Abstract

**Purpose:** The primary purpose of this study is to analyze the main content of discussions on the relationship between the size of government spending and economic growth. Furthermore, the secondary purpose of this study is to analyze the main discussion content of the papers that studied the relationship between different items of government expenditure and economic growth. In this way, this study can contribute to exploring the research flow and direction between government spending and economic growth.

**Method:** This study systematically collected and investigated quantitative and qualitative studies that analyzed the relationship between the size of government spending and economic growth and the relationship between government spending items and economic growth. In addition, policy reports and related data on economic data and impact analysis between government spending and economic growth were additionally utilized in addition to the analysis of previous studies.

**Results:** Most of the research so far has focused on the relationship between the size of government spending and economic growth. In other words, it was confirmed that there were not many studies that recognized the differences between government expenditure items and analyzed the different quantitative relationships between different expenditure items and economic growth.

**Conclusion:** In future research, it is necessary to analyze the different impact relationships between government spending items and economic growth, and follow-up studies that can suggest more specific and practical policy implications according to the results. It is also needed to analyze the quantitative relationship between different expenditure items and economic growth at the local government level and to draw implications for the different influence relationships between government spending and economic growth at different levels of government.

**Keywords:** Financial Safety, Public Spending, Economic Growth, Government Expenditure, Components of Public Spending

1. Introduction

The scope and content of studies analyzed by setting economic growth(performance) variables as independent or dependent factors are vast(e.g.,[1][2][3][4][5]). Also, extensive studies have been conducted theoretically and empirically to explain the variation in economic growth as well as the effect of government size(i.e., public spending) on growth for decades. Those studies can be categorized into four groups of theoretical camps based on its findings and arguments as follows.
First group of studies has found a positive effect of government size on economic development (e.g., [6][7][8][9][10][11][12][13]). However, second camp has argued that an increase in government spending is negatively associated with economic growth (e.g., [14][15][16][17][18][19][20][21]). Third group of studies has found no statistically significant correlations between government size and economic growth (e.g., [22][23][24][25]). Finally, the last group of research has discussed about the relatively different effects of each of the components of government expenditures on economic growth (e.g., [16][26][27][28][29][30][31][32][33]).

The primary purpose of this study is to analyze the main content of discussions on the relationship between the size of government spending and economic growth. Furthermore, the secondary purpose of this study is to analyze the main discussion content of the papers that studied the relationship between different items of government expenditure and economic growth. In this way, this study can contribute to exploring the research flow and direction between government spending and economic growth.

2. Research Method and Scope

In order to achieve the above-mentioned research purpose, this study systematically collected and investigated quantitative and qualitative studies that analyzed the relationship between the size of government spending and economic growth and the relationship between government spending items and economic growth. In addition, policy reports and related data on economic data and impact analysis between government spending and economic growth were additionally utilized in addition to the analysis of previous studies. It is revealed that the temporal and spatial scope of this study was not limited in particular, and only the content scope was limited to discussing the relationship between the size of government spending and economic growth.

3. Studies on the Size of Public Spending and Economic Growth

The link between government size (i.e., public spending or government expenditures) and economic growth (i.e., gross domestic product or gross state product) has been extensively discussed. The empirical findings and theoretical arguments regarding the associations are mixed, because studies have used different groups of countries and time periods as well as different measures of government size and economic growth [18][34]. However, based on the discussion and findings from the studies previously published, in general, an increase in government size is associated with an increase in economic growth among developing countries, whereas the reverse is true for developed ones.

First, with regard to supporting arguments on the positive linkage of government size with economic growth (i.e., a big government), some discuss several positive functions of a government in economic development as follows: 1) “protecting individuals and their property”, 2) “operating a court system to resolve disputes”, and 3) “making a stable monetary regime” [6][7]. In a similar vein, another research finds that an increase in public spending plays a significant role in reducing social costs resulting from various types of conflicts, increasing public investment for nations’ constructive and stable operations, as well as maintaining their independence from other countries [8].

In addition, a big government is more likely to invest in redistributive policies like social welfare programs, compared to a small government. Although a high level of government expenditures for unproductive activities has a detrimental effect on economic growth to some degree, it points out that an intensive level of redistributive programs plays a critical role in addressing income inequality, maintaining the social order, as well as improving economic
growth in the long run [9].

