

THE EFFECTS OF INTERGOVERNMENTAL TRANSFERS FOR URBAN DEVELOPMENT IN KOREA

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Introduction

Nowadays, with decentralization and rapid urbanization, local or urban governments are faced with great pressure to accelerate the provision of urban services. Capital investment projects in urban area are top concerns for localities, especially, cities of all sizes because urban development is still a major challenge for decentralized urban governments, whether in industrialized countries or developing countries. Investments by urban or local government in social and physical infrastructure are critical. The maintenance of public capital assets in urban areas is now largely the responsibility of local authorities.

Through the capital investment projects, urban governments want to provide the services demanded within a specific jurisdiction. Urban governments and local leaders in cities have had to take active roles in shaping their community's economic and social welfare. In both good and bad economic times, local leaders turn to urban development programs such as road construction, water and sewer system, industrial development, and downtown redevelopment, to strengthen their local economic base, capital facility, and infrastructure. Development efforts of local government are often

focused on narrow geographic areas. Concentration of resources and programmatic effort can maximize the impact of programs, but such a focus increases the economic externalities, whether it is negative or positive, that may influence the broader local economy. Therefore, a urban development program that affects adjacent localities may produce intergovernmental relations on financing and benefits. Intergovernmental relation is the subject of how various governments deal with each other; and what their relative roles, responsibilities, and levels of influence are and should be. This interdependent set of economic development may restrict governmental actions.

This interdependence of local governments may produce intergovernmental transfer payments to enhance economic efficiency for urban development. Intergovernmental transfer payments were devised to reduce intergovernmental fiscal inequality and to resolve the problems like intergovernmental spillover. Interdependence of local governments, especially in metropolitan areas, produces intergovernmental transfer payments. The intergovernmental transfers secure a remarkable position of local finance. Much local government activities depend on the intergovernmental transfer payments as operating sources. Cities in Korea, especially, have relied on central government for assistance in affecting the development of urban areas. Funds from central government have been used to clear slums, upgrade the built environment, improve public infrastructure, and create jobs for the city's unemployed.

The main purpose of intergovernmental transfer payments is to stimulate local government's expenditures. That is, the increase of intergovernmental transfers induces the increase in local expenditures. It is based on a belief that intergovernmental transfers induce local public goods provisions. Without the transfers, the local governments would produce the local public goods at the below level of economic efficiency. However, there is no clear-cut consensus on the degree of stimulus.

The effects of the intergovernmental grant system have long been topics of discussion and, at times, heated debate among politicians, economists, and

political scientists, as well as among lay people. The impact of intergovernmental transfers on the expenditures of recipient governments has been the focus of considerable economic research.

In these contexts, it is critical that local officials understand how intergovernmental transfer works so they can be successful in their efforts to produce and deliver public goods and services in their communities. This study will examine how intergovernmental transfer payments affect urban development projects in local areas.

Local Finance in Korea

Administrative Structure of Local Governments and Decentralization

Korea has a unitary governmental system. Traditionally, the top-down governmental policies of Korea have shaped a centralized administrative system. As a result, the central government has raised and spent most of the government's revenues. Korea's local governments have possessed only a small revenue base. Consequently, local entities have been hard-pressed to generate enough local revenue to run their governmental organizations.

The system of local governments in Korea is backed by the Constitution. At present, the Local Autonomy Law provides for a two-level system of local governmental structure.¹ Figure 1 illustrates the system of local governments in Korea. The upper levels of local governments consist of a special city (Seoul), six direct jurisdiction cities (Pusan, Daegu, Incheon, Daejeon, Gwangju, and Ulsan), and nine provinces. The lower levels of local governments consist of 72 cities, 91 counties, and 69 autonomous districts in 1998. The cities and counties are within the provinces. The autonomous districts are within the special city and direct jurisdiction cities. The chief

