National Mandates in Korea: Fiscal Illusion and the Irreversibility of Tax Revenue Transfers*

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2013. 9

[1] This paper is prepared to present at the Copenhagen 2013 workshop on "Interaction Between Local Expenditure Responsibilities and Local Tax Policy", jointly organized by the Danish Ministry of Economic Affairs and the Interior and the Korea Institute of Public Finance.

I. Introduction

National mandates are popular fiscal tools employed by the central government in Korea to pass on public program costs to local governments or force local governments to take part in national fiscal policies. National mandates initially force local governments to respond by adjusting the composition of local expenditures or by postponing their own public programs, but, after a few years, local governments demand full compensation. Parliamentary members support this process because they have incentives to represent the interests of local jurisdictions. As a result, tax revenue transfers, usually in the form of tax sharing, are later introduced to compensate local governments for increased local expenditure responsibilities. The central government then finds it necessary, but difficult, to impose a higher tax burden on tax payers, who only recognize the full cost of the mandates only after a few years.

This whole process has the characteristic of being effectively irreversible because increased mandates and local expenditures, although veiled by the effect of fiscal illusion, are public benefits to citizens and therefore difficult to repeal. The cumulative effect of fiscal illusion and irreversibility is an over-expansion of the local public sector and fiscal deterioration.

There is not much literature on the issue of national mandates and conditional matching grants. Among the few studies on this issue, Lotz (2009) reports that it is not common for local governments in Europe to be tasked with a so-called "agent function", in which they are given no discretionary role. Lotz goes on to point out that, even in cases when such functions exist, general grants rather than earmarked grants tend to be used. In a study into the effects norms and standards in the federal government have on local government budgets in Germany, Spahn (2013) reports that there are indeed many types of mandate functions in Germany, especially in the area of social spending. However, in Germany, conditional matching grants are not common fiscal tools for the implementation of federal mandates, and intergovernmental dialogue is used to improve the situation. A provocative recent paper by Baicker et al. (2012) argues that federal mandates and the use of matching grants are more important factors than the Tiebout mechanism in explaining the evolution of U.S. state budgets for the past 50 years. They show that, in the process of expanding U.S. state expenditures on education, health, and social welfare, the size of own-source sub-national revenue increased significantly along with intergovernmental grants.

Even comparing with other country cases where mandates are widely used, the case of Korea is fiscally most problematic because it is accompanied by a fiscal illusion which masks the long-term tax burden on the central government. Because of this, change is needed in Korea's fiscal institutions to force both the central and local governments to recognize and share the correct tax burden of national mandates from the point of introduction. Otherwise, the rapidly increasing public expenditures involving national mandates could become a structural problem and lead to sustained fiscal deterioration.

~~III.~~II. Intergovernmental Fiscal relations in Korea

1. Structure of Local revenue and expenditures

The size of the local public sector in 2012 was 151.0 trillion Won, or about 12% of GDP.[2] Out of this total budget, the amount of own-source revenue was 85.9 trillion Won, while intergovernmental grants contributed 61.3 trillion Won. Local debt in Korea is negligible and amounted to approximately 3.9 trillion Won in 2012. On average, the share of own-source revenue of local governments is about 57 percent, and the share of intergovernmental grants about 41 percent.

Table 1. Revenue of local governments (Trillion Won)

	2010	2011	2012
Total	140.0	141.0	151.0
Own Revenue	79.4	79.3	85.9
Transfers	55.2	58.0	61.3
Local Debt	5.2	3.7	3.9

Source: Ministry of Public Administration and Security (MOPAS).

As of 2012, the size of local expenditures is almost the same as that of central government expenditure, which was 146.1 trillion Won in 2012.[3] The size of local expenditures in Korea has been traditionally large, but less than that of the central government. In 2006, the share of local expenditures in total government expenditure was 40.5 percent while that of the central government was 46.1 percent. In recent years, however, local government expenditure has been rapidly increasing and will likely soon surpass central government expenditure. As will be discussed later, this phenomenon is related to the central government's reliance on conditional matching grants and mandates in response to rapidly increasing demand for welfare expenditures.

