variance of the first-order factor, which can be explained by the second-order factor (Cheung 2000). The APM obtained the lowest second-order factor loading. This implies that it was least influenced by the second-order factor of PSM. The APM dimension was least related to the other three factors (table 2 and table 3), which is due to its low loading on the second factor. Thus, the APM dimension was not satisfactorily represented by the PSM second-order construct.

DISCUSSION

The results show that the four-factor structure of PSM can be generalized in the Korean context, but the APM dimension does not appear to be a valid PSM dimension in Korea. There are several ways to explain this. First, in the Korean context, which differs from the United States, rational motives might not be related to PSM. The APM dimension represents a motive rooted in rational choice theory. Perry and Wise (1990) explained that individuals may be drawn to government or to pursue particular courses of action within government because of a belief that their choices will facilitate the interests of special groups and that one motive prevalent in pluralistic societies is an individual's conscious or unconscious advocacy for special interests. But unlike the United States, Korean society

is very homogeneous; Koreans share a sense of ethnic identity and a common culture (Macdonald 1996). Under the influence of Confucian virtues and collectivistic culture, Koreans are inclined to become civil servants to serve the public and enhance the public interest generally, not specifically in their own interests. Thus, normative and affective motives will be more prominently related to PSM than rational motives.

Secondly, it might be reasonable that rational motives in general are not part of PSM. The rational choice approach to motivation is based on an assumption of utility-maximizing behavior (Shamir 1991). A rational actor calculates costs and benefits associated with alternative actions and chooses the alternative that maximizes expected values (Perry 1996). However, PSM suggests that public employees are more likely to possess attitudes that are altruistic and to be motivated by a strong desire to perform public, community, and social service (Brewer 2003; Houston 2006). In Perry's (1996) study, the correlations between APM and other subscales (.28 – .38) were lower than those between the other subscales (.58 – .89). The same results are shown in this study. Perry (1997) found that professional identification, as an antecedent of PSM, is negatively related to APM but positively associated with COM and SS. Brewer, Selden, and Facer (2000) found that politics and policy making are not driving motives involved in performing public service. The attitudinal and behavioral implications of PSM could not be calculated by a rational choice formula or as a function of self-interest. Civil servants are more inclined to abandon self-interests to promote the welfare of others or the public interest (DiIulio 1994); thus, PSM needs to be more focused on normative and affective motives, deleting the dimension of rational motives.

Third, it might be reasonable that the APM is not an appropriate rational motive base of PSM.[1] The scale items do not ask whether the respondents are attracted to public policy making; rather, they ask if they like or dislike politics, politicians, and political phenomena. These items are not appropriate for measuring the essential components of rational motives. Thus, it is necessary to develop the more valid measures of APM, reflecting motives such as participation in the process of policy formulation, commitment to a public program because of personal identification with it, and advocacy for special or private interests (Perry and Wise 1990).

Fourth, one could say that the negatively worded items on Perry's (1996) scale are not appropriate to adequately assess the perceptions and feelings of respondents, and thus, it is necessary to modify Perry's instrument to assess APM more effectively. Modifying these items and adding some more positively worded items would improve the scale. Perry (1996, 20) also mentioned this problem:

Because the current subscale is composed entirely of negatively worded items, it confounds whether the subscale taps the APM dimension or whether it also may tap cynicism or negative affect toward politics. Thus, the addition of positively worded items would be desirable.

CONCLUSION

The purpose of the present study was to examine whether the structure of PSM observed in the United States by Perry (1996) can be generalized to Korea. The initial model with Perry's (1996) 24-item scale was not a good fit to the present data, so a 14-item scale

1 An anonymous reviewer suggested that the APM scale items have little face validity as indicators of APM itself and of a rational motivational base.

of four factors was developed through the process of modifications. We found that the four-factor structure of PSM can be generalized in the Korean context, but in the second-order model, it is doubtful whether the APM dimension is a valid dimension of PSM. It seems that the three-factor model, without the APM dimension, is a more appropriate measure of PSM in Korea. Possible explanations for this finding include: (1) rational motives might not be related to PSM in the Korean context, (2) rational motives might not be part of PSM at all, (3) scale items measuring APM might not be appropriate to represent a rational base of PSM, and (4) negatively worded scale items from Perry (1996) might not be appropriate to assess APM. However, this study alone is insufficient to show which explanation is more reasonable. Further studies are needed to figure out whether APM should be included as an essential subscale of PSM or not.

This study used a 14-item scale instead of 24 items for achieving a better fit for the model. Shorter scales are generally preferred in studies so that respondents' workload is reduced. Nevertheless, it is necessary to establish that the shorter version is a valid and reliable measure of the construct that the longer scale measures (DeVellis 1991). The 14-item scale was shown as a valid measure, but the reliability coefficients of some subscales were not good enough according to Nunnally's (1978) recommended level of .70. Future studies need to pay more attention to expression and translation of the scale items.

PSM has significant implications in the field of public administration, and its scale needs to be fully explored and examined. Further validation studies on the PSM scale should be done in different contexts and in different samples, including adjustments to the scale to improve the fit of the model in some contexts. Future research should also investigate whether rational motives are really one of the analytically distinct PSM bases, as well as attempt to develop more adequate indicators of APM.

REFERENCES

Anderson, James C., and David W. Gerbing. 1988. Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin* 103:411–23.

