JPS
Journal of Policy Studies

Kim, S., & Kim, B. H. (2023). The Moderating Effect of Politicians' Power on the Correlation Between Total Grants and Unit Grants in Special Grants Distribution. *Journal of Policy Studies*, *38*(3), 15–23. https://doi.org/10.52372/jps38302

Articles

The Moderating Effect of Politicians' Power on the Correlation Between Total Grants and Unit Grants in Special Grants Distribution

Sangheon Kim[1], Baek Hyeon Kim[2]

[1] Graduate School of Public Administration, Seoul National University, Seoul, KR, E-mail: sanghkim@snu.ac.kr

[2] Graduate School of Public Administration, Seoul National University , Seoul, KR

Keywords: Special Grants, Pork-barrel, Moderating Effect, Fixed Effect Model, Political Power

https://doi.org/10.52372/jps38302

Vol. 38, Issue 3, 2023

To investigate whether political power influences the allocation of government grants, a grants allocation panel dataset of 150 units of analysis was constructed for the period 2016-2019. Specifically, the aim of this study is to find out how politicians' influence would work in situations where the size of the pie, the sum of the amount of grants distributed to every electorate, changes. This perspective that focuses on changes in the aggregate amount of grants, which has not been considered in previous studies, is reflected in the interaction term between the size of the resources and the measure of political power. Fixed effect estimation reports that the coefficient of the interaction term is significant with a positive sign. This implies that powerful politicians are not satisfied with merely securing more grants than the previous year. Instead, they seek to obtain more year-on-year increment in grants than other politicians. Policymaker is advised to monitor and exclude any political influence in the decision-making process of grants allocation.

1. INTRODUCTION

The amount of budget allocated to electorates is one of the tools re-election-seeking politicians can use to appeal to their voters. Therefore, one can expect that politicians would exert their influence to bring as much budget as possible to their electorates and that more powerful politicians are likely to bring more budget to their electorates. Such an expectation could be classified as the subject of public choice theory since the theory assumes that governments' decision-making is determined by main actors such as bureaucrats and politicians and puts an emphasis on figuring out the incentive that motivates these actors (Lee & Cho, 2016).

This paper aims to identify whether Special Grants, one of government grants, are allocated in favor of powerful politicians. Previous empirical studies have already indicated the possibility that powerful politicians successfully exert their influence. In these studies, the power of a politician of a given electorate is measured by relevant variables, leading to the finding that the higher the measures are, the larger the amount of Special Grants allocated to an electorate is.

This paper is different from previous studies in that it gives a closer look at the way powerful politicians are favored. The main question is as follows: how would the influence-exerting behavior of politicians work in situations where the size of the pie, the sum of the amount of grants distributed to every electorate, changes?

For example, when the size of the pie decreases as compared to the previous year, every politician (and thus every electorate) is potentially subject to the reduction of government grants. However, one might expect that even in such a situation, powerful politicians, by exerting their influence, would be able to secure their share of the pie, the amount of Special Grants allocated to their electorates, at the same level as the previous year. Similarly, when the size of the pie increases, powerful politicians might be able to enjoy more increment as compared to their less powerful counterparts.

Most of the aforementioned studies, in conducting regression analysis, have set the power of a politician as independent variables and the amount of Special Grants distributed to each electorate as the dependent variable. However, a regression model in this paper was modified to reflect the research motivation in the preceding paragraph. In addition to (a) the power of a politician, (b) the sum of the amount of grants distributed to every electorate and (c) the interaction term of the preceding variables (i.e., (a) and (b)), were set as independent variables.

The rest of the paper proceeds as follows. Section 2 describes the Special Grants system in Korea and reviews previous studies. The research design is explained in Section 3. Section 4 presents the result of the analysis, and Section 5 concludes the paper.

2. INSTITUIONAL BACKGROUND AND RELATED LITERATURE

2.1. Allocation of Special Grants in Korea

It is one of the overarching principles of the Korean government that citizens should receive a basic level of administrative service no matter where they reside. Adminis-

trative services are specifically provided by individual local governments, which supply services based on the taxes they collect. However, due to the fact that national taxes take a higher proportion of the overall tax revenue compared to local taxes and that population and income levels vary across regions, some local governments, without further coordination, find it difficult to meet the basic administrative needs of their residents.