1 For a review of Korean local governmental and financial system, see An-Je Kim (1994) and Kazuhisa Ito (1992).

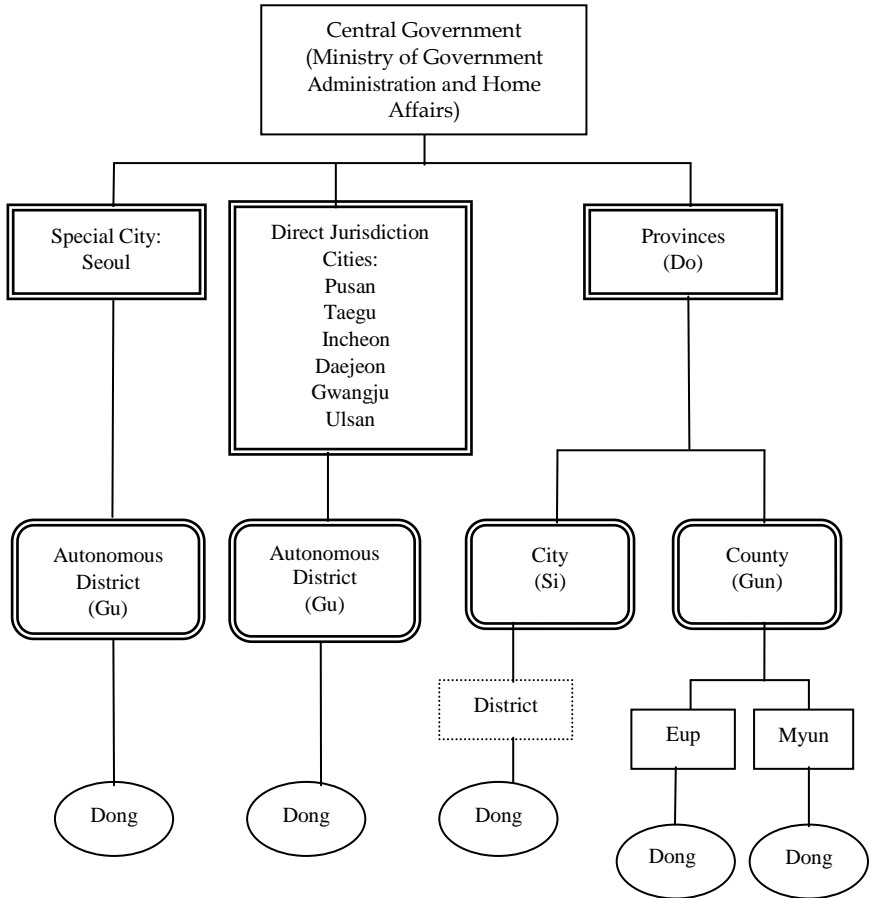
executives of all levels of local government are elected directly by their residents. The local councils of all levels of local governments are also established by local general elections. The lower administrative units under the local governments are Gu (district), Dong (urban village), Eup (town), Myun (township), and Li (village).



In reality, Korea has had a highly centralized form of governmental system. Thus, Korean local governments have been limited in their autonomous administration because the traditional top-down governmental policies have regarded local governments as agents of the central government. The Ministry of Government Administration and Home Affairs has the power to supervise every level of local governments. Also, the provincial governments supervise the lower level of local governments such as cities and counties. A special city and six direct jurisdiction cities supervise autonomous districts within their jurisdictional boundaries.²

The recent trends of decentralization and localization are bringing about strong demands for both greater investments in local economic development and strict implementation of local autonomy. This trend has surely brought about changes in Korea's centralized governmental structure. Since Korea revised the Local Autonomy Law in 1988, there have been some signs of decentralization. Some of the centralized governmental functions have devolved on to the local governments. With the decentralization, the rearrangements of governmental functions and fiscal resources between central and local governments have become imminent issues.

2 The Korean Local Autonomy Law also suggests such special organizations as the intergovernmental associations for the upper level of local governments and the intergovernmental associations for the lower level of local governments. The purpose of the intergovernmental associations is to handle or coordinate governmental functions, with spillovers and public functions related to more than two local governments.

