

Relationship between Organizational Size and Performance in Public Management : Mediating Effect of Organizational Goal Ambiguity

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Abstract

This study is to corroborate the relationship between organizational size and performance in the Korean government context. Hence, this study aims to advance research on the relationship between organization size and performance by considering mediating variable: organizational goal ambiguity, which helps understand how organizational size affects organizational goal ambiguity in government and the organizational goal ambiguity has an influence on organizational performance. Bases on theoretical review, we assume that there is the inverted U-shaped relationship between the number of employees and budget size and organizational performance. From the results of path analysis, it shows that organizational size in the Korean government has a negative correlation, “a linear relationship”, with organizational performance. Budget size has mediating variables, but the number of employees not. We try to suggest implications on the relationship between organizational size and performance in terms of theoretical perspectives in the context of the Korean government.

Keywords: *Organizational Size, Organizational Performance, Organizational Goal Ambiguity, Public Management*

1. Introduction

Does organizational size in public management have a relationship with economies of scale? The bigger an organization, the better performance? Organizational size has been dealt with as one of the important factors, a long-standing argument in the field of organizational theory, relating to how organizations can obtain their goals in effective and efficient ways. As many organization theorists [1, 2] noted, there are conflicting findings of the relationship between organizational size and performance, presenting positive and negative correlations. In contrast, some theorists argue that the relationship between organizational size and performance is not linear but nonlinear with an inverted U shape [3].

Based on the relevant theory and literature, there is the tendency for cycling between assumptions that large organizations deliver better outcomes through economies of scale and integrated communication and that small ones are better since they can be more autonomous and specialized [4, 5]. Are the assumptions fit with public management in the context of the Korean government? The key viewpoint of the question is about whether the steady growth of organizational size of the Korean government including personnel and budget size has contributed to performance improvement or not.

After the advent of New Public Management and Public Administration Innovation in the 1980s, the Korean government paid attention to the reduction of the governmental size in short time, but just discussion over it rocked the public sector without the obvious outcomes. In particular, distrust of a big government was a hot

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political issue claiming the need for reducing the governmental size including the number of employees, the number of subunits, and budget size. Regardless of this controversy, the Korean government has been expanding organizational size. According to the statistical years by the Ministry of the Interior and Safety in the Korean government, the total number of employees was 872,106 in 2001, 1,026,201 in 2015, and 1,104,508 in 2019. It presents that there has been an average increase of 1,223 every year for the last 19 years. With the growth of personnel size, how much the government has improved organizational performance for the same period? It must be a difficult question to answer. The government does not show something relating to performance through the assessment. Is there no relationship between organizational size and performance in the context of the Korean government?

This study is to corroborate the relationship between organizational size and performance in the context of the Korean government, which gives us a deep insight into a theoretical discussion about the relationship between organizational size and performance in terms of theoretical perspectives. Hence, this study aims to advance research on the relationship between organization size and performance by considering mediating variables: three-goal ambiguity measures. It helps understand how organizational size affects organizational goal ambiguity in government and the organizational goal ambiguity has an influence on organizational performance.

2. Theoretical Background and Hypothesis Development

2.1 Organizational Size

Of the various factors utilized to predict organizational effectiveness or performance, the importance of organizational structure as an influential factor has been highlighted by a lot of works [6, 7]. For better functioning, what should be the size of an organization has always been a critical issue [8]. Organizational size is taken as one of the important contextual organizational dimensions [9] that underlie an organization's structure and work processes. For example, a large organization size tends to create an organization that has greater formalization, specialization, and centralization [10, 11].

There is a consensus on the argument that organizational size is one of the structural qualities, which are the physical characteristics of organizations [2, 12]. Studies have provided conceptual definitions of organizational size. Kimberly(1976) defined the size as "the total number of employees" [13]. Using the number of total employees as the measure of organizational size inherently mixes size with efficiency [14], which points to that organizational size has a close relationship with how to obtain organizational outcomes.

There are, however, different definitions: Blau (1972) conceptualized organizational size as "the scope of an organization and its responsibilities" [15], Aldrich (1972) contended that "organizational size refers to the scale of an organization's operations and not necessarily to the size of the labor force" [16].