Table 2. Expenditures of central and local governments (Trillion Won, %)

	2006	2007	2008	2009	2010	2011	2012
Central	111.13	104.85	110.55	132.7	136.2	137.4	146.1
(share)	(46.1)	(42.3)	(40.3)	(42.9)	(43.7)	(42.8)	(42.8)
Local	97.61	108.05	123.52	133.9	133.6	136.5	144.0
(share)	(40.5)	(43.6)	(45.1)	(43.3)	(42.8)	(42.5)	(42.2)
Education	32.47	35.08	39.99	42.7	42.1	47.4	50.98
(share)	(13.4)	(14.1)	(14.6)	(13.8)	(13.5)	(14.7)	(15.0)

[2] The exchange rate of 1 USD is about 1,150 Won.

[3] Total local expenditure is somewhat lower than total local revenue due to carry-overs.

Source: Ministry of Public Administration and Security (MOPAS).

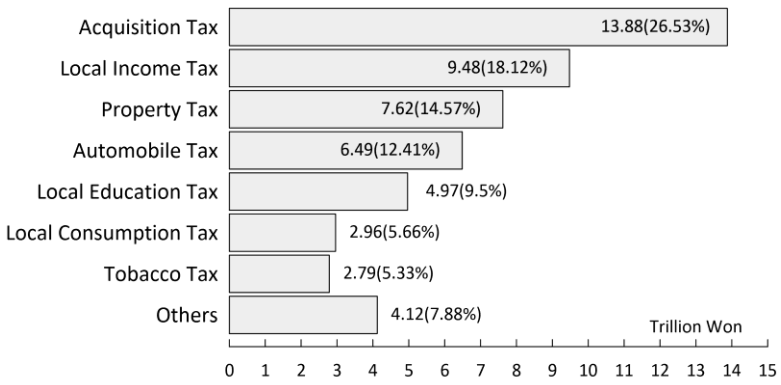
In Table 2, local education expenditures are reported separately. This is because public expenditures for primary and secondary education are managed by local education offices, entities separate from local governments. The heads of local education offices are elected by popular vote, but local education offices do not have power of taxation and all their expenditures are financed by central government general grants for education (about 76 percent), transfers from local governments (about 18 percent) and tuition and fees (about 6 percent). The share of local education expenditures in total government expenditure was 15.0 percent in 2012.

2. Local tax

There are eleven local taxes in Korea: Property Acquisition Tax, Local Income Tax, Property Tax, Automobile Tax, Local Education Tax, Local Consumption Tax, Tobacco Tax, along with four others that are relatively minor in terms of tax revenue (Resident Tax, License Tax, Leisure Tax, Regional Resource Tax). Among these, the Property Acquisition Tax is the most important, providing 26.5 percent of revenue (13.9 trillion Won in 2011). Local Income Tax, a 10 percent piggy-back tax on national income tax payments, is the second largest with a revenue share of 18.12 percent (9.48 trillion dollar in 2011). The Local Education Tax is another piggy-back tax on seven other local taxes (Acquisition Tax, Automobile Tax, Property Tax, Tobacco Tax, etc.). It collected about 5 percent of total local revenue (9.48 trillion dollar) in 2011. The Local Consumption Tax, which was introduced in 2010, is not really a local tax by international standards (OECD, Council of Europe, etc.), but is defined in the Local Tax Act as a local tax. Its total amount is determined as 5 percent of VAT revenue, and it is distributed to 17 provinces (upper-level local governments) based on an index of final consumption expenditure in each province. Ultimately, it is a form of general grant because higher weights (100%, 200%, and 300%) are applied to poorer provinces.

Kommentar [EL1]: This was unclear. Not sure if this is what was intended.

