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Articles

Government Officials' Self-Assessed Expertise and Subject Organizational Performance: Does Recruitment Type Matter?

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This study verified whether the relationship between self-assessed expertise and subject organizational performance of government officials in South Korea would vary depending on the type of recruitment system—open competitive examination for recruitment (OCER) and mid-career competitive recruitment (MCCR). Multiple regression analysis was conducted using Public Employee Perception Survey data from the Korea Institute of Public Administration. The results demonstrated that self-assessed expertise positively affected organizational performance. However, when the two groups were analyzed separately, self-assessed professionalism was not a significant factor in the MCCR model. Additionally, the mediation effect of work autonomy was confirmed between the two models; the mediation effect was present in the OCER group, but not in the MCCR group. The results suggest that creating conditions for work and personnel management that allow MCCR employees to maximize their expertise is necessary, however, the government's current personnel management system prevents their expertise from being fully utilized.

INTRODUCTION

Governance by performance management has spurred theoretical debates within the public administration literature on how to manage organizational performance (Moynihan, 2008, p. 3). The debate's fundamental question is: How should organizational performance be enhanced? Concerning performance determinants, some scholars stress organizational impacts (e.g. Daft et al., 2010; Moynihan & Pandey, 2005; Tolbert & Hall, 2005; Wolf, 1993), while others emphasize individual manager activities (e.g. Meier & O'Toole Jr, 2001, 2002, 2003, 2005, 2007; O'Toole Jr & Meier, 2004a, 2004b, 2006), the need to satisfy the motivational urges of organization members (e.g. Alonso & Lewis, 2001; Angle & Perry, 1981), and the influence of goal clarity (e.g. Balfour & Wechsler, 1991, 1996; Chun & Rainey, 2005a, 2005b; Moynihan & Pandey, 2005; Rainey & Steinbauer, 1999). Strategic orientation, outcome-based and citizen-orientated objectives, cooperative relationships, competences, and high employee engagement are key factors facilitating high organizational performance (e.g. Blackman et al., 2012; Cho et al., 2017), while human resources (HR) are among the major determinants of high organizational performance (e.g. Blackman et al., 2019; Dyer & Reeves, 1995; Germain & Tejeda, 2012). Human resource management (HRM) activities influence the entire recruitment and competency development of public officials.

Studies suggest that the expertise of leaders or members is positively related to organizational performance (e.g. Bonner et al., 2002; Chan, 2010; Currie & Procter, 2005; Goodall & Bäker, 2015; Kirkpatrick et al., 2017; S.-Y. Lee & Whitford, 2013; Mumford et al., 2002). When defined at an analytical level, expertise can be understood as a bureaucracy's accumulation of knowledge or an individual bureaucrat's personal capacity. Cho et al. (2017) conducted focus group interviews to extract the expertise of South Korean government officials based on four dimensions: problem-solving capacity, public ethics, job performance capacity, and managerial capacity. As the complexity of an administrative environment increases, both the government's problem-solving capabilities and government officials' expertise are pivotal to effective public administration. Therefore, prior studies on organizational performance and expertise of public officials have focused on proposing possible institutional improvements to job rotation and/or career development programs that often impede the accumulation of expertise (Campion et al., 1994). Although extant literature can undeniably improve personnel systems, its limitations are also clear: it does not facilitate the understanding of how government officials' expertise influences organizational performance (H. Lee, 2019).

This study adds to our understanding of the relationship between government officials' expertise and organizational performance based on job recruitment type. Specifically, it utilizes perceptual measures of the extent to which the South Korean government's mid-career competitive recruitment program increases government performance (prob-

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lem-solving capacity, achievement of organizational aims) by strengthening officials' expertise. As general service staff's lack of expertise has long been criticized within the executive branch, most mid-career competitive recruitment program hires are professional license holders, former researchers, or specialists. Therefore, there is an increasing need to better understand what work environment determinants are conducive to government officials' manifesting expertise; in other words, to discern different types of expertise manifested by generalists and specialists and to allow the full exploitation of their expertise and enhanced organizational performance. Furthermore, the findings may further elucidate the differential effects of government official recruitment types on (perceived) organizational performance.

THEORETICAL REVIEW AND HYPOTHESIS

HUMAN RESOURCE MANAGEMENT THEORY AND EXPERTISE

The relationship between expertise and organizational performance is one of the central topics of HRM in public administration literature. HR strategies are positively related to subjective or objective organizational performance (e.g. Brewer & Selden, 2000; Delaney & Huselid, 1996; Lu et al., 2015). HRM activities not only influence the entire recruitment and competency development of public officials but also enhance organizational performance, especially by strengthening the ability to handle policy issues and management capabilities of public officials. In other words, high performing organizations make strategic moves to increase performance by enhancing job design, recruitment, education and training, and provision of compensation/incentives (Blackman et al., 2019). Since the government strives to maintain and reinforce the professionalism of public officials to improve organizational performance, bureaucrats' expertise becomes the core management target of HRM (Brewer & Selden, 2000). However, the level of employee expertise is neither fixed nor constant (Andersen & Moynihan, 2016). For example, it was found that the capacity to handle civil affairs of general public officials peaked when the working period was 19 months and then decreased (Kim et al., 2008). Moreover, the expertise acquired through professional training or work experience in special areas is difficult to cultivate in the government (see Chen et al., 2020).

Government Officials' Expertise and Organizational Performance

Research shows that bureaucrats' expertise positively affects organizational performance (S.-Y. Lee & Whitford, 2013). Various aspects of expertise can affect organizational performance. Although the effect of expertise on organizational performance may vary depending on the contents of expertise, the position of the bureaucrat, and the field of work, several studies have confirmed an association between these concepts. For example, Yoo (2018) examined the influence of leaders' expertise on organizational performance in the public sector, based on various dimensions such as leader's expertise, generic managerial expertise, internal organizational expertise, and knowledge-based expertise; for organizational performance, effectiveness, efficiency, and equity. The results indicated that generic managerial expertise positively influences organizational efficiency.

Bureaucrats' expertise has a positive effect on the government's organizational performance for several reasons: First, the more the expertise in an organization, the more likely it is that decisions will be made correctly within that organization. For knowledge management, decision making strategies are crucial factors for organizations (Abubakar et al., 2019). Bonner et al. (2002) conducted experiments in which an individual's performance information was provided to the experimental group but not to the control group. The results demonstrated that expert-weighted decisions were made to ensure that the group operated at the best level. These findings suggest that level of expertise significantly impacts group decision making, and that expert-oriented decision making can enhance organizational performance. In addition, if members have high expertise, they are more likely to make correct decisions because they possess excellent ability to identify information that is relevant and essential for policy decision-making (Andersen & Moynihan, 2016). Second, public officials with high expertise contribute to organizational performance by better understanding organizational goals. In particular, leaders improve organizational performance not only by understanding core tasks themselves, but also by encouraging the understanding of organizational goals by their subordinates (Chan, 2010; Mastrangelo et al., 2014). Considering the above studies, we propose the following hypothesis:

Hypothesis 1: The more positively a government official perceives his or her level of expertise to be, the more positively he or she is likely to view his or her organizational performance.

