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Investigating Factors that Affect Job Satisfaction and Performance in the Public Sector

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Abstract

Purpose: The public sectors including government and public organizations have put an efforts to improve the quality of people's lives by providing enhanced services. The purpose of this paper is to investigate the factors that affect job attitude, job satisfaction, and job performance in the public sector, that are rarely examined by previous studies. **Research Design, data, and methodology:** The following research questions have been proposed: i) how do payroll system, personnel management system, cooperative working environment, and self-efficacy affect job attitude?; and ii) how does job attitude affect job satisfaction and performance? This paper used a survey through an online platform and collected data randomly from five classified public institutions. This study applied regression analysis and ANOVA. **Results:** This study found that cooperative working environment and self-efficacy had significant impacts on job attitude, while payroll system and personnel management system did not affect job attitude. Overall job attitude affected both job satisfaction and performance. **Conclusions:** The results provide policy implications to the public sector which factors should be considered to improve job attitude, job satisfaction, and job performance. The results also provide managerial implications how such efforts ultimately improve service quality to the citizens.

Keywords: Job Satisfaction, Performance, Public Sector.

JEL Classification Code: J28, D23, H83

1. Introduction

The number of public sector workers in the Republic of Korea, which consists of the central and local governments and state-run companies, stood at 2.41 million as of 2017, or 9 percent of the total number of employed workers (Statistics Korea, 2019), and the current government of

Korea, which was established in May 2017, is pushing to increase the number of public service workers, including safety, living, welfare, education, and national defense, with a pledge to create 810,000 new jobs to cultivate quality regular workers in the public sector (National Planning Advisory Committee, 2017). The purpose of this national policy to increase the number of public sector workers is to improve the quality of people's lives by enhancing the services provided by the public sector (National Planning Advisory Committee, 2017).

In order to improve these services, it is essential to raise working conditions, advance personnel management, and upgrade the organizational culture, in addition to increasing the number of workers. That way, employees' satisfaction level will increase and their work performance will improve accordingly. Although many researchers have done many studies to date as to how job attitude as formed by working conditions affects job satisfaction and performance, most of

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them was conducted for private firms and institutions, and the studies for the public sector were limited only to certain areas, such as medical care and welfare (National Planning Advisory Committee, 2017).

The purpose of this paper is to investigate the factors that affect job attitude, job satisfaction and job performance in the public sector. Previous studies have examined job attitude, job satisfaction and job performance in the private sector, while studies rarely examined in the public sector. This study applied factors such as payroll system, personnel management system, cooperative working environment and self-efficacy to explore job attitude, job satisfaction and job performance. Effective factors should be further strengthened and developed and if not, the measures should be improved or other steps must be taken to satisfy the employees. The results may have important implications for policymakers and managers in human resources in the public sector. The results of this study also provide managerial implications to foster the performance of public sector workers by considering which aspects should be improved to enhance job satisfaction and performance in the public sector. The following research questions have been formulated for the effects of job attitude: i) does payroll system affect job attitude?; ii) does personnel management system affect job attitude?; iii) does cooperative working environment affect job attitude?; and iv) does self-efficacy affect job attitude? Proposed research questions also include how does job attitude affects job satisfaction and job performance.

2. Literature Review

2.1. Job Attitude

Job attitudes such as work participation and organizational dedication are important to study, as they have been shown to foretell diverse workplace behaviors such as tardiness, absence, turnover intent, and performance of duties (Harrison, Newman, & Roth, 2006). The attitude of the workplace affects how we view and judge the environment at work, and experts in organizational behavior are very interested in the nature of workers' attitudes toward their jobs, careers, and the organization itself (Velnampy, 2008). We can therefore argue that job attitudes are social attitudes; it is perhaps one of the more central social attitudes because people spend most of their waking hours at work, work is central to their identity, and job attitudes have crucial consequences (Judge & Kammeyer-mueller, 2012). Individuality traits such as personality affect influence job attitudes, but given well-balanced and fixed personality traits, supervisors are better served by focusing not on trying to change a staff member's personality, but on addressing

circumstances of work, duty, and the environment to make optimal climates for work (Matteson & Kennedy, 2016). Employees' attitude toward work is formed by the conditions of the place of work as well as by individual traits (Czajka, 1990).