Most of the studies suggest that counting the total number of employees is as good as many other measures of size. Van De Ven et al. (2008) found the correlation between the number of employees and the organization's net assets to be [17]. The number of employees has had utility as a good measure of organization size, in terms of operational definition: "since it is people who are organized," measurement of this size will more closely relate to structure than will other aspects of size [18]. Some scholars argued that the number of organization members is not size itself but is rather the implications for patterns of control and affiliation that are of theoretical importance for gaining an understanding of organizational phenomena [13, 19].

Although organizational size looks like being a simple variable, meaning the number of people in an organization, other conceptual definitions and perspectives suppose that size measurement is much more complicated than it appears to be [7]. Instead of the number of employees, there are the various operational definitions for organizational size: the number of sections, subunits, and supervisory levels, and budget size [6, 13, 15].

2.2 Organizational Performance

There is a widely-accepted notion about performance in the public sector, which is that it is hard to measure organizational performance in the public sector. The definition of organizational performance is a surprisingly open question with few studies using consistent definitions and measures [20]. Performance is so common in management research that its structure and definition are rarely explicitly justified; instead, its appropriateness, in no matter what form, is unquestionably assumed [21].

A number of definitions of organizational performance have been proposed by organizational and management fields. Thorndike (1949) first noted the general trend among researchers to assess organizational performance using a univariate model that focused on an ultimate criterion, such as profit or productivity [22]. This approach directed attention toward outcomes and viewed the organization as a rational system that enables the attainment of certain objectives [23]. On the other hand, Georgopolous and Tannenbaum (1957) shifted the focus from univariate to multivariate by expanding the criteria to include organizational flexibility and intra-organizational strain [24].

In the public sector, there is an obvious limit to assess organizational performance just by objective-economic indexes such as profit or productivity because public goods have different characteristics from private goods. Brewer and Selden (2000) propose a measure of organizational performance based on the perceptions of the organization's members [25], but which refers to that there is a possibility for gaps or biases in measuring organizational performance instead of getting out of the limit.

There is a lack of consensus as to what constitutes a valid set of organizational performance criteria [26, 27]. Although many researchers rely on a single indicator, there seems to be a general agreement that multiple internal (preferred by internal participants) and external (preferred by clients and citizens) criteria are needed for a more comprehensive evaluation of organizations [28].

2.3 Organizational Size and Organizational Performance

Organizational theorists have argued that organizational size has a negative effect on organizational performance, which means that organizational size is taken as one of the influential variables that can negatively affect an organization's structure and work processes for performance improvement. Based on the perspective, Miles & Snow (1992) point out the movement moving from labor-intensive to capital-intensive organizations, and from large-sized to small or medium-sized organizations for better organizations with the higher performance [1].

As we can see from the theoretical review on organizational size, it can be conceptualized as the number of employees, the number of sections or subunits, and budget size. Among them, the number of employees and budget size are almost used to measure organizational size in both the public and private sector and the private. In light of this consideration, this study takes a look at the relationship between the number of employees and budget size and organizational performance.

A lot of works on organizational performance have long studied and debated the effect of organizational personnel size, which increases with organizational age, on organizational performance [3]. As Boyne (2003) and Gooding and Wagner (1985) comment, there are conflicting findings of the relationship between the number of employees and organizational performance [2, 6]. A great number of researchers have argued or reported a negative relationship between the number of employees and organizational performance. With the growth in the number of employees or subunits, organizations become more complex, more conflicts can occur, communication can be distorted, and coordination costs can increase [10, 29]. On the other hand, there is a different argument that personnel size in an organization was positively related to organizational productivity [6], which means as Gooding and Wagner (1985) mentioned, organizational members have played an important role to achieve organizational goals [6]. Brewer (2005) argued based on this empirical research that agencies with more staffing would perform better and that excessive workforce reductions would decrease organizational performance [30]. From those both arguments, Jung (2013) insisted that there is an inverted U-

shaped relationship between the number of employees and organizational performance like the Figure 1 [3].