Channels of Recruitment and Organizational Performance

Recruitment Program overview. The South Korean civil service is based on the career civil service system. There are two main types of recruitment: open competitive examination for recruitment (OCER) and mid-career competitive recruitment (MCCR). Any law-abiding citizen can apply for the OCER, and the government hires new talent based on uniform standards. Despite several obvious advantages of OCER, including securing equal opportunity (of application) and a fair selection process (by meritocratic principles), concerns have been raised that it lacks not only responsiveness to the changing environment but also efficiency in personnel management. The government has strived to diversify its channels of recruitment by introducing MCCR to mobilize mid-career experts who pass the minimum career and qualification threshold and qualify in the MCCR examination. In sum, MCCR reinforces meritocracy both in terms of application opportunity and selection process. It is highly likely that the officials hired through OCER will become generalists, while those hired through MCCR are specialists.

There are annual variations in the number of MCCR recruits as well as the ratio of MCCR to OCER recruits, even

under the same government (the Lee Myung-bak government). For example, the ratio rose from 20.3% in 2008 to 49.7% in 2011. More specifically, concerning general service staff, the ratio of MCCR to OCER recruits rose from 17.7% in 2008 to 147.1% in 2011 and remained above 100% in the 2010s. Most MCCR officials are professional license holders, former researchers, and/or hold the highest degrees in science and technology, as shown in Table 1. Therefore, while the MCCR program was introduced to secure government expertise, criticisms persist regarding government officials' performance and whether MCCR is effective. If this trend of hiring through MCCR persists, the ratio of MCCR to OECR recruits will likely increase, rendering government performance significantly dependent upon MCCR officials' roles and work attitudes.

Channels of recruitment and organizational performance. Organization members' perceptions of expertise and work attitude can depend on their recruitment method, which can also influence organizational performance. Since MCCR is a recruitment type adopted to pursue specialization in special fields, and OCER is a recruitment type for pursuing general administrative expertise, there are inevitable differences in the content of expertise between groups depending on the type of recruitment (Neshkova & Guo, 2012). Regarding companies, Kirkpatrick et al. (2017) found that hiring business experts as directors on the board of the English National Health Service did not affect health service quality but did increase financial performance. Mumford et al. (2002) argued that organizations that do creative work need leaders with creative problem-solving skills. Goodall & Bäker (2015, p. 11) proposed that a leader with expertise in key tasks can improve organizational performance in knowledge-intensive organizations (universities, hospitals, etc.). About government, Kang et al. (2003) compared the work attitudes of contractual workers and permanent government officials in central administrative agencies in South Korea. Contrary to popular belief, their findings revealed that contractual government officials had more positive sentiments toward job satisfaction, organizational resources, and organizational citizenship behavior than permanent government officials. Han (2017) discussed how perceived occupational identity can change depending on recruitment type. He conceptualized expert identity in terms of expert control, expertise acquisition, and area of expert activities, and through interviews with OCER and MCCR officials found that government officials are not highly aware of expert control and do not differentiate between expert and public ethics. However, whereas OCER officials perceive expertise as generic experience gained from job rotation and organizational management, MCCR officials view expertise as special skills and knowledge gained from both civil service experience and specialized education or work experience. As such, the claim that recruitment type influences how government officials perceive expertise and organizational performance seems justified. Government officials hired through MCCR serve as specialists rather than professional administrators. In other words, public officials recruited through OCER and MCCR require different expertise. Hence, we propose the second hypothesis:

Hypothesis 2: Perceived expertise and perceived organizational performance are subject to change depending on recruitment type.

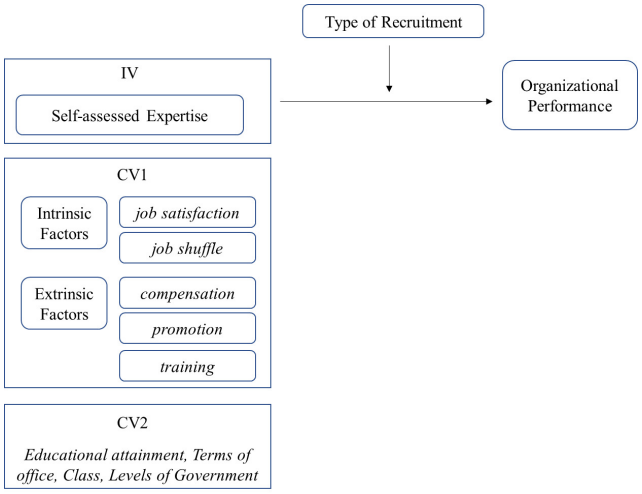

Figure 1. Analysis Framework

RESEARCH DESIGN

Research Model

Figure 1 illustrates our hypothesis that perceived expertise influences perceived organizational performance above and beyond control variables, including HR-related variables. It is also hypothesized that there is a between-group difference in this relationship by recruitment type. However, it should be noted that combining aggressive HR management strategies does not necessarily yield positive outcomes such as increased organizational performance (Delaney & Huselid, 1996). Research generally supports the positive relationship between individual factors and organizational performance.

Data

The study data were sourced from the Public Employee Perception Survey (PEPS), an annual survey conducted by the Korea Institute of Public Administration (KIPA). Since 2012, KIPA has been conducting PEPS to compile comprehensive data on government officials' perceptions of key HR-related issues that enable systematic tracking of perceptual changes. The 2016–2017 survey data were merged to create a pooled dataset. Both surveys were administered by Hankook Research, a local survey and research company, to government officials working in 46 national government departments (42 in 2016) as well as 17 metropolitan governments. Multiple stratified sampling was used to maximize the sample representativeness (first stratified into types of government departments and then by number of employees). The total respondents in the merged dataset comprised 5,187 officials (2,070 in 2016; 3,117 in 2017).