2.2. Job Satisfaction

Locke (1976) defined job satisfaction as a pleasant or positive state of emotion resulting from the assessment of one's job or career experience. Discussions on job satisfaction (Jung, 2018; Nguyen, Nguyen, Nguyen, Le, & Do, 2020; Phuong, Khuong, Phuc, & Dong, 2018) have usually focused on issues such as type of work, working atmosphere, working conditions, supervision, leadership, acknowledgment, opportunities, career compensation and future progress (Limbu, Jayachandran, & Babin, 2014; Meneghel, Salanova, & Martinez, 2016; Moorman, 1993). Theoretical frameworks and empirical evidence categorize job satisfaction as extrinsic and intrinsic (Warr, Cook, & Wall, 1979). External job satisfaction indicates satisfaction with all-inclusive aspects of the job such as wages, schedule, and number of vacation days, and intrinsic job satisfaction indicates satisfaction with internal features of the job such as learning opportunities, diversity of work to be performed and level of autonomy (Peiro, 2017). Hakman and Oldham (1975) put forward the job characteristics model, which is broadly used as a framework to examine how certain job features such as skill diversity, job identity, job importance, feedback, and autonomy affect job performance along with job satisfaction. Bal, de Lange, Jansen, and Van Der Velde (2008) stressed that if workers recognize reciprocity, they may be satisfied with their jobs and play extra roles such as innovator. Alexander, Lichtenstein, Oh, and Ullman (1998) stated that deficiency in job satisfaction calls for the abandonment of employees' organizational goals.

2.3. Job Performance

Job performance is the deliberate behavior and actions of the members of the organization that support organizational aims (Murphy, 1989). Workers' job performance can be considered as an exercise in which individuals successfully perform tasks assigned to them under the normal constraints of rational utilization of available resources (Olukayode, 2017). Essentially, an employee's job performance reflects how well he or she is meeting his or her job requirements (Byars & Rue, 2004). Research in the area of organizational/industrial psychology indicates that job performance is a crucial element of organizational prosperity and is linked to revenue, productivity, and overall lifespan of a company (Johnson, 2003). The important function of job performance in organizational prosperity has led many

researchers to investigate various antecedents that probably affect job performance such as ability (Deadrick, Bennett, & Russell, 1997), personality (Thoresen, Bradley, Bliese, & Thoresen, 2004), and motivation (Cerasoli, Nicklin, & Ford, 2014). Although various studies (Paais & Pattiruhu, 2020) have examined the issues and explored many aspects of performance and satisfaction in the workplace, it is hard to find sufficient studies focusing on public sector organizations.

2.4. Public Sectors

The UN (1988) defined the public sector as any market or non-market activity of each institution controlled by or primarily funded by the public authority. The OECD (1997) also defined the public sector as all public corporations, including the general government and the central bank. Gemmel (1993) defined the scope of the public sector in terms of government resources, government expenditure, government ownership, government control, and government production of goods.

systematic performance analysis of the economic policies of the general and public sectors, the public sector includes virtually all entities that influence fiscal policy, including central governments, state governments, local governments, financial public corporations, and non-financial public corporations. Combining the concepts and definitions of the public sector from previous research and international organizations, all institutions managed by or related to the government based on its source of financial support will be included in the public sector category. In this aspect, this study classified Korea’s central and local government and all public institutions into government-owned enterprises, government organization, and public organization according to the law on the operation of public institutions (Table 1).