Figure 1. Local Government System in Korea



 : Upper Level of Local Government
 : Lower Level of Local Government

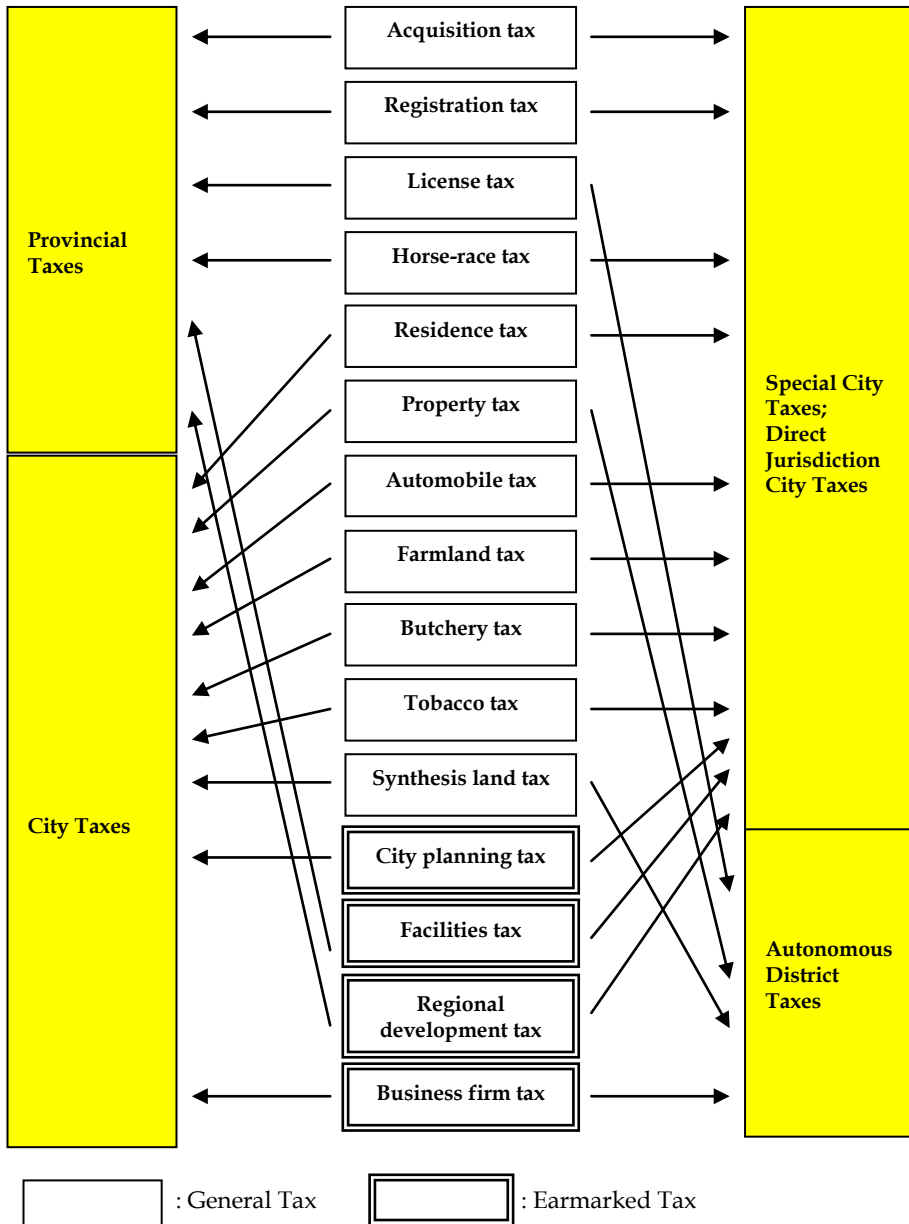
The decentralization has changed the central-local governmental relations. Traditionally, the Korean local governments had worked as the agents of the central government. Nowadays, however, local governments try to work as independent governmental bodies, and thus they compete with other governmental bodies for the public service provisions. Thus, with the advent of decentralization, local governments have experienced greater responsibilities to provide more public services, as well as exercising discretionary power in local policy-making.

Local Revenue System

Local governments in Korea have two types of budgetary accounts: the general account and special accounts. The general account covers local functions as well as national functions that are assigned to the local governments by the central government. Financial sources for the general account consist of local taxes, local non-tax revenues, intergovernmental transfers, and local borrowing. The special accounts cover those functions associated with the management of specific projects or funds, which are classified for convenience sake into the categories of local public hospitals, local public enterprises, education, and other special accounts.

Local taxes are the main source of local revenue. Local taxes are classified into the same category as general taxes and objective (earmarked) taxes. General taxes include acquisition taxes, registration taxes, license taxes, horse-race taxes, residence taxes, property taxes, automobile taxes, synthesis land taxes, farmland taxes, butchery taxes, and tobacco taxes. Objective (earmarked) taxes include city planning taxes, facilities taxes, regional development taxes, and business firm taxes.

Figure 2. Local Tax Systems



Each level of local government has its own taxes in order to finance its own service provisions, as illustrated in Figure 2. The special city and direct jurisdiction cities collect acquisition taxes, registration taxes, residence taxes, automobile taxes, farmland taxes, butchery taxes, horse-race taxes, tobacco taxes, city planning taxes, facilities taxes, and regional development taxes. The autonomous districts have license taxes, property taxes, synthesis land taxes, and business firm taxes. The provincial governments have acquisition taxes, registration taxes, license taxes, horse-race taxes, facilities taxes, and regional development taxes. Cities and counties collect residence taxes, property taxes, synthesis land taxes, automobile taxes, farmland taxes, butchery taxes, tobacco taxes, city planning taxes, and business firm taxes.