Measurement of Variables and Analytical Methods

Dependent variable: organizational performance. As the

Table. 1 Number of new employees by recruitment program

Year	OCER		MCCR						ratio of recruits via MCCR to OCER	
	Total (A)	general service staff (B)	Total (C)	general service staff						
				Total (D)	Certificate	Research/ Working Experience	Degree	Other	(C/ A)*100	(D/ B)*100
2005	18,841	2,584	5,953	1,404	624	22	412	346	31.6%	54.3%
2006	20,989	4,476	8,108	3,877	864	1,000	857	1,156	38.6%	86.6%
2007	18,330	3,890	6,527	3,424	919	1,451	441	613	35.6%	88.0%
2008	21,963	5,738	4,457	1,017	441	194	182	200	20.3%	17.7%
2009	18,633	3,894	5,442	2,124	354	729	248	793	29.2%	54.5%
2010	14,746	2,821	6,234	3,059	407	45	228	2,379	42.3%	108.4%
2011	13,553	2,311	6,737	3,399	620	62	274	2,443	49.7%	147.1%
2012	15,660	1,974	6,639	2,793	701	119	268	1,705	42.4%	141.5%
2013	16,045	1,919	6,731	2,691	684	112	176	1,719	42.0%	140.2%
2014	24,333	3,985	7,256	4,578	2,170	935	369	1,104	29.8%	114.9%
2015	23,149	3,929	7,409	5,089	2,370	1,194	461	1,064	32.0%	129.5%
2016	22,487	3,711	7,131	4,933	2,173	1,405	324	1,031	31.7%	132.9%

OCER: Open competitive examination for recruitment, MCCR: Mid-career competitive recruitment

(Source) Ministry of Personnel Management, 2005–2016 Civil Service Personal Statistics

organizational performance of a government is socially constructed, it would be complex. With regard to measuring organizational performance, one stream of research examines the utility of subjective indicators (Brewer & Selden, 2000; Moynihan & Pandey, 2005; Whitford et al., 2010), while another focuses on different dimensions of performance (Andrews et al., 2006, 2010, 2011; Brewer & Selden, 2000; Carmeli & Tishler, 2004; O'Mahony & Stevens, 2004; Walker et al., 2011). It is reasonable to measure the performance of government as a subjective indicator. This is because it is difficult to establish appropriate objective performance indicators for a government that serves public goods. In this regard, Dess & Robinson (1984) measured organizational efficiency across small businesses and noted a strong positive correlation between objective (growth in sales and net assets after tax) and subjective measures (perceived performance measured on a 5-point scale). Their findings suggest that the two measures are substitutable for each other. In addition, the difference of analysis level between bureaucratic expertise, an individual-level variable, and organizational performance, an organization-level variable, should be reviewed. Regarding this, Huselid (1995) found that individual outcomes (measured by job turnover and productivity) and organizational performance (measured by short-term financial performance) are strongly correlated in a statistically significant manner. Again, such findings suggest that organizational performance is not independent of managerial strategies to enhance members' performance. Therefore, it would not be a stretch (Collier & Mahon, 1993) to hypothesize that enhancing the performance of an organization requires strategies that improve its constituent members' capacity and performance. In this study, the dependent variable, organizational performance as perceived by government officials, was measured using three items: cost savings, extent of performance enhancement, and extent of performance and quality (of service) enhancement.

Independent variables: Government Officials' expertise. Two measures were used to examine expertise: an objective measurement based on qualifications or working periods and a subjective measure rated by the respondents themselves or their coworkers. According to Germain & Tejeda (2012), objective expertise consists of six categories: Knows work, Knows field, Education, Qualifications, Conducts research, and Trained. Subjective expertise includes 12 items: Ambitious, Drive, Improve, Charismatic, Deduce, Intuitive, Judge, Self-assured, Talks his/her way through situations, Assess, Self-confidence, and Outgoing. The objective expertise measurement method can ensure reliability but has limited validity. Experience is neither a necessary pre-requisite of expert knowledge nor does it inherently convey expertise, therefore, it cannot be a proxy for expertise (Goodall & Bäker, 2015). However, the subjective expertise measurement method is retrospective and can result in inaccurate or manipulated memory. Despite these shortcomings, subjective measurement data are used since individuals can assess their own knowledge and ability (Van Der Heijden, 2001). In this study, the independent variable, i.e., respondents' self-assessed work expertise vis-à-vis the overall expertise of government, was measured using a 5-point scale ranging from 1=very low to 5=very high. Regarding the other variables, values measured in terms of the factor score were standardized.

Moderating variables: type of recruitment. When recruiting vocational officials to the Korean government, the recruitment method differs based on expected capabilities. According to Cho et al. (2017), MCCR promotes government

officials' expertise, particularly problem-solving capacity and job performance, whereas OCER promotes expertise in knowledge and techniques, managerial skills, and ethical practices. Thus, generally, those selected by MCCR become specialists while those selected through OCER become generalists. In this study, to analyze the relationship between expertise and organizational performance, the recruitment method variable was used as a proxy for the contents of expertise. Each recruitment type, which is the moderating variable, was assigned a numerical value (1 to OCER; 2 to MCCR; 3 to others), but in the actual analysis, it was either turned into a dummy variable (MCCR=1; others=0) or the dataset was divided based on recruitment type.

Control variables. Strategic variables of HR management (job satisfaction, job shuffle, promotion, compensation, training) known to promote a high performance work system were treated as control variables. HR management can impact workers' motivations in various ways (Delaney & Huselid, 1996). Dimensions of intrinsic and extrinsic motivation are job satisfaction and compensation (promotion and pay-raise), respectively. Substantial efforts have been expended to better understand the relationship between work motivation and organizational performance, including research on whether job satisfaction or organizational commitment influences performance (Angle & Perry, 1981; Balfour & Wechsler, 1996), whether intrinsic or extrinsic motivation has differential effects, or whether there are motivational differences between the public and private sectors (Balfour & Wechsler, 1991). Presuming that the relationship between individual motivational factors and organizational performance holds, scholars have attempted to empirically examine the influence of such factors on organizational performance (Gould-Williams, 2003) or on organizational commitment or job satisfaction (Giauque et al., 2013) in public sector settings.

Job satisfaction was measured by the factor score of the responses to two statements regarding the extent to which respondents were interested in their job assignments and sense of achievement. Government officials' attitudes toward job shuffle were measured by the factor score of responses to three statements addressing the extent to which respondents could maximize their work capacity, their perceptions on work hours, and their views on career development programs. Perceptions of compensation and incentives were measured by the factor score of responses to three items on the appropriateness of the wage level considering work performance, wage level of private enterprise workers, and work responsibility. Respondents' perceptions on promotion were measured by the factor score of responses to five statements on the promotion process, impartiality of work performance evaluation, work performance achievement evaluation process, talent draft system, and women's promotions. Lastly, government officials' perceptions of training opportunities were measured by the factor score of responses to three items on education and training opportunities, capacity building, and self-development. As reported in the Table 2, each composite variable is reliable (or internally consistent).