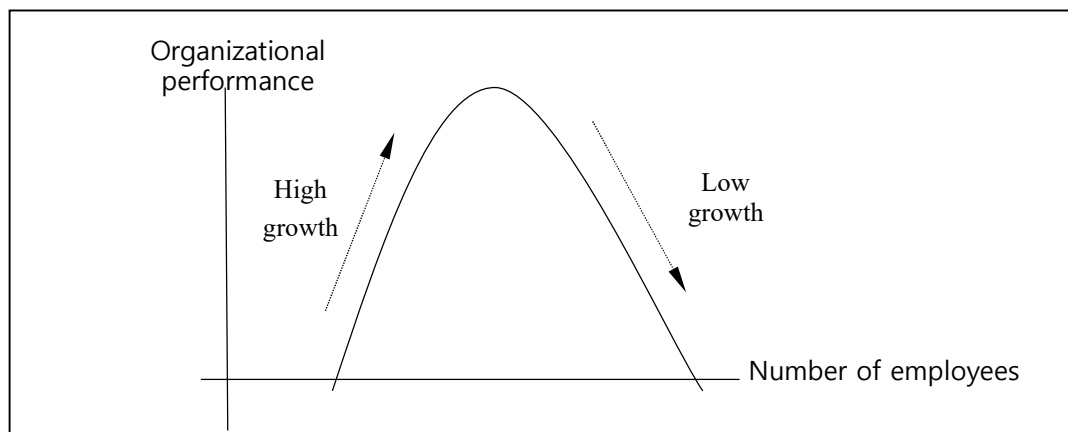


Figure 1. Inverted U-shaped relationship between number of employees and performance

From the studies relating to the number of employees or employee size in the context of the Korean governmental, it is a little bit hard to explicitly confirm the relationship between the number of employees and organizational performance, because the key focuses of these studies just have been on finding out determinants of civil servants' manpower such as the number of population and sub-administrative agencies, and land area, and so on. More importantly, the Korean political leaders have been into the political argument over the orientation of restructuring of the governmental organization with controversy over a big government or a small government since the advents of New Public Management and Public Administrative Reform.

Regardless of NPM and PAR, the Korean government has continued to increase the number of employees, which is less correlated with the need or necessity of forecasting optimal level manpower in the delivery of public service. Many scholars have agreed that political influence contributes to the growth in the number of employees in the government. There also has been a lack of empirical analyses on the relationship between the number of employees and organizational performance. Based on the steady growth of personnel size in the Korean government and the lack of researches, this study hypothesizes that the correlation between the number of employees and organizational performance is on the right side of the inverted U-shaped curve. It assumes that there is a high possibility of being a linear relationship.

H₁: The number of employees will have a significant negative correlation with the organizational performance.

Hence, budget size as an alternative variable of organizational size has been highlighted to examine the relationship between organizational size and performance, even though not as consistent in the correlation relationship as the number of employees. According to Boyne (2003)'s argument, a larger budget size can be a sufficient condition for performance improvement with higher quantity or quality of public services [2]. Pfeffer and Salancik (1978) highlighted that organizations with greater financial resources are more likely to acquire better control over environmental entities that will be able to affect resource certainty for sustainable productivity [31]. There is a critic, even though it is very old, which the great increase in public spending results in inefficient outcomes of public organizations [32]. This postulates a negative or insignificant relationship between the budget size of public organizations and their performance [3].

From these contradictory perspectives, it can be assumed that there is also the possibility of curvilinearity in the relationship between budget size and organizational performance.