While the fundamental purpose of private companies and institutions is to pursue profit or gain of their own, government and public institutions play a key role in providing services that have the characteristics of public goods, such as national defense, social safety, foreign affairs, and in carrying out functions that the government is responsible for such as mail, water, railways and electricity projects. In order to perform its role for the public interest properly, the public sector should provide various incentives to attract and nurture the capabilities of its workers need to be provided, or so-called good working conditions. Therefore, studies should intensively conduct on what conditions demonstrate enhanced job satisfaction and performance to produce a wealth of results.

Although various studies have addressed the issue of job attitude related to the performance and satisfaction of employees, most studies have been limited to the private sector or institutions such as school (Agnihotri & Yadav, 2010). Therefore, this study seeks to investigate the working conditions of public sectors extensively by covering government and public institutions as a whole and by classifying key factors that may affect job attitudes in the public sector into four categories of monetary, personnel management, cooperative working environment and social status factors. We also want to look closely at the differences between the central government, local governments, government-owned enterprise, government organization and public organizations.

Table 1: Public Sector in Korea (2019)

Classification		Definition
Government	Central government	National government of Korea
	Local government	A form of <u>government</u> which exists as the lower tier of national one called local autonomous body in Korea
Public Institution	Government-owned enterprise	With more than 50 employees, more than half of all earnings are their own earnings, designated by the Minister of Economy and Finance
	Government organization	With more than 50 employees, designated by the Minister of Economy and Finance among public institutions except government-owned enterprises
	Public organization	Public institutions except government-owned enterprises and government organizations

*Source: The law on the operation of public institutions, Public institution information system "ALIO" (www.alio.go.kr)

According to the IMF (2001)’s government finance statistics manual, which performs the task of providing the appropriate concepts and structures needed to conduct a

3. Hypothesis Development

The purpose of this study is to measure the effects of proposed factors on job attitude and the effect of job attitude on job satisfaction and performance. For the effects on job attitude, this study proposed payroll system, personal management system, cooperative working environment, and self-efficacy.

3.1. Payroll System

Owing to the growth of the market economy, the accumulation of economic wealth tends to be regarded as the goal of many people's lives, and the act of making money is becoming more important (Jia, Zhang, Li, Feng, & Li, 2013). Lawler (1981) claimed that money can be perceived as a motivator. In this regard, companies generally use financial rewards to encourage their employees to work and prevent them from moving to other companies (Tang, Kim, & Tang, 2000). Even if money is important to individuals, some scholars have argued that remuneration is not fundamentally correlated with the attitude in working places (Griffiths, 2003; John & Weitz, 1989). Spector (2008) insisted that being paid more at work than others does not necessarily make one more satisfied with their job. This study hypothesized that payroll system affects job attitude.

H1: Perception on payroll system affects job attitude.

3.1.1. Wage

Wage was found to be the prime factor for the attitude of salaried employees (Kathawala, Moore & Elmuti, 1990). Wage serves as an indicator of how important the worker is in the organization because it is paid in return for providing labor (Zobal, 1998). In ordinary cases, total income or wages combine many other components, like base remuneration, tips, performance related pay, annual bonuses, over-time pay, risk allowance, position allowance, and certificate allowance (ILO, 2014). This study excludes productivity and performance pay from the concept of wage in order to study the role of fixed monetary compensation (wage) and performance-based benefits separately.

H1a: Perceived wage affects payroll system.

3.1.2. Performance-related Incentives

Performance-related incentives, sometimes referred to as merit allowances, are linked to base pay and are sometimes paid as independent bonus, regardless of base pay (Lawson, 2000). The fact that monetary rewards have a significant impact on an individual's performance and the trust in motivational theory are the basic grounds for incentives related to performance (Suff, Reilly & Cox, 2007). Ren, Fang, and Yang (2018) argued that motivation and capacity-building of employees is a key part of organizations' operations, and in this respect the implementation of a performance-related incentive system is effective in giving workers a positive job attitude and improving behavior.

H1b: Performance-related incentives affect payroll system.