Government officials' characteristics and organizational attributes, which were also treated as control variables, were measured as follows. Educational attainment, an employee's highest degree of education, was treated as a continuous variable (less than high school=1; doctorate=5). Term of office was also treated as a continuous variable, with one unit denoting five years (2=10 years of service). Government officials' ranks or class were also treated as a continuous variable, with ranks corresponding to numbers (grade 1, the highest level, corresponds to 1; grade 9, the lowest level, corresponds to 9). Regarding the level of government in which the official participates, national government departments were coded 1 and provincial and metropolitan 0. Female employees were coded 1, and males 0. Lastly, to account for year effects, 2017 was coded 1 and 2016 as 0.

Analytical Methods

This study aimed, first, to examine to what extent government officials' perceived expertise influences their perceptions of organizational performance; and second, whether the relationship between the two variables as well as determinants of organizational performance are subject to change depending on recruitment type. There are at least two approaches to examining moderating effects: first, by creating an interaction term for an independent and a moderating variable; and second, by creating separate models by groups. This study hypothesizes that there are likely to be between-group differences between MCCR and OCER groups not only in terms of the relationship between perceived expertise and perceived organizational performance, but also in the mediating effect of work autonomy. When creating a single model in which there is an interaction term between an independent and a moderating variable, it is assumed that the two groups are homogenous. However, where MCCR and OCER groups are not homogenous, a leap of logic is unavoidable in adopting the former approach. Therefore, using a multiple regression technique, this study divided the dataset into two groups (MCCR and OCER) and examined the moderating effects of recruitment type by comparing the statistical significance of the standardized coefficients.

ANALYSIS RESULTS

Descriptive Analysis and Correlation of Variables

Table 3 illustrates the characteristics of respondents. Of the total survey respondents, 36% were female; most were grade 6 employees (followed by 7 and 5); more than 90% were university graduates (4 years); most had 11–15 years of service (approximately 20%); 64% were affiliated with national government departments; 80.6% were OCER-based employees, while approximately 16% were MCCR-based employees.

Table 4 illustrates the major variables' descriptive statistics. Except for the perceived expertise variable (only one question item), factor values were used. Respondents' levels of perception regarding organizational performance and promotion were lower than that of job satisfaction, job rotation, and training opportunities. Their levels of perceived expertise were also relatively high.

Correlations among the explanatory variables are presented in Table 5. Some variables were statistically signif-

Table 2. Items used to measure study variables

Variable	Items	Scale	Inter-item Reliability
Organizational Performance	Our organization strives for cost reduction. Our organization's performance has been steadily improving. Our organization's performance and quality are improving.	5	Cronbach's α=0.8777
Expertise	What do you think your present job expertise level is?	5	-
Job Satisfaction	I am interested in the job I am in charge of. I feel a sense of accomplishment while performing my job.	5	Cronbach's α=0.8343
Promotion	Our organization's promotion procedure is appropriate. The performance reflected in promotion in our organization is fairly rated. In our institution, members are promoted appropriately based on the results of work performance evaluation. The personnel draft system may be helpful in renewing the seniority-based personnel practice. It is difficult for women to be promoted to a high-ranking position in our organization.	5	Cronbach's α=0.7541
Job Shuffle	I am assigned appropriate work through which I can exhibit my competency properly. The average work period in the department is at a level appropriate to my experience. The career development system should expand for career development in a certain professional field.	5	Cronbach's α=0.6183
Compensation	My pay is appropriate for my work performance. My pay is at an appropriate level as compared to an employee at a private enterprise (large corporation level) performing similar tasks. I am fairly compensated for the amount of responsibility I shoulder.	5	Cronbach's α=0.8869
Training	I have enough opportunities for proper education and training/ability development when I need them for job performance. I constantly develop myself to improve my job performance ability. The activities of education and training/ability development I completed last year helped improve my job performance.	5	Cronbach's α=0.8008
Autonomy	I have options for the job performance method/procedure. I can control the job performance speed/deadline. I can decide the job performance order/priority.	5	Cronbach's α=0.8174

icantly correlated to each other while others were not. Nonetheless, the correlation coefficients did not seem problematic for the analysis.

Additionally, regarding variables by recruitment type, perceived expertise, perceived organizational performance, perceptions on promotion, perceptions on job rotation, perceptions on compensation and incentives, and job satisfaction were higher among MCCR- than OCER-based employees (3.46 vs 3.41, 0.10 vs -0.03, 0.06 vs -0.02, 0.18 vs -0.04, 0.07 vs -0.02, 0.21 vs -0.05, respectively). Overall, MCCR-based employees had higher perception levels than OCER-based employees.

Results of Multiple Regression Analysis

This study employed four models, two all-in-one models (model A inclusive of the recruitment type variable and model B not inclusive), model C in which only OCER-based employees were included, and model D in which only MCCR-based employees were included. The results confirm that, except for the MCCR-based model, perceived expertise positively influences perceived organizational performance (H1 adopted). Comparing the OCER- and MCCR-based models, perceived expertise influence is statistically significant in all models except the MCCR-based model (H2 adopted). The findings reveal significant differences between OCER- and MCCR-based employees not only in terms of perceived expertise but also some of the major control variables.

Furthermore, changes in the number of observations do not influence statistical significance. To confirm whether such differences are attributable to the difference in sample size (OCER-based employees, N=4,179; MCCR-based employees, N=838), two additional analyses were conducted. First, there was no change in statistical significance of the explanatory variables when the two datasets (2016 and 2017) were merged or separated for the analysis. Next, to confirm whether the regression coefficient difference is attributable to the difference in sample size, 838 samples were randomly extracted from the OCER-based group to equalize the number of samples in the two groups, and bootstrap test was conducted (100 times). As seen in Table 6, the results and statistical significance were not affected by sample size difference. Therefore, the between-group differences in the relationship between perceived expertise and perceived organizational performance are not attributable to population sampling.

Lastly, regarding the potential threat of common method bias (Podsakoff & Organ, 1986), which is inherent in a single survey study, Harman's single factor test found five factors with eigenvalues higher than 1, constituting 63% of the total variance (the largest factor constituting 23% of the total variance). Therefore, the potential threat of common method bias is not serious in this study (Taylor et al., 2015).