Every local government has such non-tax revenues as property rent revenues, rents, fees, business firm revenues, collection grants, interest, property disposal revenues, contributions, loan collections, transfers from other accounts, allotments, and miscellaneous revenues. Other revenue sources for local governments include local borrowing and intergovernmental transfers. The intergovernmental transfers are broken down into local shared taxes, local transfers, and subsidies. Local shared taxes are unconditional revenues that the central government provides the national revenues for local governments (15% of the amount of national taxes). Local transfers mean that central government transfers the national revenues from selected sources to local governments to provide selected local services. Subsidies are money that central government and provincial governments give subsidies to local governments to cover the costs of public projects.

Framework of Analysis

Hypotheses

Many local governments' activities for urban development depend on the intergovernmental transfer payments as operating sources because they are

interdependent with other governments. This study will determine whether the intergovernmental transfer payments make economic sense for localities in Korea. There is a belief that intergovernmental transfers are positively related to local government's expenditures. Intergovernmental transfer payments, basically, stimulate local government's expenditures. According to this logic, intergovernmental transfer payments are positively related to local investment expenditures for capital facility development.

Previous empirical studies on the United States have generally found that intergovernmental transfers tend to stimulate state-local expenditures--federal aid induces states and localities to spend more than a dollar in total or for a particular function per dollar of grants.³ The finding of theoretical studies suggests that, for a given public good or service, provincial-local expenditures increase more from receiving a conditional grant than from receipt of a general grant. Regardless of the form of grant, the impact is greater if provinces and localities provide the aid for a good or service not previously supported.

This study establishes hypotheses to test the effectiveness of the intergovernmental transfers for urban developments in Korea.

- **Intergovernmental transfers are positively related to local government's expenditures.**
- **Intergovernmental transfers are positively related to local government's own source revenues.**
- **Intergovernmental transfers are positively related to local (urban) development expenditures.**

3. ACIR, *Summary and Concluding Observations*, 1978, p. 13

Conditional transfer, especially, shows the strong relationship between intergovernmental transfers and urban development. If these hypotheses are held, it is valid that local governments provide efficiently the urban development as local public goods with intergovernmental transfer payments.

Research Method

The purpose of this study is to examine the effects that intergovernmental transfer payments affect urban development projects in local areas. This study uses the cross sectional statistical analysis, which compare the fiscal situations among local governments in Korea. This method will show how the intergovernmental transfers relate to the urban development of local government in Korean governmental systems.

Table 1. Intergovernmental Transfer System

Purpose	Type	Donor
General Transfer	Local Shared Tax	Central Government
Semi-General	Local Transfers	Central Government
Conditional	Grants or Subsidy	Central Government, Provincial government, Other Local government

Korea is the developing country. Korea has the centralized unitary systems. Korea has a unique intergovernmental system. We can classify the type of transfers as Table 1. Intergovernmental transfers are, basically, to transfer the funds from one government to another for some specified purpose. In Korea, the transfers can be explained as follows.

The local shared tax refers to tax allocated to local governments at a fixed

rate from among taxes collected by the national government as income tax, corporation tax, etc. Depending on the financial strength of the local government, more local shared taxes are granted to the local government that has less tax revenues, in order to adjust financial resources between local public bodies. It is created to enable central government to offer financial aid to local governments with virtually no restrictions as to its use.

The local transfers refers to all or part of taxes, which are transferred to local governments, such as telephone tax, beverage tax and special education tax, etc. collected as national taxes by the national government. The donor government may also design an intergovernmental program for a variety of purposes within a broad field such as road construction, farming and fishing community development, or water conservation services.

Grants or subsidy is money for which the donor may specify to an extent how the funds can be used --government may structure the purpose quite narrowly, offering aid for the construction of certain kinds of highways within a local government.

This study uses the statistical method of correlation analysis and regression analysis. They are to analyze the relationship between inter-governmental transfers and urban development expenditures. Correlation and regression coefficients that came from the analyses will show the extent of the relationships between both variables.

Step 1: To analyze the extent of expenditures for urban development to the extent of intergovernmental transfers, using correlation analysis

Step 2: To analyze the extent of expenditures for urban development to the extent of intergovernmental transfers, using regression analysis

Data and Variables

To analyze the relationship between intergovernmental transfers and urban development, This study compares the per capita extent of

intergovernmental transfer revenues to the per capita extent of urban development expenditures⁴ in local government fiscal accounts.

Korea is a developing country from which one can gather data to analyze the above hypotheses. As a newly industrialized country, it has experienced some of the most rapid industrialization and urbanization of any developing country. Korean cities include communities with diverse mixtures of manufacturing, commercial, and residential housing property bases.