3.2. Personnel Management System

This study applied four aspects of personnel management system, including job placement, job training, promotion policy, and job security. Many scholars looked into the ways in which the efficiency of personnel management practices are associated with the attitude of its employees (Olajide, 2014; Sadatsafavi & Walewski, 2013). It is observed that stingy investment in human resources and indifference to manpower management lead to negative job attitudes such as low morale, loss of motivation, and increased desire to change jobs. (Cogin, Ng, & Lee, 2016). White and Bryson (2013) stressed that personnel management is a method based on motivational theory, and that in order for an organization to achieve higher performance, it must create intrinsic work value and make sure that employee attitudes have a positive impact on both organizations and individuals through sufficient investment in human resource management.

H2: Personnel management system affects job attitude.

3.2.1. Job Placement

This study considered that most employees have their own preference in terms of job placement. From the perspective of workers who have to do a given task themselves, it is natural that positive attitude increases when they feel the task interesting and rewarding and when they have expertise in the task (Hakanen, Schaufeli, & Ahola, 2008). This study hypothesized the effect of job placement personnel management system.

H2a: Job placement affects personnel management system.

3.2.2. Job Training

Job training refers to both formal and informal education conducted to improve one's knowledge, skills, behavior and attitude necessary for an individual to perform their duties (DeCenzo & Robbins, 2002). Training is a key element in increasing individual and organizational competency (Bhat, 2014). Torrington, Hall, and Taylor (2005) suggested that trainings programs tend to expand the employee's psychological and physical work-related attitudes; therefore, creating opportunities for employees to further learn and develop themselves with regards to expected roles will increase employee effectiveness and efficiency as well as expose them to various aspects of the organization. Bercu (2017) stressed that job training affects the performance of a firm, as well as the correlation between job satisfaction and employees' attitudes and behaviors at work. Umar, Oni, Tsado, and Ajayi (2013) believed that poor performance as a

result of inadequate training could produce employee dissatisfaction and alienation as well as a negative work attitude. This study hypothesized the effect of job training on job attitude.

H2b. Job training affects personnel management system.

3.2.3. Promotion Policy

Promotion is a shift in the hierarchy of employees within an organization to a place with greater responsibilities and discretion (Dessler, 2008). Promotion is one of many incentive mechanisms, a way of rewarding employees who faithfully achieve an organization's goals or instructions, thus, it is used as a means of synchronizing the organization's intentions with individual goals (Lazear & Sherwin, 1981). Promotion is important because it accompanies many increases in working conditions, but most of all, it involves a compelling change in the payroll package (Murphy, 1985). The effect of wage hikes through promotions has a greater impact on job attitudes than fixed income (Clark & Oswald 1996). Wan, Sulaiman, and Omar (2012) emphasized that employees who consider promotions to be fair and transparent are more likely to devote themselves to the organization, experience career satisfaction, achieve better results, and are less willing to leave the organization afterwards. This study hypothesized the effect of promotion policy on job attitude.

H2c. Promotion policy affects personnel management system.

3.2.4. Job Security

As the globalization of the product and labor market progresses, flexibility is now regarded as a key factor in the changes taking place in the workplace, and an element that organizations and workers must adopt to succeed and survive in this new competitive world (ILO, 2003; OECD, 2006). However, it has been confirmed that rising job insecurity is one of the most dominant factors that causes workers to have a poor attitude. Ekhsan, Othman, and Suleiman (2013) stressed that poor working attitudes among employees have emerged as a severe problem in almost every organization, which is largely due to workers' different perceptions of job stability. If workers recognize that their jobs are not stable and that they could be in danger of quitting the company at any time if necessary, this would affect their happiness and job satisfaction, and furthermore have a profound impact on the way they perform assigned tasks (Fatimah, Noraishah, Nasir, & Khairuddin, 2012). This study hypothesized the effect of job security on job attitude.

H2d. Job security affects personnel management system.