Figure 1. Local taxes (2011)



An important feature of the local tax system in Korea is that standard tax rates as well as the tax bases of local taxes are decided in parliament and stipulated in the Local Tax Act. The Local Tax Act does contain clauses that allow local governments to change the local tax rates within defined boundaries (typically 50 percent below/above the standard rates), but local governments have never exercised that power. According to the criteria of OECD taxing power studies (e.g., Blöchliger and King, 2006), most local taxes in Korea belong, *de jure*, to category *b.2*[4], but, *de facto*, they belong to category *d.3*[5].

This feature of the local tax system in Korea has an important implication for understanding the interaction between local expenditure responsibilities and local tax policy in Korea – the theme of the 2013 Copenhagen workshop. As seen from Table 2, the size of local expenditures in Korea is very large and rapidly increasing. Such a large, rapid increase in local expenditures cannot be matched by natural increases in local tax revenue (i.e. tax revenue increases resulting from an increase in GDP). In most other countries, this situation would be expected to result in at least a part of the extra revenue requirement being matched by local tax efforts (an increase in local tax rates or tax bases). That is not the case in Korea, where extra revenue requirements are all financed, in one way or another, by tax revenue transfers from the central to local governments. The reasons for this are related to both historical factors and economic/political incentives. Korea only introduced a system of local autonomy (election of local heads and local council members) in 1995 after a long history of centralization. As a result, national mandates on both the revenue and expenditures of local governments are prevalent. This blurs the distinction between central and local government expenditure responsibilities, and it provides no incentives for the heads of local governments to show financial responsibility by raising the local tax burden, as doing so would lower their chances for re-election. A more detailed discussion of this will be given in the next section.

3. Intergovernmental grants

There are three types of intergovernmental grants in Korea: general grants for local governments, "the Local Allocation Tax" (LAT); general grants for local education offices, the "Local Education Grant" (LEG); and conditional matching grants, the "National Subsidy" (NS). From 1991 to 2004, there was a kind of block grants called the "Local Transfer Fund" (LTF) distributed for local loads and environmental facilities, but it was absorbed into the LAT and NS in 2005. In 2005, a block grant for many small-scale social services (facilities for the

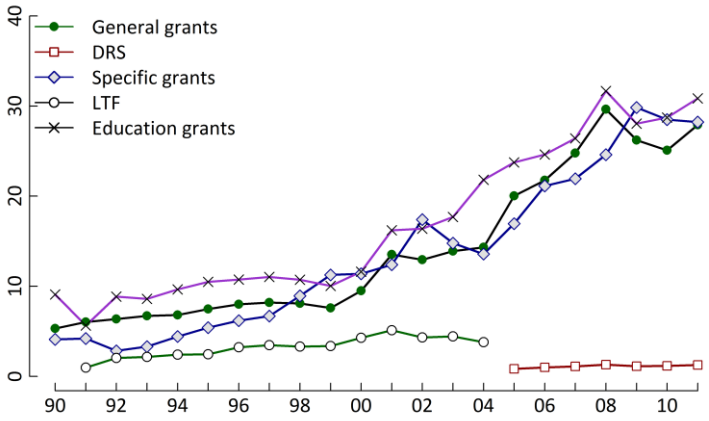
[4] "The recipient SCG sets the tax rate and a higher level government does set upper and/or lower limits on the rate chosen"

[5] "The recipient SCG sets the tax rate and a higher level government does set upper and/or lower limits on the rate chosen"

disabled, elderly, children, etc.) termed "Decentralization Revenue Sharing" (DRS) was created, but the size of this block grant is relatively small.

As can be seen from Fig. 2, the sizes of the two general grants and conditional grants have been similarly determined for the past two decades, each being around 30 trillion Won in 2011. However, if LTF, a kind of block grant, is counted as a general grant, then the size of general grants for local governments was greater than that of conditional grants until the mid-2000s, when the size of conditional grants overtook the size of general grants. This reflects the fact that recently increases in welfare expenditures have mostly been financed by conditional matching grants.