Exploring mediating effects

The multiple regression analysis results suggest that perceived expertise positively influences perceived organizational performance for OCER-based employees but not for MCCR-based employees. An additional analysis was

Table 3. Respondent Characteristics

Variable	Character	Frequency (person)	Ratio (%)
Sex	Male	3,336	64.31
	Female	1,851	35.69
Grade	2	4	0.08
	3	47	0.91
	4	360	6.94
	5	1,336	25.76
	6	1,534	29.57
	7	1,401	27.01
	8	328	6.32
	9	177	3.41
Education	Below high school graduation	150	2.89
	College graduate (2 years)	295	5.69
	University graduate (4 years)	3,669	70.73
	Master's	953	18.37
	Ph.D.	120	2.31
Years of service	5 years or less	981	18.91
	6–10 years	935	18.03
	11–15 years	1,042	20.09
	16–20 years	603	11.63
	21–25 years	727	14.02
	Over 26 years	899	17.33
Type of government	Central	3,343	64.45
	Local (Metropolitan)	1,844	35.55
Type of recruitment	OCER	4,179	80.57
	MCCR	838	16.16
	Other	170	3.28
Total		5,187	100

OCER: Open competitive examination for recruitment, MCCR: Mid-career competitive recruitment

conducted to determine the cause of this difference as another factor could not be ruled out. This is because expertise may directly affect organizational performance, but it may also have an indirect effect that is mediated by other factors between the two variables. If there is no mediating effect in a specific subgroup, the overall effect may also be insignificant. Another advantage of examining the relationship between self-assessed expertise and perceived organizational performance, considering the possible existence of another factor affecting the relationship, is that it provides additional insights into the pursuit of institutional and policy improvement.

Work autonomy was considered a potential factor affecting the relationship between perceived expertise and perceived organizational performance. According to Hackman & Oldham (1975), work autonomy refers to autonomy and discretion granted to organizational members when performing work. It plays a positive role in promoting organizational members' intrinsic motivation, job satisfaction, and individual achievement (Conger & Kanungo, 1988; Dysvik & Kuvaas, 2011; Gagné et al., 1997). Also, in accordance with many studies confirming the role of autonomy in mediating the relationship between individual attributes and performance (Barrick & Mount, 1993; Dodd & Ganster, 1996), this study hypothesizes the role of work autonomy in the relationship between perceived expertise and perceived organizational performance. One likely reason for the significant differences between the OCER- and MCCR-based groups is that while a lively perceptual flow exists among OCER-based employees, with their perceived expertise leading to perceived work autonomy and perceived organizational performance, this flow is defunct among MCCR-based employees.

To test the mediating effect of work autonomy, Baron & Kenny's (1986) methodology was applied. Work autonomy was measured using the factor score of the responses to three items (rated on a 5-point scale) regarding the extent to which employees can determine their work style, process, speed, deadlines, order, and priorities. Results suggest the partial mediating effects of work autonomy in all models

Table 4. Descriptive Statistics

Variable	Observations	Mean	SD	Min.	Max.
Organizational Performance	5,187	-0.000000003	1	-3.67505	2.277483
Government Officials' Expertise	5,187	3.416233	0.682879	1	5
Autonomy	5,187	0.000000009	1	-3.03618	2.444159
Job Satisfaction	5,187	0.000000009	1	-3.27101	1.968924
Promotion	5,187	-0.0000000008	1	-2.89254	2.927265
Job Shuffle	5,187	0.000000007	1	-3.63542	2.904237
Compensation	5,187	0.000000005	1	-2.14054	3.050146
Training	5,187	0.0000000003	1	-2.83849	2.6913
Education	5,187	3.115288	0.660005	1	5
Years of service	5,187	3.35801	1.745258	1	6
Grade	5,187	6.072296	1.205935	2	9
Type of government (Central=1)	5,187	0.644496	0.478712	0	1
Sex (Female=1)	5,187	0.356854	0.479117	0	1
Year Dummy	5,187	0.600925	0.489755	0	1

Table 5. Correlation coefficient

	1	2	3	4	5	6	7	8
Organizational Performance	1							
Government Officials' Expertise	0.2883***	1						
Autonomy	0.3198***	0.2305***	1					
Job Satisfaction	0.4128***	0.4175***	0.3677***	1				
Promotion	0.4802***	0.1983***	0.3288***	0.3085***	1			
Job Shuffle	0.4417***	0.2789***	0.3835***	0.4848***	0.4999***	1		
Compensation	0.2064***	-0.0095	0.2798***	0.1648***	0.3579***	0.2906***	1	
Training	0.4138***	0.3096***	0.3848***	0.4188***	0.4019***	0.4474***	0.3329***	1

*** Correlation is significant at the p<0.01 level

except the MCCR-based model.

To investigate whether work autonomy is influenced by perceived expertise and perceived organizational performance, the Sobel–Goodman mediation test was performed. Again, there was a difference between the OCER- (0.222) and MCCR-based (0.138) groups. Furthermore, the ratio of the indirect to direct effect was larger for OCER- than MCCR-based groups, suggesting that perceived expertise via work autonomy does not greatly impact perceived organizational performance for the MCCR-based group.

CONCLUSIONS

Discussion

The Korean government has been able to hire excellent talent while pursuing government-led development strategies. The Korean people have supported government policies in the belief that the best public officials, selected through rigorous testing, implement these policies. As the difficulty of policy issues, such as the complexity of interests or technology, has rapidly increased, the public's expectations of bureaucrats' expertise have also increased. In the past, the authoritarian work attitude of public officials has been heavily criticized, however in recent years, the incompetence of public officials has also come under fire. In public administration, bureaucratic expertise is divided into the following sub-categories: problem-solving capacity, public ethics, job performance capacity, and managerial capacity (Cho et al., 2017). However, it is difficult to develop the capability to solve and manage specific policy issues while pursuing a general bureaucratic career. To cope with these issues, the Korean government has expanded the