Arbuckle, James L. 2003. *Amos 5.0 update to the Amos user's guide*. Chicago, IL: SmallWaters.

Bollen, Kenneth A. 1989. *Structural equations with latent variables*. New York: John Wiley.

Boudrias, Jean-Sébastien, Patrick Gaudreau, and Heather K. Spence Laschinger. 2004. Testing the structure of psychological empowerment: Does gender make a difference? *Educational and Psychological Measurement* 64:861–77.

Bratt, Christopher. 2005. The structure of attitudes toward non-western immigrant groups: Second-order factor analysis of attitudes among Norwegian Adolescents. *Group Processes & Intergroup Relations* 8:447–69.

Brewer, Gene A. 2003. Building social capital: Civic attitudes and behavior of public servants. *Journal of Public Administration Research and Theory* 13:5–26.

Brewer, Gene A., Sally Coleman Selden, and Rex L. Facer II. 2000. Individual conceptions of public service motivation. *Public Administration Review* 60:254–64.

Byrne, Barbara M. 2001. *Structural equation modeling with Amos: Basic concepts, applications, and programming*. Mahwah, NJ: Erlbaum.

Cheung, Derek. 2000. Evidence of a single second-order factor in student ratings of teaching effectiveness. *Structural Equation Modeling* 7:442–60.

Choi, Do Lim. 2004. Public service motivation and ethical conduct. *International Review of Public Administration* 8:99–106.

Civil Service Commission, Republic of Korea. 2005. *Public human capital reform*. Seoul, Korea: Civil Service Commission.

Crewson, Philip E. 1997. Public-service motivation: Building empirical evidence of incidence and effect. *Journal of Public Administration Research and Theory* 7:499–518.
DeVellis, Robert F. 1991. *Scale development: Theory and applications*. Thousand Oaks, CA: Sage.
DiIulio, John D., Jr. 1994. Principled agents: The cultural bases of behavior in a federal government bureaucracy. *Journal of Public Administration Research and Theory* 4:277–318.
Edwards, Jeffrey R. 2001. Multidimensional constructs in organizational behavior research: An integrative analytical framework. *Organizational Research Methods* 4:144–92.
Hofstede, Geert. 1991. *Cultures and organizations*. London: McGraw-Hill.
Houston, David J. 2000. Public-service motivation: A multivariate test. *Journal of Public Administration Research and Theory* 10:713–27.
———. 2006. "Walking the walk" of public service motivation: Public employees and charitable gifts of time, blood, and money. *Journal of Public Administration Research and Theory* 16:67–86.
Hui, Chun, Cynthia Lee, and Denise M. Rousseau. 2004. Psychological contract and organizational citizenship behavior in China: Investigating generalizability and instrumentality. *Journal of Applied Psychology* 89:311–21.
Kim, Joong Yang. 2006. *The Korean civil service system*. Seoul, Korea: Bubmunsa.
Kline, Rex B. 2005. *Principles and practices of structural equation modeling*, 2nd ed. New York: Guilford.
Knoke, David, and Christine Wright-Isak. 1982. Individual motives and organizational incentive systems. *Research in the Sociology of Organizations* 1:209–54.
Lee, Geunjoo. 2005. PSM and public employees' work performance. *Korean Society and Public Administration* 16:81–104.
Macdonald, Donald Stone. 1996. *The Koreans: Contemporary politics and society*. Boulder, CO: Westview.
Nunnally, Jum C. 1978. *Psychometric theory*. New York: McGraw-Hill.
Park, Heungsik, Michael T. Rehg, and Donggi Lee. 2005. The influence of Confucian ethics and collectivism on whistle blowing intentions: A study of South Korean public employees. *Journal of Business Ethics* 58:387–403.
Perry, James L. 1996. Measuring public service motivation: An assessment of construct reliability and validity. *Journal of Public Administration Research and Theory* 6:5–22.
———. 1997. Antecedents of public service motivation. *Journal of Public Administration Research and Theory* 7:181–97.
———. 2000. Bringing society in: Toward a theory of public-service motivation. *Journal of Public Administration Research and Theory* 10:471–88.
Perry, James L., and Lois Recascino Wise. 1990. The motivational bases of public service. *Public Administration Review* 50:367–73.
Riordan, Christine M., and Robert J. Vandenberg. 1994. A central question in cross-cultural research: Do employees of different cultures interpret work-related measures in an equivalent manner? *Journal of Management* 20:643–71.
Ro Chung-hyun, H. George Frederickson, and Sung-don Hwang, eds. 1997. *Confucian thought and bureaucracy in East Asia*. Seoul, Korea: Korea Institute of Public Administration.
Schumacker, Randall E., and Richard G. Lomax. 1998. *A beginner's guide to structural equation modeling*. Hillsdale, NJ: Erlbaum.
Shamir, Boas. 1991. Meaning, self and motivation in organizations. *Organization Studies* 12:405–24.
Vandenabeele, Wouter, Annie Hondeghem, Jeroen Maesschalck, and Roger Depré. 2004. Values and motivation in public administration: Public service motivation in an international comparative perspective. Presented at EGPA 2004 Annual Conference, Ljubljana, Slovenia, September 1–4
Vandenberg, Robert J., and Charles C. Lance. 2000. A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods* 2:4–69.