Figure 2. Intergovernmental grants (1990-2011, trillion Won)



Local Allocation Tax (LAT)

The calculation of general grants (LAT) involves three steps. In the first step, the total amount is set at a fixed percentage -- currently 19.24 percent -- of Domestic Tax Revenue (DTR), which is defined as national tax revenue minus the revenues from custom duties, earmarked taxes such as gasoline tax, liquor tax and national education tax. At the second step, the fiscal gap is calculated based on the difference between Basic Fiscal Revenue (BFR) and Basic Expenditure Needs (BEN). At the third step, since the sum of the differences between BFR and BEN is usually greater than the predetermined size of the LAT, the difference is scaled down by multiplying an adjustment factor, which is the ratio of the sum of the differences to the predetermined total amount of LAT.

In Local Allocation Tax Act, BFR is defined as 80 percent of local tax revenue, as calculated based on the "standard local tax rates". Since no local governments in Korea deviate from the standard tax rates, the calculation of BFR is straightforward and simply amounts to 80 percent of actual local tax revenue. Calculation of BEN, however, is more complicated. Firstly,

it consists of 4 major expenditure categories (general administration, culture & environment, social welfare, and economic development) and 16 sub-categories. For each sub-category, three components are used for calculating the BEN: workloads, such as the population and number of local officials; unit costs; and modification factors.

Among 244 local governments[6], there are several (seven in 2013, all in the capital region) that do not receive LAT since their BFR exceeds their calculated BEN. Although the number of non-recipient governments is small, their population size is quite large at around 30 percent of the total population, with Seoul and its 10 million people being one of the non-recipient governments.

LAT is often blamed as the reason why local governments in Korea never exercise their powers to raise tax rates: If a local government raises local tax rates, it raises BFR and hence lowers the amount of LAT. Looking at the Local Allocation Tax Law, this argument seems superficially incorrect, since the law stipulates that the calculation of BFR is based on a "standard tax rate", not the actual local tax rate as determined by local governments. But in practice, there is a good possibility that higher local tax revenue would indeed result in a decrease in the amount of LAT due to opaque administrative processes at the Ministry of Security and Public Administration (MoSPA), the ministry which administers the LAT. But more fundamentally, yardstick competition seems to be an important factor affecting local governments in Korea since, if a head of local government raised local tax rates instead of somehow attracting more intergovernmental grants from the central government, he/she would be put in a clearly disadvantaged position in the next election. The yardstick competition hypothesis also seems to offer a good explanation of why rich local governments in the Capital Region that receive no LAT do not exercise their own taxing powers. However, as discussed previously, the fact that most local expenditures are mandated and the division of expenditure responsibilities is not clear to residents is probably a more important reason why local governments are unwilling to raise the local tax burden.

Local Education Grant (LEG)

The calculation of LEG is very similar to that of LAT. Firstly, the total amount of LEG is determined as a fixed percentage -- currently 20.27 percent -- of Domestic Tax Revenue (DTR). Secondly, the fiscal gap is calculated based on the difference between Basic Fiscal Revenue (BFR) and Basic Expenditure Needs (BEN), and an adjustment factor is applied to make the sum of the differences between BFR and BEN equal to the predetermined amount of LEG. Since local education offices do not have any taxing power, their BFR is defined as

[6] As of 2013, there are 74 cities, 84 town, and 69 wards as lower-level local governments, and 17 special cities, wide-area cities, and provinces as upper-level local governments.

the sum of tuition received and transfers from local governments and. As a result, the size of the BFR is much smaller than that of the BEN, which consists of the costs of teacher salaries and general administration. Therefore all local education offices, including those in the Capital Region, receive LEG. As will be discussed later, the way that the total amount of general grants is determined in Korea gives rise to a serious problem of fiscal rigidity. Even though the number of students in Korea is declining at a rapid pace due to a low fertility rate, the amount of LEG is increasing even faster than national tax revenue

Conditional Matching Grants

The size of conditional grants was about 33.2 trillion Won in 2012 (2.6% of GDP), as large as general grants for local governments. Conditional grants used to play a significant role in many OECD countries in Europe, but their role is now much smaller than that of general grants.[7] An exception is the United States, where the size of federal conditional grants is as large as 3.5 % of GDP as of 2011.[8]

In theory, the main role of conditional grants is to stimulate the local provision of public goods which have spill-over effects. Conditional grants in Korea operate quite differently. There are some conditional grants for national public services which are provided to local governments with full funding. But almost all conditional grants are imposed on local governments by central government ministries with a requirement for local matching funds. Due to the prevalence of such requirements, the National Subsidy Act does have a clause that says conditional matching grants should be based on "the principle of request". However, this is not effective in practice because of the close ties between sectoral ministries and local governments. Expenditure areas such as transport infrastructure, agriculture, and culture have typically shown this problem.