3.3. Cooperative Working Environment

Individuals tend to build and uphold cooperative and positive relationships with others at workplaces where they can go to work every day and receive financial rewards, a means of livelihood (Baumeister & Leary, 1995). The so-called relationship between employees at work is defined as the interaction of information exchange between individuals and groups who wish to achieve the organization's goals (Ferris, Rogers, Blass, & Hochwarter, 2009). Research conducted by May, Gilson, and Harter (2004) explained that whether they have positive or negative relationships with colleagues and supervisors determines the psychological state of employees. The communication as part of the interaction relationship between colleagues and superiors has several implications for the organization's operations, including employee satisfaction, job motivation, work efficiency, and ability to innovate (Adams, Schlueter, & Barge, 1988; Albrecht & Hall, 1991).

H3: Cooperative working environment affects job attitude.

3.3.1. Supervisor's Role

The major role of a supervisor is to act as the focal point of an organization by taking responsibility for the delivery of organizational goals, implementing strategic decision-making, and acting as a coordinator between management and staff (Castillo & Cano, 2004; Sergiovanni & Starratt, 1993). The role of supervisors is to act on behalf of the organization, and their actions have an important impact on workers' perception of what kind of support or instructions the supervisor gives (Berta, Laporte, Perreira, Ginsburg, Dass, Deber et al., 2018). Supervisors who encourage a mutually collaborative work environment among employees provide them with opportunities to improve their abilities and help solve problems that may arise at work through positive feedback. Therefore, the supervisor's support encourages subordinates to improve their right to self-determination, to actively participate in tasks, and to have a good attitude toward their duties (Ariani, 2015).

H3a: Supervisor's role affects cooperative working environment.

3.3.2. Cooperative Interaction (Co-workers' relation)

This study proposed effects of cooperative interaction among co-workers on working environment. While the interaction between a subordinate and a supervisor exists with different authority depending on the hierarchical position, co-workers relations are dominated by mutually horizontal relationships without differences in formal authority elements (Basford & Offermann, 2012).

Interaction between colleagues has a significant impact on the organization's operations, including employee satisfaction, motivation, work efficiency and innovation capabilities (Adams, Schlueter, & Barge, 1988; Albrecht & Hall, 1991). Collaborative interactions among employees help them reduce stress, improve work efficiency, and achieve goals through communication and cooperation (Fine, 1986). Roberson and Stevens (2006) argued that there are compelling reasons to believe that job attitudes will be influenced by respectful treatment from co-workers.

H3b: Cooperative interaction affects cooperative working environment.

3.4. Self-Efficacy

Self-efficacy refers to a judgment on how well an individual can act in a particular situation, such as work, how much effort they will make, and how long they will persist to resolve a difficult situation (Bandura, 1977; Bandura & Schunk, 1981). A high level of efficacy belief is associated with desirable and compelling outcomes, including positive attitudes and satisfaction and excellent job performance (Loeb, 2016). Self-efficacy is useful for motivating individuals toward continued improvement, so a person with a high level of self-efficacy takes it as a challenge and tries to produce good results rather than try to avoid difficult problems when they are encountered (Elstad & Christophersen, 2017).

H4: Self-efficacy affects job attitude.

3.4.1. Self-esteem

Self-esteem is both an attitude toward oneself and a judgment on oneself, which reflects the overall subjective appraisal of one's value (Gabrile, 2016). The development of self-esteem takes place as individuals compare and evaluate their own and others' abilities (Cotton, 1983). Self-esteem increases if employees' working standards are consistent with their attitude. In other words, a working environment that meets an individual's standards, wishes and performance skills positively affects employees' self-esteem (Akgunduz, 2015). A person with high self-esteem will feel happy through work and achieve success on the job, and will also have beneficial impacts on the achievement of the organization's goals (Kuster, Orth, & Meier, 2013).

H4a: Self-esteem affects self-efficacy.