The Local Tax Allocation System was introduced to address this issue. Since its introduction, there have been several legal amendments by which different types of grants were added to or removed from this system. For instance, the Decentralization Revenue Sharing and Real-estate Shared Tax were introduced in 2000 as subcategories of the Local Tax Allocation System. Subsequently, in 2015, the Fire Safety Shared Tax was incorporated into the System, while the Decentralization Revenue Sharing System was eliminated. Also, the extent to which internal tax has been changed through these amendments. For instance, 15% of internal tax was allocated to the System by the revision in 2000, after which the proportion increased to 19.13% in 2005 and further to 19.24% in 2006.

As of 2023, the System consists of the following four components: (a) Ordinary Grants, which is funded by 97% of the 19.24% of internal tax, aims to help local governments maintain a basic level of administrative service. The financial level required for basic service is measured by indicators such as personnel expenses and population, and the gap between this financial level and the actual financial income of a local government is supplemented by Ordinary Grants. (b) Special Grants, which is funded by 3% of the 19.24% of internal tax, is allocated flexibly to respond to situations that were not taken into account when calculating Ordinary Grants. (c) Real-estate Shared Tax, which is funded by Comprehensive Real Estate Holding Tax, is distributed to promote balanced development among local governments. (d) Fire Safety Shared Tax, which is funded by 45% of the Individual Consumption Tax on tobacco, is allocated to enhance safety infrastructure.

This paper focuses on Special Grants, one of the four types of government grants. As discussed before, on a narrow scale, Special Grants serve to complement the limitation of formula-based Ordinary Grants allocation; on a broader scale, they contribute to achieving the ideal of satisfying basic administrative needs, as part of the System. Also, Special Grants is further divided into three categories, each of which de jure aims to (a) address *special* local financial needs (40%) (b) help regions recover from disaster and create a safe environment (50%) or (c) finance joint projects between local and central governments (10%).

This categorization is crucial for understanding the research design of this paper. It has been pointed out that vagueness of the word "special" in category (a) makes it more vulnerable to the influence-exerting behavior of politicians as compared to other categories (i.e., (b) and (c)). This observation has prompted research on Special Grants allocation patterns and has also led to the consensus among a majority of researchers that only Special Grants falling under category (a) should be utilized as a dependent variable in conducting such research. Following the tradition, this paper also applied the same criterion in constructing *TOTAL PIE* and *PARTIAL PIE* variables.

Another noticeable feature of the Special Grants system is that it is administered by Ministry of the Interior and Safety, whose corresponding congressional committee being Security and Public Administration Committee. This raises concern that congressmen who belong to this committee may exert influence on the allocation of grants to their advantage. For this reason, committee-related variables have always been included as control variables in previous studies. In this paper, a variable *SPA COMMITTEE* serves the purpose.

2.2. Previous studies on Special Grants allocation

Correlations between political power and the amount of grants distributed have been explored in various ways. Choi and Kim (2008) found that the number of congressmen belonging to a region or holding membership on a particular congressional committee influenced grant amount received by the region. This study argued that the part of grants not vulnerable to the intervention of politicians should be truncated, a practice adopted by most of the subsequent studies on Special Grants.

Similarly, Hur and Kwon (2009) discovered a positive correlation between measures of political power and grant amount. This study focused on the moderating effect of party membership. Empirical analysis showed that the same measure of political power was statistically significant in the case of congressmen belonging to the opposition but not significant in the case of congressmen belonging to the ruling party. According to the authors, this result could be attributed to the difference in vote-earning strategies between both parties.

Yoo and Cho (2014) added another type of politician. In addition to the influence of congressmen, the mayors were included in a set of independent variables, turning out to be influential participants in the allocation process. Park and Chang (2015) also analyzed the influence of congressmen and mayors. However, the main interest of this study is robustness check. Observant of the fact that a researcher can choose either a district or an electorate as a unit of analysis (see Section 3.3), the authors construct two datasets. One dataset was constructed based on a district unit and the other dataset was constructed based on an electorate unit. The authors conducted regression analysis on each dataset and compared the results. It was found that some independent variables, measures for the power of politicians, stayed statistically significant across both regressions, while others were not.

Choi et al. (2016) focused on explaining why certain independent variables are *not* influencing grant amount. DID regression analysis showed that among measures of political power, membership on a particular congressional committee was found *not* statistically significant. This result was explained by an accumulated effort to increase the transparency of grant allocation system.