Since late 1990s, however, the composition of government expenditures started to shift toward welfare expenditures, and a more serious problem began taking shape. The benefit levels and eligibility criteria for important welfare programs such as cash and medical assistance to the poor, the disabled, families with children, etc. are all determined legally. When laws on these sorts of welfare programs are enacted, they effectively stipulate not only the benefit levels and eligibility criteria, but also the fiscal responsibilities of local governments. The exact amount of local matching rates is usually stipulated in the Regulation on National Subsidy, administered by the Ministry of Finance, but they are sometimes included in the laws governing specific welfare programs.

[7] For more details on general grants and conditional grants in selected OECD countries, see, e.g., Kim, Lotz and Mau (2010).

[8] The GDP and federal grants in the U.S. in 2012 were $14.58 trillion and $514 trillion, respectively.

The growth of conditional matching grants for mandated welfare programs since the late 1990s has been quite fast and large. In 1997, before the Asian financial crisis and the start of a rapid increase in social safety net spending, the share of conditional grants of the Ministry of Health and Welfare in conditional grants was around 25%. It then rose to 36% in 2001, the year when the system of cash and medical assistance to the poor was significantly expanded. The rapid pace of increase in the conditional grants for welfare programs continued in the 2000s due to increasing spending for the old and political demand for welfare expenditures. In 2005, the share of conditional grants of the Ministry of Health and Welfare was around 42%, and it rose to 45% in 2010, and 47% in the 2013 budget.

Kommentar [EL2]: The share of the budget of the Ministry of Health and Welfare composed of conditional grants?

Kommentar [EL3]: Same as above

Given the fact that conditional grants for welfare programs are accompanied by central government mandates for matching local government funds, it should come as no surprise that the tension between the central and local governments has increased. In a sense, such tension is inevitable because governments at both central and local levels are forced to quickly adjust expenditure composition in response to changing economic and social environments.

However, it will be argued in the next section that part of the reason why a strong tension between central and local governments has built up in the process of expanding welfare expenditures is that decision-makers in both the executive and legislative branches are affected by a fiscal illusion hiding the true fiscal burden of expanding welfare expenditures. This fiscal illusion is the result of decision-makers failing to consider the real costs of demands for matching local funds. To a certain extent there is a room for local governments to increase welfare expenditure by reducing other expenditure items such as transport infrastructure, cultural facilities, etc. However, there is a limit for local governments to adjust local expenditure composition to meet the requirement of matching funds for rapidly increasing welfare expenditures. Given the fact that local tax rates and tax bases have never changed and are not likely to change in the near future, the fiscal burden of local matching funds ultimately has to fall back on the central government. A more detailed discussion of this process follows.

~~IV.~~III. National mandates, fiscal illusion, and irreversible tax revenue transfers

1. National mandates

Local Expenditure

After a long period of rapid economic growth, Korea faced a sudden economic shock in

the late 1990s. To overcome the economic crisis, the government pushed for economic reform measures which strengthened competitive market forces in the economy. At the same time, in order to lessen the widening income gap, the government started to introduce social safety net programs. In the 2000s, it also became evident that a low fertility rate and rapidly aging population would add to the demand for welfare expenditures. As a result, many types of welfare programs for the poor, the old, the disabled and families with children were introduced beginning in the late 1990s. In 2001, the benefits for the poor (in the form of the Basic Livelihood Security Program) were introduced, and health benefits for the poor were also significantly extended in the same year. In 2008, cash benefits to the elderly were introduced, while child care support and cash benefits to families with children have increased significantly from 2011 to 2013.