3.4.2. Autonomy

Hackman and Oldham (1975) described job autonomy as the degree to which employees have discretion, independence, and substantial freedom in determining the procedures to use in scheduling and performing tasks. Grant and Ashford (2008) argued that individuals are likely to be

more active and smooth in their work under autonomous conditions. Lack of autonomy increases the level of stress, which inevitably leads to dissatisfaction with work (Bakker & Demerouti, 2007). Job autonomy improves employees' self-efficacy because it allows them to use their skills, knowledge, and creativity to select and establish work strategies without interference from others (Saragih, 2011).

H4b: Autonomy affects self-efficacy.

3.5. Job Attitude, Job Satisfaction, and Job Performance

This study also hypothesized effects of job attitude on job satisfaction and job performance.

H5: Job attitude affects job satisfaction.

H6: Job attitude affects job performance.

4. Methodology

The purpose of this study is to investigate the factors that affect job attitude, job satisfaction, and job performance in the public sector. Korean government has been pushing to improve the quality of services in the public sector as well as to increase the number of public service workers. In order to improve services provided by the public sector, it is essential to raise working conditions. Therefore, this study examined what conditions demonstrate good job attitudes and how satisfy employees and produce better results. This study applied an online survey method to collect the data. The data is distributed and collected from five classified public organizations' employees in Korea, including the central government, local government, government-owned enterprises, government organizations, and public organizations as explained in Table 1. The survey was conducted through SNS using an online platform called Qualtrics, which produces an online link. 181 were responded and the response rate was 90.5%.

The survey consisted of 25 questions concerning working conditions and demographics such as age, marital status, and academic background, etc. A 5-point Likert scale was applied with 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. Regression analyses were applied to measure factors affecting job attitude. Furthermore, additional findings were included with the result of the analysis of ANOVA.

5. Data Analysis

Among the 181 respondents, 36 responded from the central government, 31 from local government, 30 from

government-owned enterprises, 34 from government organizations, and 50 from public organizations. When it comes to gender, 112 are men and 69 are women. By age, those over 40 years old and under 50 years old account for half of the total with 92, followed by those over 30 years old and under 40 years old with 54. 110 respondents had associate or bachelor’s degree, while 44 respondents hold master’s degree. The seniority was evenly distributed at around 20 percent of the total, and the number of long-term employees for more than 20 years was relatively fewer. More details on age, marital status, education and terms of current organizations are given in the table below (Table 2).

Table 2: Summary of Demographics

(N = 181)	Total	
	%	N
Gender		
Male	61.9	112
Female	38.1	69
Age		
Less than 30years old	9.5	17
30- Less than 40years old	29.8	54
40- Less than 50years old	50.8	92
50 years old or More	9.9	18
Marital status		
Single	29.3	53
Married	69.6	126
Others	1.1	2
Education		
High school	5.0	9
Associate/Bachelor degree	60.8	110
Master degree	24.4	44
Ph. D	9.9	18
Term of current organization		
Less than 5 years	24.3	44
5 - Less than 10 years	17.7	32
10 - Less than 15 years	23.8	43
15 - Less than 20 years	24.3	44
20 years or More	9.9	18

Table 3: Effects on Payroll System

Variable (Independent → Dependent)	Standardized Coefficient (Sig)
Wage → payroll system (H1a)	0.751 (***)
Performance-based incentives → payroll system (H1b)	0.112 (**)

***Significant at 0.01 level (2-tailed);
 ** Significant at 0.05 level (2-tailed)

This study applied multiple regression analyses to test hypotheses. As shown in Table 3, this study found that effects of wage and performance-based incentives on payroll system were significant, while the effect of wage on payroll

system was much stronger. The result of ANOVA found the model was significant at the level of 0.01 with $F = 168.227$ ($R\text{-square} = .653$). Therefore, H1a and H1b were accepted. The effects on payroll system was higher with wage rather than performance-based incentives.