Kim (2018) argued that presidents, as well as congressmen and mayors, were also influential players in grants

Table 1. Previous studies of the Special Grants allocation

Authors	Main findings
Choi and Kim (2008)	Powerful politicians (congressmen) bring more grants to their electorates.
Hur and Kwon (2009)	Powerful politicians (congressmen) bring more grants to their electorates. The party congressmen belong to moderates the effectiveness of political power variables.
Yoo and Cho (2014)	Powerful politicians (congressmen and mayors) bring more grants to their electorates.
Park and Chang (2015)	Powerful politicians (congressmen and mayors) bring more grants to their electorates. Statistical significance of political power variables is robust to the choice of unit of analysis.
Choi et al. (2016)	Powerful politicians sometimes fail to bring more grants to their electorates.
Kim (2018)	Powerful politicians (congressmen, mayors) bring more grants to their electorates. In addition, regions closely related to presidents receive more grants.
Ryu (2020)	Politicians bring grants to their electorates not because they desire re-election. They work as much as they get paid.

allocation. The hypothesis was that regions where presidents were born or spent their childhood would receive more grants during their incumbency. Panel GLS corroborated this hypothesis.

Ryu (2020) explained politicians' motivation in an unprecedented way. Previous studies explicitly or implicitly assumed that politicians try to maximize the grant amount for their re-election. However, the author assumed that politicians work as much as they get paid: the grant amount politicians bring to their electorates is proportional to the parliamentary expenses they received from the voters of their electorates.

3. EMPIRICAL MODEL

3.1. Research Hypothesis

The authors aim to observe the way politicians respond to the change in the size of the pie. This research motivation is reflected in the following research hypothesis:

H: When the sum of the amount of grants distributed to every electorate increases as compared to the previous year, the year-on-year increment of grants distributed to the electorates of powerful politicians would be greater than that of grants distributed to the electorates of less powerful politicians.

3.2. Model Specification

To test the hypothesis, the following fixed effects model was estimated:

$$\begin{aligned} PARTIAL\ PIE_{i,t} =& \beta_0 + \beta_1 \\ & \times RULING\ PARTY\ CONGRESSMEN_{i,t} \\ & + \beta_2 \times TOTAL\ PIE_t \\ & + \beta_3 \\ & \times RULING\ PARTY\ CONGRESSMEN_{i,t} \\ & \times TOTAL\ PIE_t + \\ & B \times CONTROLS_{i,t} + \varepsilon_{i,t} \end{aligned}$$

The regression coefficient of main interest is β_3. According to the regression model, when *TOTAL PIE* increases by one unit, *PARTIAL PIE* increases by β_2+β_3×*RULING PARTY CONGRESSMEN*. Therefore, β_3 reflects the research hypothesis that when the sum of the amount of grants (*TOTAL PIE*) increases, the year-on-year increment of grants is moderated by the power of politicians (*RULING PARTY CONGRESSMEN*).

3.3. Unit of Analysis

It should be noted that an electorate is not necessarily the unit of analysis in the above regression model. In many cases, the unit of area where government grants are distributed (a district) does not match up with the unit of area where politicians are elected (an electorate). This inconsistency, or a nested structure, usually occurs in two ways: multiple districts are included in a single electorate (Type I), or multiple electorates are included in a single district (Type II).

In both situations, the upper unit was selected as a unit of analysis. Observations from the lower units were aggregated to create an observation for the upper unit. In Type I, for example, an electorate was selected as the unit of analysis, whose value of *PARTIAL PIE* was measured by the sum of government grants distributed to multiple districts. In Type II, a district was selected as the unit of analysis, whose value of *RULING PARTY CONGRESSMEN* was measured by the proportion of ruling-party congressmen within the district. As for other variables except for *TOTAL PIE*, aggregation was conducted in a similar manner.

With this aggregation method, a panel dataset of 150 units of analysis was constructed for the period 2016–2019. Data were retrieved from Statistics Korea, Ministry of the Interior and Safety, and other sources.

3.4. Variable Description

3.4.1. Dependent Variable

PARTIAL PIE is the amount of grants distributed to each unit (log-transformed). A measurement issue appears from

the fact that Special Grants is divided into three categories (See Section 2): grants that (a) address special needs, (b) help regions recover from disaster and create a safe environment, and (c) finance joint projects between local and central governments.