On the contrary, an increase in government size (i.e., a high level of government expenditures) is likely to constrain economic improvement by reducing motives or incentives to work resulting from an increased level of unproductive public spending (e.g., social welfare programs and other types of redistribution programs) [14] and strict regulations that have detrimental effects on private investment and positive economic activities [12] [15]. Another research finds that a big government is likely to impose a heavy tax burden in order to expand its budget and financial activities. A high level of tax burden is more likely to have detrimental effects on private investment and labor supply as well as retard economic growth in the long run [16].

In a similar vein, it notes that rent-seeking activities and government regulations, which are relevant to an increase in public spending, have also negative influences on economic growth by allocating financial resources inefficiently from productive to unproductive government expenditures [9]. Another research also generally supports the negative relationship between the size of government and economic growth. The study finds that the negative effect of public spending leads to lower level of economic development by increasing a government’s fiscal policies and regulations, which are more likely to hamper the market economy, crowd out more efficient provision from private sectors, as well as increase tax burden [13].

Another research also confirms the negative correlation between the size of government expenditures and economic growth based on empirical results from 29 rich countries in two periods (1970-1995 and 1970-2005). Additionally, the research confirms that a large government tries to utilize positively “economic openness” and “sound economic policies” (p. 195) in an effort to reduce and compensate for the negative effects of an increase in public spending on economic growth [18].

With regard to arguments from those two theoretically competing camps, it finds that a developing country is more likely to have positive effects of its public spending on economic performance since a larger portion of government expenditures in developing countries tend to be implemented for building social overhead capital (SOC) facilities. On the other hand, a developed country is more likely to invest its government expenditures to implement redistributive programs and social welfare assistances, which are unproductive spending as well as not directly relevant with economic growth [35].

According to [26], the link between government size and economic growth is a complicated and nonlinear relationship. An increase in government expenditures leads to a higher level of economic performance by some point of public spending, but the positive association tends to become negative after a particular point of government size. Another research mentions that the effects of government size on economic growth are relatively different depending on the size of government. Specifically, he argues that the negative linkages of an increase in tax burden with incentives to work and economic growth are generally confirmed among large governments, while an increase in government expenditures tends to lead to marginal productivity of capital and economic growth among small governments [36].

The different research examines the empirical linkage between government size (i.e., total government expenditures) on economic growth (i.e., gross domestic product per capita) in 32 developed and 51 developing countries over the period of 1996 to 2006. His study tries to address the empirical gaps of the previous studies on the relationship between government size and economic growth, which have identified the positive correlations in developing countries and negative linkages in developed ones by analyzing the two groups of countries separately. In other words, the primary contribution of his study to the growth and government spending literature is that the research demonstrates the magnitude of effects of government expenditures on economic growth between two groups of countries are relatively different. The study also finds that the effects of public spending on economic development are five times
higher in developing countries than in developed groups. From the results, the study points out that national-level of government policies and decisions on financial policies are more likely to influence economic development in developing countries rather than in developed groups [34].


Beyond discussion on the general relationship between government size and economic growth, several studies (e.g., [27][28][32][34]) mention that future research needs to explore the relatively different effects of government expenditure on economic growth depend on purposes and types of expenditures in order to contribute to the development of the literature on economic growth and public spending. However, few studies have tried to investigate the structure of government expenditure and its empirical correlations with economic growth to date.

For instance, the above <Table 1> identifies what types of expenditures are included in each of the seven categories constructing the state expenditures.

Table 1. Construction and measures of the state expenditures.

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary and secondary education</td>
<td>Expenditures for the state’s Department of Education, transportation of school children, adult literacy programs, handicapped education programs, programs for other special populations (i.e., gifted and talented programs), anti-drug programs, and vocational education.</td>
</tr>
<tr>
<td>Higher education</td>
<td>Expenditures for capital construction, community colleges, vocational education, law, medical, veterinary, nursing and technical schools, and assistance to private colleges and universities, as well as tuition, fees and student loan programs.</td>
</tr>
<tr>
<td>Public assistance</td>
<td>Expenditures for cash assistance under the Temporary Assistance for Needy Families (TANF) program and other cash assistance (i.e., state supplements to the Supplemental Security Income program, general or emergency assistance).</td>
</tr>
<tr>
<td>Medicaid</td>
<td>Expenditures from state funds, federal matching funds and other funds and revenue sources used as a Medicaid match such as provider taxes, fees, assessments, donations, and local funds.</td>
</tr>
<tr>
<td>Corrections</td>
<td>Expenditures for capital construction, aid to local governments for jails, parole programs, prison industries, and community corrections, as well as expenditures made for juvenile correction programs.</td>
</tr>
<tr>
<td>Transportations</td>
<td>Expenditures for highways, mass transit, and airports. States were also asked to include expenditures for road assistance to local governments, the administration of the Department of Transportation, truck and train/ railroad programs, motor vehicle licensing, and gas tax and fee collection.</td>
</tr>
<tr>
<td>All others</td>
<td>Expenditures for all remaining programs not captured in the functional categories, including the Children’s Health Insurance Program and any debt service for other state programs (i.e., environmental projects, housing).</td>
</tr>
</tbody>
</table>

Note: State Expenditure Report: Examining Fiscal 2009-2011 State Spending by the National Association of State Budget Officers.