Table 6. Model Analysis

	Model A		Model B		Model C (OCER Model)		Model D (MCCR Model)	
	B	SE	B	SE	B	SE	B	SE
Government Officials' Expertise	0.09055***	0.022	0.09055***	0.022	0.09871***	0.025	0.04999	0.055
Job Satisfaction	0.17725***	0.018	0.17724***	0.018	0.17458***	0.020	0.16725***	0.041
Promotion	0.30663***	0.017	0.30663***	0.017	0.30008***	0.019	0.33753***	0.040
Job Shuffle	0.12112***	0.017	0.12112***	0.017	0.12183***	0.020	0.10648***	0.037
Compensation	-0.02341*	0.014	-0.02342*	0.014	-0.01795	0.016	-0.06503*	0.034
Training	0.13664***	0.016	0.13663***	0.016	0.14022***	0.018	0.14313***	0.040
Education	-0.01291	0.018	-0.01293	0.018	-0.01098	0.023	-0.01652	0.035
Years of service	0.05389***	0.008	0.05388***	0.008	0.04682***	0.009	0.08969***	0.017
Grade	0.06288***	0.012	0.06286***	0.011	0.06085***	0.013	0.07112***	0.029
Type of government (Central=1)	-0.02254	0.025	-0.02257	0.025	-0.01901	0.028	-0.06356	0.067
Sex (Female=1)	0.02879**	0.025	0.02878**	0.025	0.04721***	0.028	-0.061*	0.062
Year Dummy __2017	-0.04503***	0.024	-0.04502***	0.024	-0.04824***	0.026	-0.00618	0.057
Type of Recruitment (MCCR=1)	-0.00019	0.031						
Constant	-0.748***	0.143	-0.748***	0.142	-0.794***	0.161	-0.504	0.371
Observations	5,187		5,187		4,179		838	
R-squared	0.357		0.357		0.36		0.335	

OCER: Open competitive examination for recruitment, MCCR: Mid-career competitive recruitment, B: Standardized Coefficients, SE: Robust standard errors, *** p<0.01, ** p<0.05, * p<0.1

Table 7. Mediating effect analysis result

Variables	Total Model			OCER Model			MCCR Model		
Dependent Variable	OP	OP	A	OP	OP	A	OP	OP	A
Expertise	0.133***	0.129***	0.0827***	0.146***	0.142***	0.0845***	0.0675	0.0642	0.0774
	0.022	0.0221	0.0223	0.0246	0.0247	0.0247	0.0546	0.0546	0.0556
Autonomy		0.0466***			0.0503***			0.0424	
		0.0146			0.0166			0.0322	
Observations	5,187	5,187	5,187	4,179	4,179	4,179	838	838	838
R-squared	0.357	0.359	0.266	0.36	0.362	0.276	0.335	0.337	0.202

OCER: Open competitive examination for recruitment, MCCR: Mid-career competitive recruitment, OP: Organizational Performance, A: Autonomy; *** p<0.01, ** p<0.05, * p<0.1

MCCR program, which requires professional qualifications in each policy field, in addition to the OCER for recruiting general administrators. If the government has appointed public officials in different recruiting types, then it should implement HRM differently for each recruiting type so that different expertise can be exerted to improve organizational performance.

The results of this empirical study suggest that, overall, regardless of recruitment type, higher perception of expertise correlates with higher perception of organizational performance. However, the results also indicate differences among OCER- and MCCR-based employees in terms of how

Table 8. Result of testing mediation effect

	Total	OCER Model	MCCR Model
Ratio of total mediation effect	0.213931	0.221995	0.138273
Ratio of indirect to direct effect	0.272153	0.285338	0.16046
Ratio of direct effect in total effect	1.272154	1.285338	1.16046
Sobel test (Z-score)	13.07***	12.3***	3.337***

OCER: Open competitive examination for recruitment, MCCR: Mid-career competitive recruitment; *** p<0.01, ** p<0.05, * p<0.1

the relationship between perceived expertise and perceived organizational performance unfolds. Also, the differences in this relationship and in the determinants of organizational performance are attributable to recruitment type. This study found that MCCR-based employees' higher expertise perceptions are not necessarily translated into higher perceptions of organizational performance, calling for the need to assess whether their work environment is conducive to maximizing their work capacity. In addition, this study found no evidence of the mediating effect of work autonomy on MCCR-based employees' organizational performance. This speaks to the unlikelihood of the linkage between perceived expertise and organizational performance mediated by work autonomy. Furthermore, despite MCCR-based employees possessing higher levels of perceived expertise, work autonomy, and organizational performance, they do not necessarily bond and create a positive synergistic impact. Therefore, one policy implication of this study is to urge government to create a work environment conducive to MCCR-based employees realizing their full potential.

The findings regarding the factors deteriorating and enhancing expertise indicate that, regardless of recruitment type, government officials face some common difficulties. However, HR decision-makers should pay attention to the fact that MCCR-based employees stress the importance of appropriate specialization while OCER-based employees emphasize the importance of training opportunities and self-development. Many recent studies corroborate this study's implications. Song (2015) proposed the necessity of substantially improving education and training programs within the government, strengthening expertise-based promotion systems, expanding MCCR systems, and imposing regulations on the terms, conditions, and scope of shuffling. Scholars largely point to job rotation as the most critical factor inhibiting expertise development. Frequent job rotations not only inhibit expertise development but also hinder administrative and policy continuity, thereby compromising accountability in administration. Thus, MCCR-based employees should be immediately appointed to posts where they can fully manifest their expertise, while providing OCER-based employees with training and self-development opportunities on an ad-hoc basis.

Contributions and Limitations

The theoretical significance of this study is that the influence of bureaucrats' expertise, a key management factor in HRM theory, as an explanatory variable for organizational performance was verified through empirical analysis. The major contribution of this study is that despite numerous debates on MCCR, there remains a scarcity of empirical studies on the performance and perceptions of MCCR-based experts. This study serves as a starting point for a discussion on MCCR and, to our knowledge, is the first attempt to investigate the relationship between MCCR-based employees' perceived expertise and their perceptions of organizational performance.

In practical terms, this study found empirical evidence that the government should apply differentiated personnel management methods for each recruiting type to improve bureaucrats' expertise. How the government treats public officials with different recruitment type will positively affect organizational performance. It was found that the higher the perceived expertise, the higher the perceived organizational performance. However, for those who are recruited based on professional qualifications such as career or degree, unlike public officials who are recruited based on their general ability, perceived expertise did not significantly affect perceived organizational performance. The results of this empirical analysis raise doubts on the effectiveness of the MCCR system introduced to recruit specialists in public offices. In this regard, it should be noted that the responses regarding "factors that hinder the bureaucrats' expertise" of PEPS were different for each recruiting type. The first and second rankings were the same for both OCER and MCCR, in the order of frequent personnel transfer and seniority-based evaluation, but the third priority for OCER was lack of opportunities for learning and development, while for MCCR it was the allocation of personnel regardless of their major and aptitude.

Despite these contributions, this study is not without its inherent weaknesses. First, the measure of expertise was purely subjective, which can be problematic in omitting multiple dimensions of expertise. Additionally, the concept "expertise" is currently measured using several aspects, but in this study, expertise was measured using just a single item on self-assessed expertise. Considering that the civil service recruitment system is divided into OCER and MCCR in Korea, we attempted to classify the contents of expertise using the recruitment method as a surrogate variable, but this remains an incomplete measure. Therefore, it would be worthwhile to further segment the concept of expertise to ascertain whether this yields different outcomes.