Previous studies had different views as to which categories should be included and which should be excluded in constructing grant amount variable. Choi et al. (2016) and other researchers argued that categories (b) and (c) should be excluded on the reason that these are administered based upon clear criteria, making them less vulnerable to politician's intervention. Choi and Kim (2008) and Ryu (2020) excluded (b) for a similar reason. All of these studies agreed that (b) should be excluded.

On the other hand, Hur and Kim (2016) and Kim (2018) included (b) in their empirical analysis. Hur and Kim (2016) admitted that it is desirable to exclude (b) for the accuracy of research but such separation was not available in the data they have for their research period. Kim (2018) argued that (b) was included because it was susceptible to presidential power, but the ulterior motive appears to be data availability as in the case of Hur and Kim (2016).

In this paper, *PARTIAL PIE* includes only (a).

3.4.2. Independent Variables

TOTAL PIE is the sum of the amount of grants distributed to every unit (log-transformed), which was also constructed using only Special Grants of category (a). The value of *TOTAL PIE* varies over time but remains constant across all units, which is why *TOTAL PIE* variable does not have an "i" subscript in the model specification.

RULING PARTY CONGRESSMEN is the proportion of ruling-party congressmen of the unit. A measurement issue occurs when constructing political power variables (*RULING PARTY CONGRESSMEN*, *SPA COMMITTEE*, and *RULING PARTY MAYOR*). For example, in a given electorate, a predecessor and a successor co-exist in year t if a congressional election was held in that year. If a predecessor belonged to the ruling party and a successor belonged to the opposition, which value should be assigned to *RULING PARTY CONGRESSMEN* variable in year t?

Yoo and Cho (2014) took a detour by skipping election year. However, this paper utilizes election year data. First, in 2016, a congressional election year (where congressmen were elected), the successors' information was assigned to political power variables. Predecessor's term expired on May 29th, whereas Special Grants was first distributed on July 8th, making it plausible that successors, not predecessors, were likely to have exerted influence in that year.

Second, in 2018, a local election year (where mayors were elected), the weighted sum of successors' information and predecessors' information was assigned to political power variables. Considering the fact that 236 billion won of grants was distributed before the election, and 234.9 billion won of grants was distributed after the election in the year 2018, the weight was determined as 1:1 (an approximation to 236:234.9).

Another point to note is that the aforementioned political power variables (*RULING PARTY CONGRESSMEN*, *SPA COMMITTEE*, and *RULING PARTY MAYOR*), though they vary across every unit, do not change on an annual basis. These values change after elections and remain constant until the subsequent election cycle unless incumbents face election annulment or pass away.

3.4.3. Control Variables

Control variables are divided into three subgroups. The first group is measures of political power. *SPA COMMITTEE* is the number of days congressmen belonged to the Security and Public Administration Committee during a year (J. Choi et al., 2016; Y. Choi & Kim, 2008). *RULING PARTY CONGRESSMEN* is the proportion of ruling-party congressmen of the unit (Park & Chang, 2015; Yoo & Cho, 2014).

The second group is measures of population factor. *POPULATION SIZE* is log-transformed population size. *POPULATION OVER 65* is the proportion of population aged 65 and over. *POPULATION DENSITY* is population density.

The third group is measures of need for grants. Although this paper assumes that grant allocation process is susceptible to the manipulation of politicians, the law governing Special Grants nominally stipulates that grants be distributed in response to local needs. *FINANCIAL INDEPENDENCE* literally means financial independence. *WATER* is waterworks distribution rate, and *SEWAGE* is sewage distribution rate. *ROAD* is the proportion of paved road, and *CULTURE* is the number of cultural facilities per 100,000 people. Including these as control variables is justified in that considerable amounts of Special Grants are used to pave a road, reinforce water supply infrastructure, and build cultural facilities (J. Choi et al., 2016).

Table 2 presents a description of the variables used in this paper.

3.4.4. Other Measurement Issues

Additional measurement issues, which are also resolved by taking the institutional background into consideration, are discussed. First, when constructing the dataset, values of political power variables (*RULING PARTY CONGRESSMEN, SPA COMMITTEE, RULING PARTY MAYOR*) in *year t* were matched to the values of *PARTIAL PIE* in year t. For some types of grants, the grant amounts allocated to each unit in year t are determined in year t-1; for other types of grants, the amount in year t is determined in year t. Special Grants belong to the latter type, meaning that it is natural to assume that politicians would intervene in the allocation process with the political power they have in year t.