A major reason for using Korea is its brief history of political and administrative decentralization; it has passed legislation that allows local autonomy. The act of 'Korean local autonomy,' enacted in 1988, was the backbone of this legislation. In effect, local autonomy is granted at local governments' discretion for future local economic development. For new local public goods production and service delivery, this trend of decentralization is a crucial factor, which emphasizes the role of local government in raising revenues.

A data set was gathered from a cross-section of Korean City governments⁵. The city government is defined as a legal authority for general administration in an urbanized area. In 2000, Korea has a two-level system of local governmental structure. Figure 1 in Section III illustrates the system of local governments in Korea. The upper levels of local governments consist of a special city (Seoul), six direct jurisdiction cities (Pusan, Daegu, Incheon, Daejeon, Gwangju, and Ulsan), and nine provinces. On the contrary, the lower levels of local governments consist of 72 cities, 91 counties, and 69 autonomous districts. The cities and counties are within the provinces. The autonomous districts are within the special city and direct jurisdiction cities.

Generally, the category of city governments may include the special city and direct jurisdiction cities, the cities within the provinces, and the

4. Actually, it is the urban development related expenditures, such as housing, infrastructure, and road construction expenditures, which are consisted of capital investment oriented expenditures.

5 The city government is a basic unit of local authorities in urban settings.

autonomous districts. However, each type of city governments has different fiscal structure from each other. The special city and direct jurisdiction cities, which are legally upper levels of local governments, have more sufficient fiscal resources and autonomy than the cities within the provinces. Even though the autonomous districts are the lower levels of local governments like the cities within the provinces, their legal and fiscal status are very limited, comparing to the ones of the cities within the provinces. These city governments cannot be considered as research target for this study together. Therefore, the special city, direct jurisdiction cities, and the autonomous districts are excluded.

The availability of data was limited by the administrative jurisdictional boundary of 1998. The result is a sample of 72 cities for a cross section. The set consists of city governments' fiscal data from the 'settled account' of 1998. The data concerns 72 cities in Korea and comes from the *Financial Yearbook of Local Government 1999* and the *Municipal Yearbook of Korea 1999*.

It is sufficient to generally define the variable as a unit or Won (W)⁶ of local revenue and expenditure. All nominal monetary terms are in 1998 real Korean Won. Table 2 contains definitions for all variables used in the regression estimation.

Effects of Intergovernmental Transfers

General Implications

Table 3 presents the mean levels of selected fiscal variables in Korean cities in 1998. The mean level of per capita total expenditures (ET) is 0.871 million Wons (W: Korean money Unit). The mean level of per capita urban development related expenditures (UDE) comes to 0.395 million Wons (W). Its portion is about 45% in the total expenditures. It means that urban

6 Won is a unit of Korean money. \$1 is worth about 1100 Won at this time.

development related expenditures, as the share of total expenditures is relatively higher than the share of any other local expenditure type in Korean cities in 1998.

Table 2. Variables and definitions

	Variable	Definition	
Dependent	ET	Per capita total expenditures in a city	Million Won
	UDE	Per capita urban development related expenditures ⁷ in a city	Million Won
Independent	RT	Per capita total revenues in a city	Million Won
	LT	Per capita local tax revenues in a city	Million Won
	NTR	Per capita local non-tax revenues in a city	Million Won
	ST	Per capita local shared taxes in a city	Million Won
	GN	Per capita central government subsidies in a city	Million Won
	LTRANSF	Per capita local transfers in a city	Million Won
	GN	Per capita central government subsidies in a city	Million Won
	GCP	Per capita province and other local government subsidies in a city	Million Won
	LBOR	Per capita local borrowings in a city	Million Won
	GAE	Per capita general administrative expenditures in a city	Million Won
	SDE	Per capita social development expenditures in a city	Million Won
	EDE	Per capita economic development expenditures in a city	Million Won
	CDE	Per capita civil defense expenditures in a city	Million Won
	SOE	Per capita support & other expenditures in a city	Million Won
	LTNTR	Per capita local taxes and non-tax revenues in a city	Million Won
	IGTR	Per capita total intergovernmental revenues in a city	Million Won
LGEN	Per capita local general revenues in a city	Million Won	

⁷ They are the expenditures of 'Housing & Development of Local Economy,' 'Agriculture & Fishery,' 'Regional Economy,' 'Resource Conservation & Development,' and 'Traffic Management.'