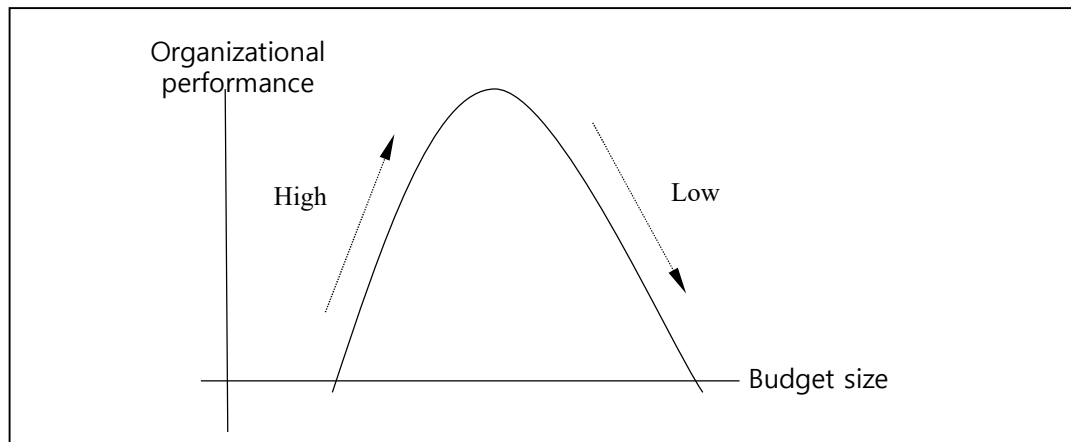


Figure 2. Inverted U-shaped relationship between budget size and performance

As mentioned above, with the constant increase in personnel size in the Korean government, controversy over budget size has been raised by political interests with no efforts to reduce budget mismanagement. It is rare to find out the correlation between budget size and organizational performance in the context of the Korean government.

In the light of these considerations, this study hypothesizes that the correlation between budget size and organizational performance is on the right side of the inverted U-shaped curve. It assumes that there is a high possibility of being a linear relationship.

H₂: Budget size will have a significant negative correlation with the organizational performance.

2.4 Mediating Variables between Organizational Size and Performance

There have been empirical tests to examine the mediating effect by using various variables, such as complexity, centralization, formalization, and specialization on the causal relationship between organizational size and performance [33, 34]. These variables have put weight on the perspective of organizational structure, but they have not shown the implication about how they affect the process of achieving goals. Taking this point into account, this study pays attention to organizational goal ambiguity as an important mediating factor that should be considered in the relationship between organizational size and performance.

Chun and Rainey (2005) specify that organizational goal ambiguity is to "the extent to which an organizational goal or set of goals allows leeway for interpretation when the organizational goal represents the desired future state of the organization" [35]. Jung (2011; 2013) tried to make some dimensions for the measure of organizational goal ambiguity: target-specification ambiguity, timeline ambiguity, and evaluation ambiguity [3, 36].

Rizzo et al. (1970) note that organization size can have a positive correlation with organizational goal ambiguity. If the organizational size increases and there are multiple lines of authority or a wider span of control, employees' orientation to their organization or to their profession can be disrupted and goals are perceived as more ambiguous. If the number of organizational members and increases, it can cause employees to perform less effectively their tasks [37]. Chun and Rainey (2005) also empirically demonstrated that organizational goal ambiguity relates negatively to organizational performance [35].

H₃: The number of employees will have a significant positive correlation with organizational goal ambiguity(target-specification ambiguity, timeline ambiguity, and evaluation ambiguity).

H4: Budget size will have a significant positive correlation with organizational goal ambiguity(target-specification ambiguity, timeline ambiguity, and evaluation ambiguity).

H5: Organizational goal ambiguity(target-specification ambiguity, timeline ambiguity, and evaluation ambiguity) will have a significant negative correlation with organizational performance.

This study sets up the research model based on five hypotheses to examine the causal relationships between organizational size and organizational goal ambiguity and performance in the context of the Korean government.