In the 2013 budget, the total amount of these four programs was 14.1 trillion Won, about 38.4 percent of total conditional matching grants in 2013 (36.7 trillion Won). Beside these welfare programs, there are several other mandatory expenditure programs provided by conditional matching grants, such as subsidies to rice growers and benefits to the disabled. Altogether, the share of mandatory expenditures in total conditional matching grants is close to 45 percent. This is likely to soon surpass 50 percent in the near future.

Table 3. Major mandatory expenditures provided by conditional matching grants

Program	Year of introduction	Amount (trillion Won, 2013)	Matching rates
Cash Benefits to the poor	2001	3.16	80% (50%)
Health benefits to the poor	2001	4.25	80% (50%)
Cash benefits to the elderly	2008	3.20	70% (50%)
Child care	2011~2013	3.50	50% (20%)

Note: the rates in the parenthesis are applied to Seoul city.

What needs to be noted in the process of introducing these mandatory welfare expenditures is that they were decided unilaterally by the central government and Parliament without consulting local governments or even getting information on the expected expenditure increases in local governments' budgets. There is some reason for this. In Korea, a sizable amount of general grants is given to local governments without specifying expenditure categories for which to spend the grants.

This may sound somewhat confusing to outsiders since the Basic Expenditure Needs (BEN) of general grants is calculated based on four major expenditure categories, one of which is "social expenditure". In the sub-category of the social expenditure category, all the major welfare programs listed in Table 4 -- benefits to the poor, benefits to the elderly, child care, and the disabled -- are included as a basis of calculating BEN. However, the calculation of BEN is only for distribution purposes, and there is no monitoring mechanism to keep track of

the link between the expenditure categories of BEN and the actual expenditures of local governments. Not knowing exactly how local governments will spend their revenues from local tax and general grants, both of which have been decided by Parliament, the central government and Parliament feels free to push onto local budgets the expenditure programs they regard as having high national priorities.

Local revenue

Unilateral decision-making by the central government and Parliament takes place not only on the expenditure side, but also on the revenue side as well. As described in the previous section, the tax rates and tax bases of local taxes in Korea are decided in Parliament, and local governments do not deviate from the standards that Parliament sets. In this sense, local taxes are themselves national mandates. However, local governments are given the taxing power to change local tax rates by by-laws, implying that the independence of local government tax policy is honored. Therefore, it can be said that there is a consensus that central government and Parliament do not change local taxes for the purpose of national policy. In other words, local taxation is supposed to be more protected than local expenditures from the intervention of the central government and Parliament.

In reality, despite this interpretation, there is hardly any effective separation of national tax policy and local revenue. In fact, they are automatically linked in a very significant way. Above all, general grants for local governments and local education offices are all automatically linked to national tax policy since they are fixed proportions of national tax revenue. Also local income tax, the second largest local tax, is a piggy-back tax on the national income tax, and so automatically linked with national income tax policy.

In this way, local revenue is significantly affected by national tax policies, and the close link between the two has been a continuous source of conflict between the central and local governments. But more serious types of national mandates on local tax policy have been implemented recently. Since the economic crisis in 2008, housing prices in Korea started to decline as in many other countries. Moreover, due to demographic changes, the number of households entering the housing market is declining. To “revive” the housing market, Parliament decided, unilaterally, to reduce the tax rate of the Property Acquisition Tax, which is a local tax. There have been two interim changes since 2011, and a third change – a permanent one -- is soon expected.

Table 4. Reduction of Property Acquisition Tax by central government

Dates	Rates on housing purchase
2011. 3~2011. 12	Above 9 billion Won: 4% → 2% Below 9 billion Won: 2% → 1%

2012. 9~2013. 6	Above 12 billion Won: 4% → 3% 9 ~ 12 billion Won: 4% → 2% Below 9 billion Won: 2% → 1%
2013. 9 (expected)	Above 9 billion Won: 4% → 3% 6 ~ 9 billion Won: 4% → 2% Below 6 billion Won: 2% → 1%

This episode clearly shows the scope of the national mandates that dominate intergovernmental fiscal relations in Korea. The central government and Parliament have unilaterally changed local tax rates for an obvious national policy objective amid controversies over its effectiveness. It is therefore not surprising that heated debates follow between central and local governments as to how this loss of local tax revenue should be compensated.