As shown in table 4, this study found that effects of job placement and promotional policy on the personnel management system were significant. The results of ANOVA found the model significant at the level of 0.01 with $F = 78.047$ ($R\text{-square} = .634$). Therefore H2a, and H2c were accepted.

Table 4: Effects on Personnel Management System

Variable (Independent → Dependent)	Standardized Coefficient (Sig)
Job placement → Personnel management system (H2a)	0.446 (***)
Job training → Personnel management system (H2b)	-0.073
Promotional policy → Personnel management system (H2c)	0.470 (***)
Job security → Personnel management system (H2d)	0.063

***Significant at 0.01 level (2-tailed)

As shown in Table 5, this study found that the effects of cooperative interaction and supervisor’s role on a cooperative working environment were significant. The results of ANOVA found that the model was significant at the level of 0.01 with $F = 106.113$ ($R\text{-square} = .540$). Therefore, H3a and H3b were accepted. The effect on cooperative working environment was higher with cooperative interaction than supervisor’s role.

Table 5: Effects on Cooperative Working Environment

Variable (Independent → Dependent)	Standardized Coefficient (Sig)
Cooperative interaction → cooperative working environment (H3a)	0.494 (***)
Supervisor’s role → cooperative working environment (H3b)	0.330 (***)

***Significant at 0.01 level (2-tailed)

As shown in Table 6, this study found that effects of self-esteem and autonomy on self-efficacy were significant. The results of ANOVA found the model was significant at the level of 0.01 with $F = 62.738$ ($R\text{-square} = .408$). Therefore, H4a and H4b were accepted. The effect on self-efficacy was higher with self-esteem than autonomy.

Table 6: Effects on Self-Efficacy

Variable (Independent → Dependent)	Standardized Coefficient (Sig)
Self-esteem → self-efficacy (H4a)	0.543 (***)
Autonomy → self-efficacy (H4b)	0.193 (***)

***Significant at 0.01 level (2-tailed)

This study also found that effects of cooperative working environment and self-efficacy on job attitude were significant, while effects of payroll system and personnel management system on attitude were not significant. The results of ANOVA found that the model was significant at the level of 0.01 with $F = 15.971$ ($R\text{-square} = .251$). Therefore, H3 and H4 were accepted.

Table 7: Effects on Job Attitude

Variable (Independent → Dependent)	Standardized Coefficient (Sig)
Payroll system → Job attitude (H1)	-0.124
Personnel management system → Job attitude (H2)	1.089
Cooperative working environment → Job attitude (H3)	0.202 (**)
Self-efficacy → Job attitude (H4)	0.411 (***)

***Significant at 0.01 level (2-tailed);

** Significant at 0.05 level (2-tailed)

Table 8 summarizes the effects of job attitude on job satisfaction and job performance. For the effects on job satisfaction, the results of ANOVA found the model significant at the level of .01 with $F = 32.737$ ($r\text{-square} = .150$). For the effects on job performance, the results of ANOVA found that the model was significant at the level of 0.01 with $F = 144.338$ ($R\text{-square} = .443$). Therefore, H5 and H6 were accepted. This study found that the effects of attitude on performance was higher than on job satisfaction.

Table 8: Effects on Job Satisfaction and Performance

Variable (Independent → Dependent)	Standardized Coefficient (Sig)
Job attitude → Job satisfaction (H5)	0.393 (***)
Job attitude → Job performance (H6)	0.668 (***)