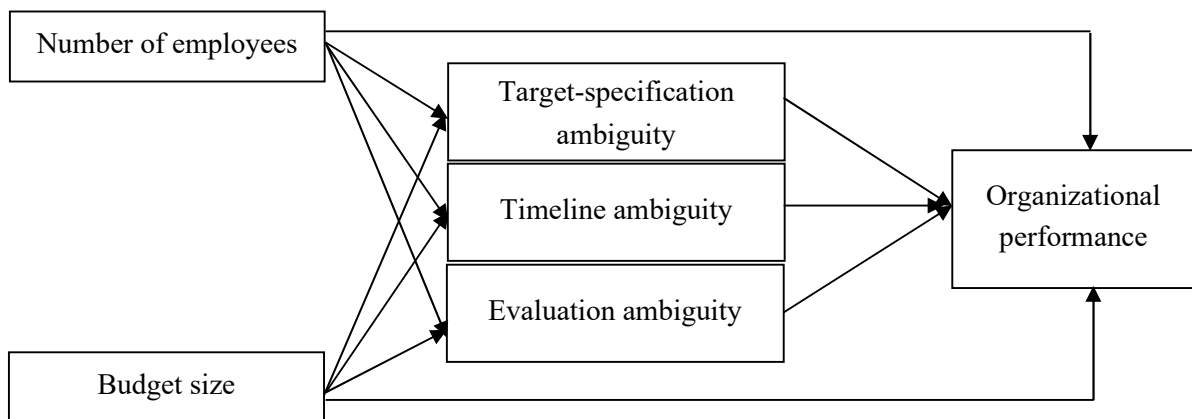


Figure 3. Hypothesized research model

3. Variables and Data

This study selects the number of employees and budget size as variables for measuring organizational size. The first dimension of organizational size is the number of employees of 243 local governments in 2019, and another dimension is the total budget size spent by 243 local governments in 2019. Data are taken from the Korean Statistical Information Service Web site.

We use three dimensions to measure organizational goal ambiguity which is the mediator in the research model. Jung (2011) and Jung and Rainey (2011) use target-specification ambiguity, timeline ambiguity, and evaluation ambiguity for measurement of organizational goal ambiguity. Target-specification ambiguity refers to the overall lack of clarity in deciding on the quantity and/or quality of work toward the attainment of all the program goals. Timeline ambiguity refers to the overall lack of clarity in deciding on the distinction between annual goals and long-term goals in each local government. Finally, evaluation ambiguity refers to the level of interpretive leeway that a program goal allows in evaluating the progress toward the achievement of the goal. Data for mediating variables are taken from the survey targeting public employees in local governments.

This study uses three dimensions to measure organizational performance as follows: organizational commitment, organizational satisfaction, and job satisfaction. It takes Brewer and Selden (2000)'s argument on a measure of organizational performance based on the perceptions of the organization's members. Data for the variables are also taken from the survey targeting public employees in local governments.

Table 1. Descriptive statistics of variables

Variables	Mean	SD
Organizational Size		
Number of employees	430.07*	860.97
Budget Size	12,056.87**	36,170.61
Organizational Performance***		
Organizational Commitment	3.56	.065
Organizational Satisfaction	3.78	.086
Job Satisfaction	3.39	.049
Organizational Goal Ambiguity***		
Target-Specification Ambiguity	4.01	.807
Timeline Ambiguity	3.99	.904
Evaluation Ambiguity	4.34	.996

* : people, ** : 10 million won, ***: Likert's 5 scale

4. Analysis and Results

This study conducted path analysis to examine the direct relationship between organizational size and performance and the effects of mediators of organizational goal ambiguity by using AMOS 24. Before conducting path analysis, to stabilize data with much greater standard deviation and find a better fit between organizational size and organizational performance, this study respectively transmits both raw measures of the number of employees and budget size into a squared measure of the number of employees and a log-transformation measure of budget size.

The path model fits the data statistically well: Chi-square = 38.983. $p = .382$, Standardized Root Mean Square Residual (SRMR) = 0.049, Root Mean Square Error of Approximation (RMSEA) = 0.072, Goodness of Fit Index (GFI) = 0.964, Adjusted GFI = 0.952, Normed Fit Index (NFI) = 0.946, Comparative Fit Index (CFI) = 0.966, and Tucker-Lewis Index (TLI) = 0.954. Nearly all the results conform well to the fundamental requirements as proposed by many research studies employing SEM. This shows that the modal structures are sufficiently fitting.

As you can see from the Figure 4, the negative relationships between organizational size and performance is corroborated in the model, which includes a squared measure of the number of employees (unstandardized path coefficient = $-.097$, $p < 0.05$) and a logged measure of budget size (unstandardized path coefficient = $-.011$, $p < 0.1$). The model corroborates that there is a positive linear term between organizational size and performance in governmental context, even though budget size has the lowest significance level, $p > 0.1$.

For mediating variables, the number of employees does not have any mediating effects, which means that there are no significant relationships between the number of employees and organizational goal ambiguity. On the other hand, budget size has all three mediators. That is, budget size exerts a direct influence on organizational performance as well as an indirect influence through target-specification ambiguity ($0.010 \times -0.287 = 0.0287$), timeline ambiguity ($0.019 \times -0.164 = 0.0312$), and evaluation ambiguity ($0.026 \times -0.128 = 0.0333$). Budget size has the lowest significance level, $p > 0.1$ in the two cases.