Second, the values of types (b) and (c) control variables in *year t-1* were matched to the values of *PARTIAL PIE* in year t. As mentioned in the previous paragraph, *PARTIAL PIE* in year t is determined in year t. However, when estimating local needs (to determine *PARTIAL PIE* in year t), bureaucrats should refer to the statistics of year t-1 given the absence of statistics for year t at that time.

Table 2. Variable Definitions

Variable	Definition
Dependent Variable	
Partial Pie	The amount of grants distributed to each unit (log-transformed)
Independent Variables	
Total Pie	The sum of the amount of grants distributed to every unit (log-transformed)
Ruling Party Congressmen	The proportion of ruling-party congressmen of the unit
Control Variables	
(a) political power	
SPA Committee	The number of days congressmen belonged to the Security and Public Administration Committee during a year
Ruling Party Mayor	The proportion of ruling-party mayor
(b) population factor	
Population Size	Population size (log-transformed)
Population over 65	The proportion of population aged 65 and over
Population Density	Population density
(c) need for grants	
Financial Independence	Financial independence
Water	Waterworks distribution rate
Sewage	Sewage distribution rate
Road	The proportion of paved road
Culture	The number of cultural facilities per 100,000 people

Table 3. Value and growth rate of *TOTAL PIE* and total government expenditure

	TOTAL PIE		Total government expenditure	
Year	Value	Growth rate	Value	Growth rate
2016	433,282	10.2%	384.9	3.5%
2017	507,615	16.7%	406.6	5.6%
2018	559,322	10.3%	434.1	6.8%
2019	650,756	16.5%	485.1	11.7%

* unit: million South Korean won (*TOTAL PIE*) and trillion South Korean won (Total government expenditure)

4. EMPIRICAL RESULTS

4.1. Descriptive Statistics

Table 3 presents the value and year-on-year growth rate of *TOTAL PIE* and total government expenditure during 2016–2019, the research period of this paper. Two points are worth mentioning concerning this table.

First, the continuous increase of *TOTAL PIE* value. Although Section 1 provides the motivation of this paper in both ways—situations where the size of the pie increases *or* decreases—, the upward trend allows one to *only* investigate situations where the size of the pie increases. This shaped the research hypothesis of this paper.

Second, the growth rate of *TOTAL PIE* always being higher than the growth rate of total government expenditure. The research hypothesis implies that powerful politicians would make an effort to take a larger share of grants increments. However, politicians should first *recognize* that total grant amounts (*TOTAL PIE*) indeed increased compared to the previous year before they make an effort.

One assumption is this: the increase of *TOTAL PIE* value is not impressive in itself and thus may not be recognized as a *true* increase by politicians given that the government budget tends to increase every year; however, if the increase of *TOTAL PIE* is *noteworthy* (i.e., the growth rate of *TOTAL PIE* is higher than that of another type of government budget, total government expenditure), it would be recognized as a *true* increase, making politicians embark on securing a larger share of grants increments. Table 3 shows that the "noteworthy" condition is satisfied.

Table 4 presents the summary statistics of variables used in the paper. *PARTIAL PIE*, *TOTAL PIE*, and *POPULATION SIZE* are log-transformed variables. Intended sample size was 600 (i=150, t=4). However, nine cases occurred where units received zero grants, leading to the extreme value of -Inf when log-transformed for the construction of *PARTIAL*

Table 4. Summary Statistics

Variable	Mean	Std. Dev	Min	Max	Obs.
PARTIAL PIE	21.3	2.7	18.8	23.0	591
TOTAL PIE	27.0	0.1	26.8	27.2	600
RULING PARTY CONGRESSMEN	35.4	41.8	0.0	100.0	600
SPA COMMITTEE	36.3	93.5	0.0	728.0	600
RULING PARTY MAYOR	56.8	38.9	0.0	100.0	600
POPULATION SIZE	12.6	0.5	11.8	14.0	600
POPULATION OVER 65	15.5	6.2	6.1	34.4	600
POPULATION DENSITY	5460.4	6796.4	34.2	27840.8	600
FINANCIAL INDEPENDENCE	25.7	12.7	5.6	64.3	600
WATER	94.7	8.6	56.1	100.0	600
SEWAGE	90.1	13.0	48.1	100.0	600
ROAD	95.6	6.5	60.0	100.0	600
CULTURE	6.9	6.1	1.0	41.9	600

PIE. These cases were removed. Further regression analysis was conducted only on 591 observations accordingly.