The study points out that future studies need to pay more attention to the structure of public spending and taxation as well as explore the causal relationship of economic growth with unproductive and productive government expenditures separately [16]. In addition, Another research investigates the different effects of public spending on economic growth depending on the types of public goods that a government provides. Specifically, the study finds that public spending on provision of “core expenditure categories” such as “public order and safety, national defense, education, transportation and communication” (p.9) is positively associated with economic improvement, while an increase in government expenditures on other services and goods have negative effects on economic growth [26].
Another research mentions that it is important to distinguish between productive and unproductive government expenditures since some types of productive government spending (e.g., communications, transportations, and other social infrastructures) are more likely to improve economic activities and growth. On the contrary, some components of unproductive government expenditures (e.g., social welfare and security programs) tend to retard economic development [27]. However, inconsistent with the above argument, some research support the positive effects of unproductive government spending on economic growth due to its potential to reduce economic inequality as well as preserve the order of society [9] [37].

These findings are partially supported by [28]'s study that examines the crowding-out and crowding-in effects of different elements of government expenditures for 39 developing and developed countries over the period of 1975 to 1984. Based on the results, it confirms the negative relationship between unproductive government expenditure and economic growth in both developing and developed countries. They also find that some components of productive government spending (e.g., communication and transportation) have crowding-in effects on private investment as well as positively influence economic growth only in developing countries [28].

Categorize government expenditures (productive and unproductive spending) and tax structures (distortionary and non-distortionary taxation) in their models, examining different relationships of those four components with economic growth [29] [30]. Consistent with theoretical arguments, these models support the positive link between productive government spending and economic development. Specifically, it demonstrates that the effect of government education expenditures on economic growth is greater than other types of productive expenditures. In addition, they point out that the biased effect of government size on economic growth can be mitigated by including both sides of the government expenditure and tax structure [29].

The other research finds that each component of government expenditures correlates differently with economic growth in both developed and developing countries. For instance, public spending on education shows a positive link with economic growth in developed countries, whereas government expenditures on defense, health, and social security and welfare have negative links with economic growth in developing countries [31]. Another research finds that the effect of public spending or investment for human capital is likely to be statistically insignificant since the relationship between those two variables is almost non-linear and quadratic [38]. In addition, it supports the positive effects of government expenditures and investment for transportation and communication on economic development in developing countries [39]. Similarly, another research finds positive relationships of public spending on education and infrastructure with economic growth, while government expenditures for national defense have negative effects on economic improvement [33].

5. Conclusion

The main purpose of this study is twofold. First, the main trend of previous studies on the relationship between government spending and economic growth is analyzed. Second, it analyzes the discussion of the relationship between the different expenditure items constituting government spending and economic growth. As pointed out earlier, most of the research so far has focused on the relationship between the size of government spending and economic growth. In other words, it was confirmed that there were not many studies that recognized the differences between government expenditure items and analyzed the different quantitative relationships between different expenditure items and economic growth. Therefore, in future research, it is necessary to analyze the different impact relationships between government
spending items and economic growth, and follow-up studies that can suggest more specific and practical policy implications according to the results.

In addition, most of the previous studies that discussed the relationship between government spending and economic growth are studies that analyzed data at the national level. In other words, there are very few studies analyzing the relationship between government spending and economic growth at the level of the state or local governments, which are lower economic actors. Therefore, it is suggested that a follow-up study is needed to analyze the quantitative relationship between different expenditure items and economic growth at the local government level and to draw implications for the different influence relationships between government spending and economic growth at different levels of government.

6. References
6.1. Journal articles


6.2. Additional references

7. Appendix

7.1. Author contribution

<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
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<tr>
<td>YS</td>
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<td>- Getting results ☑</td>
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<td>- Play a decisive role in modification ☑</td>
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<td>- Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑</td>
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<td>- Participants in Drafting and Revising Papers ☑</td>
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<td></td>
<td>- Someone who can explain all aspects of the paper ☑</td>
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