The mean level of per capita total revenues (RT) is 1.192 million Wons (W). Out of these total revenues, per capita total intergovernmental revenues (IGTR) is 0.516 million Wons (W). The Proposition of total intergovernmental transfer revenues in total revenues is about 43%. It says intergovernmental transfer revenues play important parts in the increase of total revenues. This mean level of per capita intergovernmental transfer revenues is divided into the 0.208 million Wons (W) of local shared taxes (ST), the 0.063 million Wons (W) of local transfers (LTRANSF), the 0.147 million Wons (W) of central government subsidies (GN), and the 0.099 million Wons (W) of province and other local government subsidies (GCP).

Table 3. Mean Levels of Selected Variables

Unit: Million Won (W)

	Mean	Minimum	Maximum	Standard Deviation
Urban Development Related Expenditures (UDE)	0.395	0.120	0.912	0.181
Total Local Revenues (RT)	1.192	0.504	2.714	0.462
Local Tax Revenues (LT)	0.188	0.121	0.339	0.042
Local Non-tax Revenues (NTR)	0.455	0.209	2.078	0.239
Local Shared Tax (ST)	0.208	0.001	0.572	0.169
Local Transfers (LTRANSF)	0.063	0.002	0.180	0.043
Central Government Subsidies (GN)	0.147	0.005	10192	0.159
Province and other Local Government Subsidies (GCP)	0.099	0.010	0.341	0.070
Local Borrowings (LBOR)	0.031	0.000	0.140	0.032
Total Local Expenditures (ET)	0.871	0.390	1.745	0.331
General Administrative Expenditures (GAE)	0.197	0.087	0.394	0.079
Social Development Expenditures (SDE)	0.361	0.020	0.784	0.157
Civil Defense Expenditures (CDE)	0.003	0.000	0.010	0.002
Support & Other Expenditures (SOE)	0.018	0.000	0.051	0.013
Local Taxes and Non-tax Revenues (LTNTR)	0.643	0.371	2.376	0.254
Total Intergovernmental Revenues (IGTR)	0.516	0.035	2.315	0.387
Local General Revenues (LGEN)	0.851	0.414	2.383	0.299

For locally raised revenues, the mean level of per capita local tax revenues (LT) is 0.188 million Wons (W), so it is a small portion (16%) of total revenues. On the other hand, the mean level of per capita non-tax revenues (NTR) is 0.455 million Wons (W). In addition, the mean level of per capita local borrowings (LBOR) is 0.031 million Wons (W). It shows a small contribution to the magnitude of total revenues.

Figure 3, 4, and 5 show how the extent of intergovernmental revenues relates to the extent of other local fiscal variables in Korea. The extent of total intergovernmental transfer revenues (IGTR) positively relates to the extent of total expenditure (ET). But, on the other hand, there is no relationship between the extent of intergovernmental transfer revenues (IGTR) and the extent of local own source revenues (LTNTR). The local own source revenues come from local taxes and locally raised non-tax revenues. Figure 5, especially, illustrates the negative relationship between the extent of local taxes and the extent of intergovernmental transfer revenues. According to these figures, in Korea, total intergovernmental transfer revenues affect the increase of total expenditures of local governments. And, the intergovernmental transfer revenues also affect the decrease of local tax revenues.

Figure 6 shows that the extent of total intergovernmental transfer revenues relates positively to the extent of urban development related expenditures. It means that the degree of urban development may be affected by the magnitude of intergovernmental transfers

Table 3 and Figure 3, 4, 5, 6 verify that local governments in Korea in 1988 spend more funds for urban development activity. Urban development related expenditures tend to depend on intergovernmental transfer revenues because of local fiscal system and weak local revenue sources. Local officials and politicians usually expect the revenue supports from the higher levels of government. Central priority might put on local income assistance of general purpose such as local shared taxes and local transfers. In 1998, locally raised revenues are only about 54% of total revenues. It means that local governments rely on other revenue sources such as intergovernmental transfer revenues for urban development. The rising demands of urban