***Significant at 0.01 level (2-tailed)

6. Conclusion

6.1. Findings

The study examined which factors that affect job attitudes, job satisfaction, and job performance in the public

sector that are rarely examined by previous studies. The results of the study were analyzed by classifying working conditions into categories including payroll system, personnel management system, cooperative working environment, and self-efficacy. The results of this study found that wage and performance-based incentives were significantly affect payroll system, while the effect size of wage was greater than performance-based incentives. The results provide managerial implications that perceived performance-based incentives should be improved as part of payroll system. The effects of job placement and promotion policy on personnel management system were significant, while the effects of job training and job security on personnel management system were not significant. The results provide another managerial implications that the role of job training and perceived job security should be improved and considered as significant aspects of personnel management system. The effects of cooperative interaction and supervisor's role were significant on cooperative working environment and the effects of self-esteem and autonomy on self-efficacy showed significant. The effects size showed greater with the effect of cooperative interaction on working environment than the effect of supervisor's role and greater with the effect of self-esteem on self-efficacy than the effect of autonomy on self-efficacy. The results also showed that the effects of cooperative working environment and self-efficacy on job attitude were significant. The effects of payroll system and personnel management system on job attitude were not significant. Overall job attitude affected both job satisfaction and performance.

Additionally, this study conducted ANOVA to check means of job attitude, job performance and job satisfaction differ based on the type of the public sectors, gender, age groups, and educational level. The results found that means were not different based on types of the public sectors, gender, and educational level, while means of job satisfaction and performance differ based on age groups.

6.2. Implications

This study provides both managerial and policy implications. First, the reason why payroll system and personnel management system do not show significant effects on job attitude can be attributed to the public sector's specificity that is related to the budget and management system of organizations. The wage of public officials has a realistic limitation because the funds are financed by the taxes of the people and public institutions are required to pay employees' wages to the extent set in line with the remuneration standards of the government's budget department. As a result, there seems to be a tendency not to consider job attitude or job performance related to one's wage. Another aspect to consider is that the performance-

based incentive system, which has been introduced from the private sector to enhance the competitiveness and efficiency of the public sector, may not be able to be carried out as originally intended. If a performance-based pay system does not conform to its original purpose because of an organizational culture that values seniority rather than performance or the lack of a proper evaluation system, it may not play a sufficient role in enhancing job attitude. With regards to human resource management, hiring, promotion, placement, training, and retirement age guarantees are all determined by strict regulations set by the government or organization in general. Therefore, the function of the personnel management system can hardly influence the job attitude and behavior of employees in the organizations. Therefore, in order for the payroll system and the personnel management system to improve the working atmosphere of the public sector and to act as motivators for workers, it is necessary to innovate the rigid system based on proper regulations. The results also provide implication that it is necessary to establish job evaluation standards to thoroughly identify and measure employees' careers, aptitudes and abilities to provide highly acceptable remuneration and personnel management.

This study found that cooperative working environment and self-efficacy have significant impacts on job attitudes. Traditional human management mechanisms such as placement, training, promotion, and payment are not closely related to motivation, as public institutions have stable organizational operations and such management mechanisms are already settled under laws or regulations. Instead, the factors that can satisfy the desire for growth such as self-esteem, autonomy, and cooperative interaction between supervisors and colleagues play important roles as motivators. In order to improve the service level and performance of public institutions in the future, it is important to expand the mentoring system between superior and junior staff, prevent conflicts within the organization in advance, and maintain an atmosphere of mutual cooperation by preparing institutional devices that can be resolved fairly and quickly in case of problems. For the improvement of individual self-esteem, it is also necessary to create an atmosphere of praise and encouragement environment within the organization and to build an organizational culture in which achievements are regularly discovered and rewards are fairly given. It is also necessary to strengthen the decision-making authority of each member of the organization so that they can escape from the various unnecessary controls involved in the fulfilment of duties.

6.3. Limitations of the Study and Future Research

This paper investigated the factors that affect job attitude in public sector by using survey for five types of public

organizations' employees in Korea. However, this study has a few limitations. When it comes to the total number of public employees in Korea, the size of the sample was relatively small. Additionally, subsequent studies can produce meaningful results if differences are found between the different types of public organization or different types of job position such as administrative positions, technical positions, etc. Further research could be conducted on the differences in job performance according to final educational background and job satisfaction level. Future research also might consider different strategies for motivation based on individual working conditions.

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