4.2. Regression Results

Table 5 reports the results of fixed effects model estimation. A total of four regression models were estimated. All variables were included in Model 1, whereas subsets of the variables were removed for robustness check in Models 2–4. Each of these subsets corresponds to different groups of control variables in Section 3.4.

As can be seen, statistical significance was consistently observed across every model. The coefficients of all the independent variables were significant. Particularly, the coefficient β_3 of interaction term *RULING PARTY CONGRESSMEN*×*TOTAL PIE*, the variable of main interest, was significant with a positive sign (0.724 in the case of Model 1).

$$\begin{aligned} PARTIAL\ PIE_{i,t} =& \beta_0 + \beta_1 \times RULING\ PARTY\ CONGRESSMEN_{i,t} \\ &+ \beta_2 \times TOTAL\ PIE_t \\ &+ \beta_3 \times RULING\ PARTY\ CONGRESSMEN_{i,t} \\ &\times TOTAL\ PIE_t + B \times CONTROLS_{i,t} + \varepsilon_{i,t} \end{aligned}$$

$$\begin{aligned} \frac{\partial\ PARTIAL\ PIE_{i,t}}{\partial\ TOTAL\ PIE_t} &= \beta_2 + \beta_3 \\ &\times RULING\ PARTY\ CONGRESSMEN_{i,t} \\ &= 1.155 + 0.724 \\ &\times RULING\ PARTY\ CONGRESSMEN_{i,t}\ \ (Model\ 1) \end{aligned}$$

The left-hand side partial derivative represents the change in grant amounts that units receive (*PARTIAL PIE*) in response to variations in the total grant amount distributed to all units (*TOTAL PIE*). Moreover, the non-negativity of β_3 (0.724) indicates that the change in *PARTIAL PIE* is greater for units when there is an increase in the proportion of the ruling party congressmen (*RULING PARTY CONGRESSMEN*) over time. This implies that as the "pie" grows larger, more influential politicians claim a larger share of the pie increment compared to their less powerful counterparts. This moderating effect of politicians' power is visualized in Figure 1 (The slopes of the two lines in the figure were calculated by substituting 0 and 1 for *RULING PARTY CONGRESSMEN* in the partial derivative equation above).

The interpretation of β_1 (-19.054), though not being the primary focus of this study, requires caution. The negative value of β_1 seemingly suggests that as *RULING PARTY CONGRESSMEN* increases, units are expected to receive lower grants. However, when we compute the partial derivative and substitute the minimum value of *TOTAL PIE* (26.8, see Table 4), a positive value of 11.89 is obtained.

$$\begin{aligned} \frac{\partial\ PARTIAL\ PIE_{i,t}}{\partial\ RULING\ PARTY\ CONGRESSMEN_{i,t}} &= \beta_1 \\ &+ \beta_3 \times TOTAL\ PIE_t \\ &= -19.054 + 1.155 \\ &\times TOTAL\ PIE_t\ (Model\ 1) \\ &= -19.054 + 1.155 \times 26.8 \\ &= 11.89 \end{aligned}$$

Among control variables, the coefficients of *SPA COMMITTEE* and *RULING PARTY MAYOR* were significant with a positive sign, which is consistent with previous studies (Y. Choi & Kim, 2008; Yoo & Cho, 2014) in that the correlation between the power of a politician and the amount of Special Grants is found. Also, the coefficient of *WATER* was significant with a negative sign, which implies that Special Grants may have been distributed reflecting the need for grants.

5. DISCUSSION

This paper differs from previous studies in two main aspects. First and foremost, a distinct model specification was employed. Several prior studies, including this paper, have explored the moderating effect of ruling party membership on specific types of correlations. Ryu (2020) focused on the correlation between Special Grants and legislative expenses, while Hur and Kwon (2009) on the correlation between Special Grants and the number of terms. This paper focuses on the correlation between Special Grants and the size of the pie, corroborating the hypothesis that politicians seek to obtain more year-on-year increments.