Second, in this study, there was a concern about common method bias because a single survey was used to explain the relationship between variables. Common method bias is a concern in self-report measures, including the fact that re-

lationships between self-reported variables can either inflate or deflate linear relationships, and self-rating sources that constitute measurement methods (Conway & Lance, 2010; Siemsen et al., 2010). Regarding the potential threat of common method bias (Podsakoff & Organ, 1986), which is inherent in a single survey study, Harman's single factor test found five factors with eigenvalues higher than 1, constituting 63% of the total variance (the largest factor constituting 23% of the total variance). Therefore, the potential threat of common method bias is not serious in this study (Taylor et al., 2015).

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REFERENCES

Abubakar, A. M., Elrehail, H., Alatailat, M. A., & Elçi, A. (2019). Knowledge management, decision-making style and organizational performance. *Journal of Innovation & Knowledge*, *4*(2), 104–114.

Alonso, P., & Lewis, G. B. (2001). Public service motivation and job performance: Evidence from the federal sector. *The American Review of Public Administration*, *31*(4), 363–380.

Andersen, S. C., & Moynihan, D. P. (2016). Bureaucratic investments in expertise: Evidence from a randomized controlled field trial. *The Journal of Politics*, *78*(4), 1032–1044.

Andrews, R., Boyne, G. A., Law, J., & Walker, R. M. (2011). Strategy implementation and public service performance. *Administration & Society*, *43*(6), 643–671.

Andrews, R., Boyne, G. A., Moon, M. J., & Walker, R. M. (2010). Assessing organizational performance: Exploring differences between internal and external measures. *International Public Management Journal*, *13*(2), 105–129.

Andrews, R., Boyne, G. A., & Walker, R. M. (2006). Strategy content and organizational performance: An empirical analysis. *Public Administration Review*, *66*(1), 52–63.

Angle, H. L., & Perry, J. L. (1981). An empirical assessment of organizational commitment and organizational effectiveness. *Administrative Science Quarterly*, *26*(1), 1–14.

Balfour, D. L., & Wechsler, B. (1991). Commitment, performance, and productivity in public organizations. *Public Productivity & Management Review*, *14*(4), 355–367.

Balfour, D. L., & Wechsler, B. (1996). Organizational commitment: Antecedents and outcomes in public organizations. *Public Productivity & Management Review*, *19*(3), 256–277.

Baron, R. M., & Kenny's, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182.

Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the Big Five personality dimensions and job performance. *Journal of Applied Psychology*, *78*(1), 111.

Blackman, D. A., Buick, F., O'Donnell, M., O'Flynn, J. L., & West, D. (2012). Developing high performance: Performance management in the Australian Public Service. *Crawford School Research Paper*, *12–09*.

Blackman, D. A., Buick, F., O'Flynn, J., O'Donnell, M., & West, D. (2019). Managing expectations to create high performance government. *Review of Public Personnel Administration*, *39*(2), 185–208.

Bonner, B. L., Baumann, M. R., & Dalal, R. S. (2002). The effects of member expertise on group decision-making and performance. *Organizational Behavior and Human Decision Processes*, *88*(2), 719–736.

Brewer, G. A., & Selden, S. C. (2000). Why elephants gallop: Assessing and predicting organizational performance in federal agencies. *Journal of Public Administration Research and Theory*, *10*(4), 685–712.

Campion, M. A., Cheraskin, L., & Stevens, M. J. (1994). Career-related antecedents and outcomes of job rotation. *Academy of Management Journal*, *37*(6), 1518–1542.

Carmeli, A., & Tishler, A. (2004). The relationships between intangible organizational elements and organizational performance. *Strategic Management Journal*, *25*(13), 1257–1278.

Chan, S. H. (2010). The influence of leadership expertise and experience on organizational performance: a study of Amanah Ikhtiar Malaysia. *Asia Pacific Business Review*, *16*(1–2), 59–77.

Chen, Y.-S., Yang, C.-C., & Yang, Y.-F. (2020). Higher Academic Qualifications, Professional Training and Operating Performance of Audit Firms. *Sustainability*, *12*(3), 1254.

Cho, T., Jin, J., Park, J., Kim, S., & Im, J. J. (2017). Exploratory Study for Public Employees' Professionalism. *Korean Policy Sciences Review*, *21*(3), 143–172.

Chun, Y. H., & Rainey, H. G. (2005a). Goal ambiguity and organizational performance in US federal agencies. *Journal of Public Administration Research and Theory*, *15*(4), 529–557.

Chun, Y. H., & Rainey, H. G. (2005b). Goal ambiguity in US federal agencies. *Journal of Public Administration Research and Theory*, *15*(1), 1–30.

Collier, D., & Mahon, J. E. (1993). Conceptual "stretching" revisited: Adapting categories in comparative analysis. *American Political Science Review*, *87*(4), 845–855.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, *13*(3), 471–482.

Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology*, *25*(3), 325–334.

Currie, G., & Procter, S. J. (2005). The antecedents of middle managers' strategic contribution: The case of a professional bureaucracy. *Journal of Management Studies*, *42*(7), 1325–1356.

Daft, R. L., Murphy, J., & Willmott, H. (2010). *Organization theory and design*. Cengage learning EMEA.

Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal*, *39*(4), 949–969.

Dess, G. G., & Robinson, R. B. (1984). Measuring organizational performance in the absence of objective measures: the case of the privately - held firm and conglomerate business unit. *Strategic Management Journal*, *5*(3), 265–273.

Dodd, N. G., & Ganster, D. C. (1996). The interactive effects of variety, autonomy, and feedback on attitudes and performance. *Journal of Organizational Behavior*, *17*(4), 329–347.

Dyer, L., & Reeves, T. (1995). Human resource strategies and firm performance: what do we know and where do we need to go? *International Journal of Human Resource Management*, *6*(3), 656–670.

Dysvik, A., & Kuvaas, B. (2011). Intrinsic motivation as a moderator on the relationship between perceived job autonomy and work performance. *European Journal of Work and Organizational Psychology*, *20*(3), 367–387.

Gagné, M., Senecal, C. B., & Koestner, R. (1997). Proximal job characteristics, feelings of empowerment, and intrinsic motivation: A multidimensional model 1. *Journal of Applied Social Psychology*, *27*(14), 1222–1240.

Germain, M. L., & Tejeda, M. J. (2012). A preliminary exploration on the measurement of expertise: An initial development of a psychometric scale. *Human Resource Development Quarterly*, *23*(2), 203–232.