2. Fiscal illusion, tax revenue transfers and irreversibility

Fiscal illusion

A notable feature of the process by which national mandates are introduced in Korea is the fact that neither the central government nor Parliament pays any attention to the long-term fiscal implications of such measures on central government budgets. In a sense, it can be argued that the fiscal implications of national mandates are clearly known to policy-makers: Regulation on National Subsidies administered by the Ministry of Finance has a table that shows matching rates of different types of public services provided by local governments. For example, as seen in Table 3, matching rates of "assistance to the poor" are 50 percent for Seoul city and 80 percent for other local governments. For child care, matching rates are 20 percent for Seoul city and 50 percent for other local governments. Therefore, based on this table, central government and Parliament may simply assume that the fiscal burden of central government for, e.g., child care, is about 44 percent of the total expenditure.[9]

Kommentar [EL4]: Local governement

An underlying assumption in this is that local governments will be able to adjust their budgets to absorb the expenditure increases resulting from mandates. However, once the unique structure of intergovernmental fiscal relations in Korea is taken into account, it can be seen that this is effectively impossible. Let T, E, and B denote, respectively, tax revenue, government expenditure, and debt issuance. Let superscripts C and L denote, respectively, central and local governments and Z denote tax revenue transfers from central to local governments. Let superscript M and O denote, respectively, mandated and own

[9] Applying a weight of 20 percent to Seoul city, an average matching rate for child care is 44 percent (0.5 x 0.8 + 0.2 x 0.2).

expenditures. Finally, let θ denote a matching rate for mandated expenditure. Then the budget constraints of central and local governments can be expressed as below.

$$T^C + B^C - Z = E^{CO} + \theta \times E^M \qquad \text{(central government)}$$

$$T^L + B^L + Z = E^{LO} + (1-\theta) \times E^M \qquad \text{(local government)}$$

As discussed previously, local tax revenue in Korea grows only by its natural growth rate, which is very low these days due to a low rate of GDP growth ($\Delta T^L \approx 0$). Local debt issuance is not allowed except for exceptional cases such as natural disasters ($\Delta B^L = 0$). Thus, when the size of the mandated expenditure increases ($\Delta E^M > 0$), local governments are forced to maintain balanced budgets either by reducing own expenditures ($\Delta E^{LO} < 0$) or by receiving more tax revenue transfers ($\Delta Z > 0$) from the central government.

Indeed, it can be seen that over the past decade the composition of local expenditures has shifted significantly toward a higher share of welfare expenditures in order to satisfy mandate requirements. And it may be also true that there is still more room for adjustment for mandated expenditures, especially by more closely linking general grants and welfare expenditures. However, recent extensions of mandated expenditures have met greater local government resistance. As seen from Table 3, assistance for the poor, introduced in the early 2000s, requires 50 percent matching rates from Seoul city and only 20 percent from other local governments. However, recently introduced mandated expenditures require Seoul city to take, respectively, 50 percent and 80 percent of required expenditures for cash benefits to the old and for child care. Matching rates imposed on other local governments are also quite high. With the much higher burden of recently extended mandate programs, there are mounting demands from local governments for more tax revenue transfers from the central government.