The empirical findings support the hypothesis. The coefficient of *RULING PARTY CONGRESSMEN*×*TOTAL PIE* was significant with a positive sign, which means that the unit with a higher value of *RULING PARTY CONGRESSMEN* experienced a greater year-on-year increment in *PARTIAL*

Table 5. Fixed effect estimation

		Dep. var = PARTIAL PIE			
		Model 1	Model 2	Model 3	Model 4
Ind. var	RULING PARTY CONGRESSMEN	-19.054* (8.923)	-24.65** (8.526)	-21.003* (8.726)	-24.278** (8.527)
	TOTAL PIE	1.155** (0.418)	1.308** (0.422)	0.780*** (0.196)	0.903* (0.392)
	RULING PARTY CONGRESSMEN ×TOTAL PIE	0.724* (0.330)	0.931** (0.315)	0.796* (0.322)	0.917** (0.315)
Con. var	SPA COMMITTEE	0.001** (0.000)		0.001** (0.000)	0.001** (0.000)
	RULING PARTY MAYOR	0.131* (0.056)		0.131* (0.056)	0.132* (0.056)
	POPULATION SIZE	-0.673 (1.023)	-0.731 (1.037)		-0.829 (1.004)
	POPULATION OVER 65	-0.097 (0.086)	-0.113 (0.088)		-0.082 (0.086)
	POPULATION DENSITY	0.000 (0.000)	0.000 (0.000)		0.000 (0.000)
	INDEP	-0.012 (0.014)	-0.010 (0.014)	-0.011 (0.013)	
	WATER	-0.048* (0.020)	-0.048* (0.020)	-0.050* (0.020)	
	SEWAGE	0.007 (0.015)	0.006 (0.016)	0.005 (0.015)	
	ROAD	0.001 (0.019)	-0.002 (0.019)	0.001 (0.019)	
	CULTURE	0.020 (0.047)	0.021 (0.048)	0.027 (0.045)	
R^2	within	0.243	0.218	0.240	0.230
	between	0.054	0.028	0.157	0.021
	overall	0.052	0.032	0.166	0.023
Observations		591	591	591	591

* p<0.05, ** p<0.01, *** p<0.001. Standard errors are reported in parentheses.

PIE. This implies that powerful politicians are not satisfied with merely obtaining a positive difference (i.e., securing more grants than the previous year). Powerful politicians are satisfied when obtaining a positive difference-in-difference (i.e., enjoying more year-on-year increments in grants than other politicians).

Second, particular attention was paid to the construction of the panel data. As mentioned before, when both a predecessor and successor coexist in the same year—typically observed in election years—a problem arises regarding which politician's political influence should be assigned as the political influence variable for that year. Many studies failed to mention this issue. An exception, Yoo and Cho (2014), addressed this issue by skipping election years during the panel construction. To avoid the potential risks from such omissions, however, we used only one politician's information for one election year and a weighted average of the two politicians' information for another election year, and the rationale between each of these decisions was explained.

However, it is important to consider the limitations of this study. First, this study is a partial observation of Special Grants distribution. The purpose of this paper was to observe the way politicians respond to the change in the size of the pie. However, the situations where the size of the pie *decreases* were not examined since *TOTAL PIE* has only *increased* during the research period. During periods of increasing resources, powerful politicians pursued their self-interest, which resulted in the aforementioned "positive difference-in-difference." However, politicians may behave more prudently during periods of decreasing resources out of fear of being criticized for behaving greedily during hard times. This implies the existence of asymmetry. A longer research period would have allowed examining both situations, leading to a multi-faceted understanding of politicians' behavior.

Furthermore, the limited research period of 2016–2019 may not be generalizable to other periods, and the study did not take into account other possible determinants of Special Grants distribution, such as political stability, geographic location, and other socioeconomic factors. Examining these factors in a different (or broader) research period