We assumed the inverted U-shaped relationship between the number of employees and budget size and organizational performance through theoretical review, but from the results of path analysis, it shows that organizational size in the Korean government has a negative correlation or a linear relationship with organizational performance. Budget size has mediating variables, but the number of employees not.

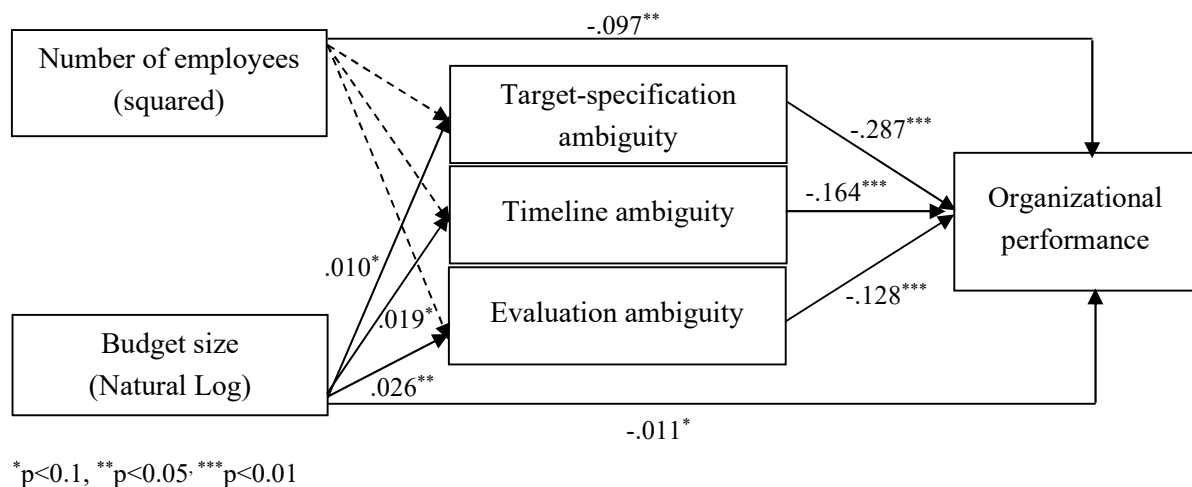


Figure 4. Result of path analysis for organizational performance

5. Discussion

The core purpose of this study research is to corroborate the relationship between organizational size and performance in Korean public management with the conflicting argument on the correlation between both concepts. From the analytical results, it turned out that organizational size is negatively related to performance. Personnel size and budget size respectively have negative relationships with organizational performance. Some theorists argue that they have a nonlinear relationship with an inverted U shape, which is in our theoretical background and could be further fit or appropriate with a theoretical explanation than a model postulating a linear relationship. Their thoughts based on the insistence are far close to economic theory. Business organizations can find the optimality of deciding the organizational size that is able to keep and induce performance improvement arriving at the top on the inverted U shape, that is, on a positive linear relationship between personnel size and budget size and organizational performance.

On the other hand, the public sector has something different from the private sector in the perspectives of approaching and applying organizational size. That is, the public sector has a structural limit not to obtain economies of scale in the relationship between organizational size and performance. Parkinson's law(1958) can be a good explanation for the limit that governments tend to expand their organizational size without paying attention to improving their performance. Parkinson's law (1958) postulates that the volume of work and the number of employees do not necessarily correlate with one another [38], which can mean that there is a negative correlation or no correlation between organizational size and performance. The analytical result of this study is well fit with Parkinson's law (1958). Since there has been a lack of empirical researches to examine the relationship in the Korean public sector, it could be a little bit hard to generalize the relationship between organizational size and performance from this study. It is highly probable, however, that the relationship between organizational size and performance has not an inverted U shape but a linear term in the Korean public management.

Lastly, we intend to take no notice of the fact that the Korean government has kept the steady growth of personnel size and budget size for any reason since this issue has been debated and argued by political and academic society. We suggest that based on the analytical results, the Korean government should make organizational size optimal and efficient to improve performance. The study also has a contribution to making up for the lack of empirical evidence relating to the relationship between organizational size and performance in the Korean public management.

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