Giauque, D., Anderfuhren-Biget, S., & Varone, F. (2013). Stress Perception in Public Organisations Expanding the Job Demands–Job Resources Model by Including Public Service Motivation. *Review of Public Personnel Administration*, *33*(1), 58–83.

Goodall, A. H., & Bäker, A. (2015). A theory exploring how expert leaders influence performance in knowledge-intensive organizations. In I. Welpe , J. Wollersheim , S. Ringelhan , & M. Osterloh (Eds.), *Incentives and Performance* (pp. 49–67). Springer, Cham.

Gould-Williams, J. (2003). The importance of HR practices and workplace trust in achieving superior performance: a study of public-sector organizations. *International Journal of Human Resource Management*, *14*(1), 28–54.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, *60*(2), 159–170.

Han, S. (2017). An Exploratory Study on Professional Identity and Accountability of Civil Servants. *Korean Review of Orgarnizational Studies*, *13*(4), 1–32.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, *38*(3), 635–672.

Kang, J., Kim, S., Kim, J. R., & Kang, C. (2003). The Job Attitudes of Contingent Public Employees: Contrasts with Non-contingent Public Employees. *Korean Public Administration Review*, *37*(2), 21–41.

Kim, J.-H., Kim, Y.-H., & Lee, T.-K. (2008). Empirical Study on the Analysis of Relationship between Position Management and Job Performance: Focusing on the Measurement Resulting from Quotidian Civil Affairs Outputs in terms of the Position-holding Duration. *Korean Policy Sciences Review*, *12*(3), 99–120.

Kirkpatrick, I., Vallascas, F., & Veronesi, G. (2017). Business Experts on Public Sector Boards: What Do They Contribute? *Public Administration Review*, *77*(5), 754–765.

Lee, H. (2019). Does increasing racial minority representation contribute to overall organizational performance? The role of organizational mission and diversity climate. *The American Review of Public Administration*, *49*(4), 454–468.

Lee, S.-Y., & Whitford, A. B. (2013). Assessing the effects of organizational resources on public agency performance: Evidence from the US federal government. *Journal of Public Administration Research and Theory*, *23*(3), 687–712.

Lu, C.-M., Chen, S.-J., Huang, P.-C., & Chien, J.-C. (2015). Effect of diversity on human resource management and organizational performance. *Journal of Business Research*, *68*(4), 857–861.

Mastrangelo, A., Eddy, E. R., & Lorenzet, S. J. (2014). The relationship between enduring leadership and organizational performance. *Leadership & Organization Development Journal*.

Meier, K. J., & O'Toole Jr, L. J. (2001). Managerial strategies and behavior in networks: A model with evidence from US public education. *Journal of Public Administration Research and Theory*, *11*(3), 271–294.

Meier, K. J., & O'Toole Jr, L. J. (2002). Public management and organizational performance: The effect of managerial quality. *Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management*, *21*(4), 629–643.

Meier, K. J., & O'Toole Jr, L. J. (2003). Public management and educational performance: The impact of managerial networking. *Public Administration Review*, *63*(6), 689–699.

Meier, K. J., & O'Toole Jr, L. J. (2005). Managerial networking: Issues of measurement and research design. *Administration & Society*, *37*(5), 523–541.

Meier, K. J., & O'Toole Jr, L. J. (2007). Modeling public management: Empirical analysis of the management–performance nexus. *Public Management Review*, *9*(4), 503–527.

Moynihan, D. P. (2008). *The dynamics of performance management: Constructing information and reform*. Georgetown University Press.

Moynihan, D. P., & Pandey, S. K. (2005). Testing how management matters in an era of government by performance management. *Journal of Public Administration Research and Theory*, *15*(3), 421–439.

Mumford, M. D., Scott, G. M., Gaddis, B., & Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly*, *13*(6), 705–750.

Neshkova, M. I., & Guo, H. (2012). Public participation and organizational performance: Evidence from state agencies. *Journal of Public Administration Research and Theory*, *22*(2), 267–288.

O'Mahony, M., & Stevens, P. (2004). International comparisons of performance in the provision of public services: Outcome based measures for education. *Royal Economic Society Annual Conference, Swansea*.

O'Toole Jr, L. J., & Meier, K. J. (2004a). Desperately seeking Selznick: Cooptation and the dark side of public management in networks. *Public Administration Review*, *64*(6), 681–693.

O'Toole Jr, L. J., & Meier, K. J. (2004b). Public management in intergovernmental networks: Matching structural networks and managerial networking. *Journal of Public Administration Research and Theory*, *14*(4), 469–494.

O'Toole Jr, L. J., & Meier, K. J. (2006). Networking in the penumbra: Public management, cooptative links, and distributional consequences. *International Public Management Journal*, *9*(3), 271–294.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*(4), 531–544.

Rainey, H. G., & Steinbauer, P. (1999). Galloping elephants: Developing elements of a theory of effective government organizations. *Journal of Public Administration Research and Theory*, *9*(1), 1–32.

Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods*, *13*(3), 456–476.

Song, S.-H. (2015). A Study on the Perception of Local Public Officials on Expertise: Focused on the Public Officialsof the Seoul Metropolitan Government. *Journal of Local Government Studies*, *27*(2), 249–270.

Taylor, J. K., Clerkin, R. M., Ngaruiya, K. M., & Velez, A.-L. K. (2015). An exploratory study of public service motivation and the institutional–occupational model of the military. *Armed Forces & Society*, *41*(1), 142–162.

Tolbert, P. S., & Hall, R. H. (2005). *Organizations: Structures, processes and outcomes*. Routledge.

Van Der Heijden, B. (2001). Age and Assessments of Professional Expertise: The Relationship between Higher Level Employees' Age and Self - assessments or Supervisor Ratings of Professional Expertise. *International Journal of Selection and Assessment*, *9*(4), 309–324.

Walker, R. M., Damanpour, F., & Devece, C. A. (2011). Management innovation and organizational performance: The mediating effect of performance management. *Journal of Public Administration Research and Theory*, *21*(2), 367–386.

Whitford, A. B., Lee, S.-Y., Yun, T., & Jung, C. S. (2010). Collaborative behavior and the performance of government agencies. *International Public Management Journal*, *13*(4), 321–349.

Wolf, P. J. (1993). A case survey of bureaucratic effectiveness in US cabinet agencies: Preliminary results. *Journal of Public Administration Research and Theory*, *3*(2), 161–181.

Yoo, J. (2018). *The Impact of Top Manager's Managerial Expertise on Organizational Performance in Korean Public Institutions*. Seoul National University.