Figure 3. Total Expenditures against Intergovernmental Transfers

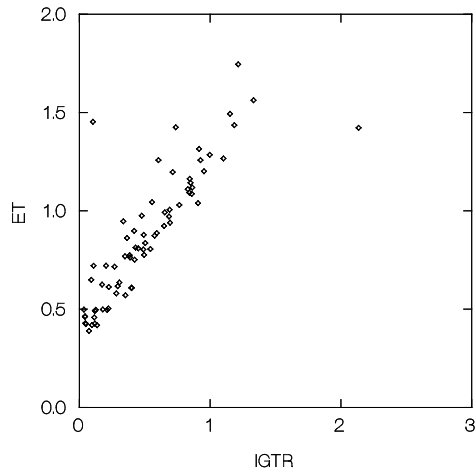


Figure 4. Locally Raised Revenues against Intergovernmental Transfers

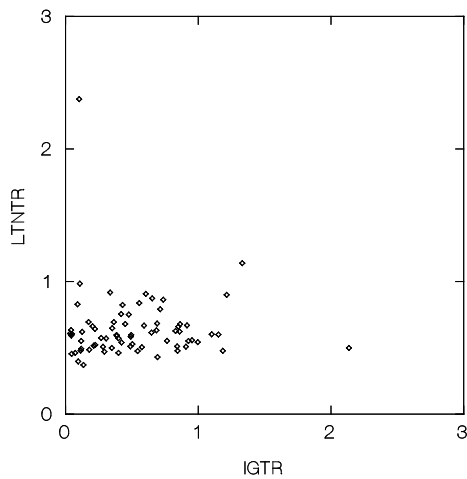
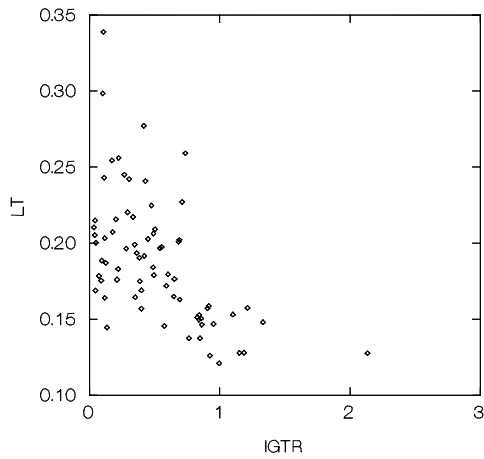
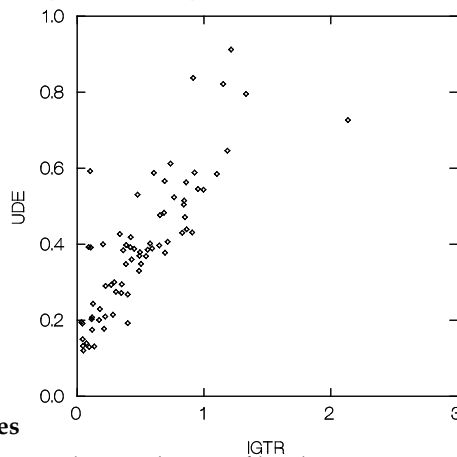


Figure 5. Local Tax revenues against Intergovernmental Transfers**Figure 6. Urban Development Expenditures against Intergovernmental Transfers****Labels in Figures**

TE : total expenditures of local governments

IGTR : total intergovernmental transfers

LT : total tax revenues of local governments

UDE : urban development related expenditures

LTNTR : total locally raised revenues

development produce the fiscal gap between locally raised revenues and expenditures. This situation has brought the local fiscal crisis because local taxes, mainly land property taxes, can't be raised its rate easily. Therefore, local governments in Korea have looked for private funds or external money for urban development projects.

Effects - Economic efficiency?

With the result of correlation analysis, This study accepts the hypothesis that urban development is positively related to intergovernmental transfers. Table 4 shows correlation coefficients. All of the value of the coefficients for urban development related expenditures are more than 0.5. It means that there are positive relationships between intergovernmental transfers and urban development expenditures.

Table 4. Correlation Analysis

	Local Shared Tax (ST)	Local Transfers (LTRANSF)	Central Government Subsidies (GN)	Province and other Local Government Subsidies (GCP)
Total Local Revenues (RT)	0.767	0.704	0.730	0.684
Local Tax Revenues (LT)	-0.619	-0.507	-0.417	-0.377
Local Non-tax Revenues (NTR)	0.063	0.014	0.067	0.135
Total Local Expenditures (ET)	0.850	0.813	0.621	0.719
Urban Development Related Expenditures (UDE)	0.806	0.778	0.650	0.655
General Administrative Expenditures (GAE)	0.856	0.798	0.606	0.626
Social Development Expenditures (SDE)	0.617	0.603	0.350	0.663
Civil Defense Expenditures (CDE)	0.173	0.207	0.056	0.270
Support & Other Expenditures (SOE)	0.486	0.408	0.389	0.325

As this study tests the relationship between intergovernmental transfers and urban development expenditures, the results say there are positive relationships, regardless of both general and conditional grants or subsidies. Consequently, intergovernmental transfers may stimulate urban development expenditures. With intergovernmental transfers, local governments can enhance economic efficiency for urban development. The governmental policies of intergovernmental transfers may affect positively for local public goods provisions in Korea.