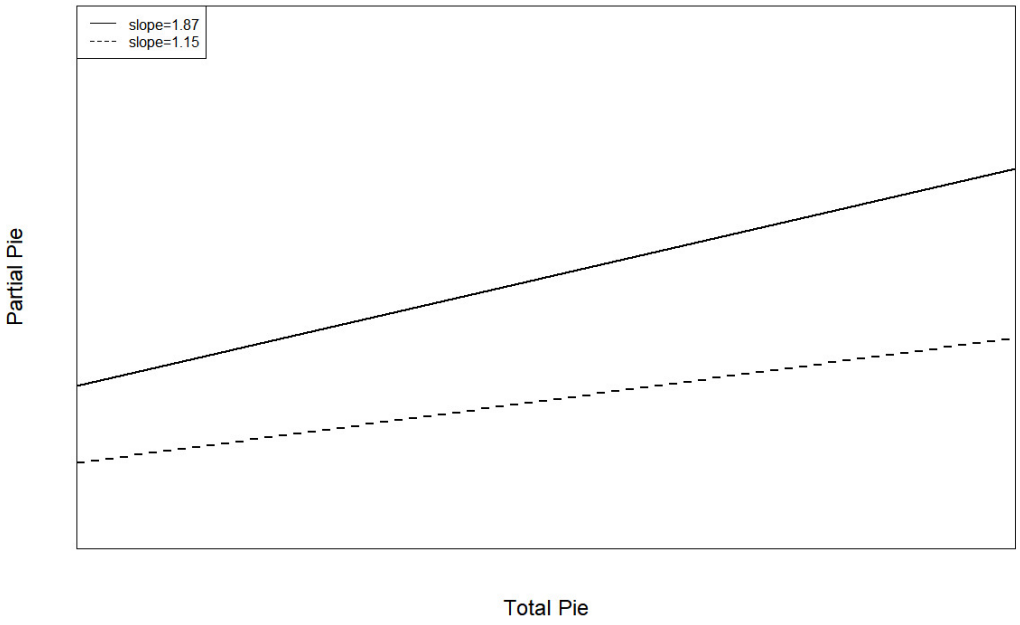

Figure 1. Moderating effect of politicians' power

may contribute to the complete understanding of Special Grants distribution.

Numerous previous studies have presented evidence that grants is distributed in favor of powerful politicians. This research confirmed that such inequities still exist today, emphasizing the need to guarantee that government grants be distributed fairly. It is less likely that a coordination mechanism that precisely matches Special Grants in South Korea exists in other countries since laws and systems vary from country to country. For example, Lim (2017) describes that the differences in the operational rules of parliamentary committees have shaped the budget processes of Korea and the U.S. in different ways. However, the moral of this study still remains applicable: the allocation of public resources can be easily distorted by the private or political motives of politicians. One example is the OMB, which gradually became politicized and lost its neutral competency, leading to its replacement by other budget agencies (Lim, 2019).

Policymakers should be aware that the prioritization of government resources by politicians may lead to negative perceptions of government institutions. It is advised that policymakers develop strategies and guidelines to ensure that political considerations be excluded from the decision-making process.

Submitted: August 24, 2023 KST, Accepted: September 11, 2023 KST

References

Choi, J., Kang, K., & Choi, S. (2016). The Effects of Political Power on the Allocation of Special Revenue Sharing among Local Jurisdictions in Korea. *Korean Journal of Public Administration*, *54*(4), 169–198.

Choi, Y., & Kim, S. (2008). An Empirical Study on the Pork Barrel Politics of Special Revenue Sharing Allocation. *Korean Public Administration Review*, *42*(2), 283–304.

Hur, S., & Kwon, H. (2009). Legislative Elections and Distributive Politics in Korea: The Case of Special Local Allocation Tax in the 17th National Assembly. *Korean Political Science Review*, *43*(2), 113–130. https://doi.org/10.18854/kpsr.2009.43.2.005

Kim, A. (2018). A Study on the Effect of the President's Political Influence on the Allocation of Special Grants: From the Roh Moo–hyun Administration to the Park Geun–hye Administration. *The Korea Journal of Local Public Finance*, *23*(1), 57–99.

Lee, J., & Cho, M. (2016). Public Finance. *Moonwoosa*.

Lim, J. (2017). How the Budget Process Works in the US House Appropriations Committee and Its Implications for the Korean Government. *Journal of Policy Studies*, *32*(2), 1–21.

Lim, J. (2019). Agency Politicization and the Decline of Neutral Competence: The Case of OMB in the United States. *Journal of Policy Studies*, *34*(1), 1–22.

Park, Y., & Chang, S. (2015). A Comparative Study on Distributive Politics of Special Shared Tax. *The Study of Election*, *6*, 147–168.

Ryu, J. (2020). *An analysis on the Special Share Tax as an Output of the District Congressmen* [Masters dissertation]. Seoul National University.

Yoo, B.-R., & Cho, C. (2014). Determinants of the Allocation of Special Revenue Sharing: Focusing on the Characteristics of Mayors. *Journal of Governmental Studies*, *20*(3), 247–278. https://doi.org/10.19067/JGS.2014.20.3.247