The value of correlation coefficient of local shared taxes (ST) and urban development related expenditures (UDE) is 0.806. It says strong relationship. Local shared taxes as general-purpose intergovernmental transfers affect strongly urban development in Korean cities. Even if there are not strong effects of central government subsidies (GN) and province and other local government subsidies (GCP), we can obtain indirect implications about local (urban) development policy from this study. According to Table 4, in Korea, conditional transfers relate weakly to urban development expenditures. It verifies indirectly that higher level governments have not stressed urban development projects as national urban policy. Therefore, the local governments in Korea may have supported the urban development costs with general revenues such as local taxes, local non-taxes, local shared taxes, and local debts.

In addition, local governments want urban development to meet the explosive demand of the residents for urban services. Localities have their specific characteristics of economic, social, cultural, and physical conditions. Localities want to have their own urban development projects to meet their own characteristics. Thus, local governments may prefer flexible funds to fixed funds. On the while, in Korea, local governments, basically, have not enough financial resources to support even the fixed maintenance costs like administrative costs. Their economic or financial resources are so weak. Therefore, if they receive general transfers, they tend to spend the funds for administrative purpose, not for investments. Furthermore, local governments can not match conditional transfers because they are so poor. This situation

makes the localities assign a large portion of intergovernmental transfer revenues for local demands.

Furthermore, intergovernmental transfer revenues relate negatively to local tax revenues. It means that the increase of intergovernmental transfer revenues make the decrease of local tax revenues. Intergovernmental transfer revenues have only local income effects for local governments in Korea, not stimulate the local; tax efforts.

Table 5. Regression Analysis

	Total Local Expenditures (ET)	Urban Development Related Expenditures (UDE)
Constant	0.462 (12.373)	0.183 (7.916)
Local Shared Tax (ST)	1.007 ** (3.159)	0.416 * (2.104)
Local Transfers (LTRANSF)	1.043 (0.894)	0.830 (1.145)
Central Government Subsidies (GN)	0.143 (0.843)	0.209 * (1.987)
Province and other Local Government Subsidies (GCP)	1.153 ** (2.934)	0.423 * (1.732)
R2	0.764	0.694
F	54.156	37.594

Note: t values are in Parentheses.

* and ** indicate significance at 10% and 5% level respectively.

This study tests whether intergovernmental transfer revenues affect the local fiscal policy. Table 5 presents the relationship between the per capita amounts of intergovernmental transfer revenues and the per capita amounts

of local fiscal variables such as total expenditures and urban development related expenditures. This includes regression coefficients for two kinds of regression models. One is for total local expenditures, the other is for urban development related expenditures. These regression models have enough explanatory power. The R^2 statistics of two models are 0.764 and 0.694 respectively.⁸ The F statistics of these models are 54.156 and 37.594 respectively.⁹

It is interesting to note that the coefficient estimates for per capita local shared taxes (ST) and per capita province and other local government subsidies (GCP) are statistically significant. This means that local shared taxes are highly related to the magnitude of total expenditures and urban development expenditures. This regression analysis shows that local shared taxes and province and other local government subsidies stimulate the increase of total expenditures. And, local shared taxes (ST), central subsidies (GN), and province and other local government subsidies (GCP) also affect the increase of urban development expenditures in Korean cities. Out of regression coefficients, the coefficients for the per capita amounts of province and other local government subsidies (GCP) are 1.153 and 0.423 respectively. They are the highest values in both models. It means that the increase of province and other local government subsidies may give the best contribution to the increase of total expenditures and urban development.

Conclusion

Generally speaking, the results of this study show that intergovernmental transfers stimulate positively total local expenditures and urban development expenditures. Because local governments have only the effects of revenue

⁸ The R^2 statistics give the proportion explained by the regression linear model.

⁹ The F statistics indicate that the data are appropriately fitted to the regression model.

increase, they do not focus on the increase of local revenues from local own sources. Korean local governments get much intergovernmental transfer revenues of local shared taxes and local transfers as general grants. The central subsidies as conditional grants, however, may have not enough supported the urban development projects. The purpose of intergovernmental transfers that prevent the economic inefficiency of urban development is difficult to reach the goal.

Urban development program in local areas interweaves with adjacent localities. The interdependence may need horizontal transfers (interlocal transfers). For urban development, local government may prefer horizontal transfers to vertical transfers. Until now, however, the horizontal transfers are so small that they may not support urban development efforts. In this situation, it is very difficult for local governments to provide efficiently urban development as local public goods. Finally, local budgeting may be decided by other factors -- political and social pressures -- , regardless of such external funds as intergovernmental transfers. Thus, for efficient provision of urban development, local governments should combine the economic and financial knowledge with political and social interests.

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