For example, Seoul city has strongly resisted assuming the mandated share of matching funds for the newly extended child care program, which had been one of campaign promises of the new President. Perhaps because the mayor of Seoul city is from an opposition party, Seoul city has been running a media campaign arguing that the child care program should be the responsibility of the central government, and has refused to adjust its budget to reflect increased child care expenditures. In the end, it was recently announced that Seoul city "will have to" issue a local bond of 0.2 trillion Won to cover the extra cost of child care and the loss of local tax revenue caused by the Property Acquisition Tax cut enacted by the central government. Considering the fact that Seoul city's local tax revenue alone (i.e. excluding non-tax revenue) was more than 12 trillion Won in 2013, the claim that Seoul city is unable to adjust 1.7% of its budget is questionable. However, Seoul city's sentiment is shared by all other local governments, and currently negotiations are taking place between the Ministry of Finance and local governments on ways to compensate local governments for the loss of

local tax revenue resulting from the Property Transaction Tax cut and increased child care expenditures. As one of the options for compensation to local governments, Seoul city is demanding an increase in the VAT share of the Local Consumption Tax, from 5 percent to 20. This figure is too high, but an increase to 10 percent is quite likely as result of the recent disputes over national mandates.

Tax revenue transfers

The current episode of the disputes between central and local governments over national mandates and related fiscal resources is one among many similar disputes that have taken place since the start of local autonomy in 1995. Such disputes seem in a sense inevitable due to the fact that there is no formal channel for budget negotiations between the central and local governments that would allow them to take into account costs incurred by national mandates and medium-term budget projections. The result of such disputes is often tax revenue transfers from central to local governments because both local revenue and local expenditures are virtually decided by the central government and Parliament. Table 3 shows the types of tax revenue transfers that have taken place since 1995. It needs to be noted that some of them are nominal in the sense that they replaced other local revenue items and didn't really contribute to increasing local revenue: the Local Gasoline Tax replaced a reduction of the Car Tax at that time and the Local Education Tax was introduced by transferring a part of national Education Tax. Also, increases in 2005, 2006, 2008, and 2010 in the shares of LAT and LEG as a part of Domestic Tax Revenue reflect the fact that these general grants absorbed other smaller grants. However, the increase of LAT and LEG in 2001 had real revenue effect, as did the Local Consumption Tax introduced in 2010.

Table 3. Tax revenue transfers

Program	Change	Year
Local Gasoline Tax	3.2% of national gasoline tax	1999
Local Education Tax	Transfer of National Education Tax	2001
Increased share of general grants in Domestic Tax Revenue	13.27% → 15.0%	2000
	15.0% → 19.13%	2005
	19.13% → 19.24%	2006
Increased share of general education grants in Domestic Tax Revenue	11.8% → 13.0%	2001
	13.0% → 19.4%	2005
	19.4% → 20.0%	2008
	20.0% → 20.27%	2010
Local Consumption Tax	5% of VAT revenue	2010
Expansion of Local Consumption Tax (planned)	5% of VAT → 10% of VAT	2014

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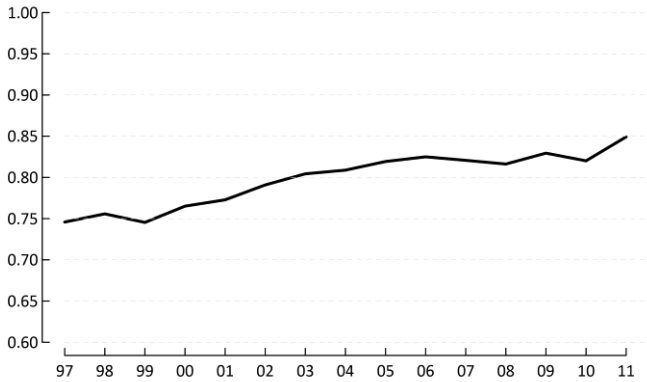
An important aspect not clearly seen in Table 3 is that quite sizable *implicit* tax revenue transfers are made due to the peculiarity of the way general grants for local governments and local education offices (LAT and LEG) are determined. As explained in the previous section, the total amounts of LAT and LEG are fixed, respectively, as 19.24 percent and 20.27 percent of Domestic Tax Revenue (DTR), which is defined as national tax revenue minus the revenues from custom duties and earmarked taxes such as the gasoline tax, liquor tax and national education tax. The ratio of DTR to central government's tax revenue (λ) therefore depends on the relative growth rates of these two tax revenues. As shown in Fig. 3, the ratio λ is far from being constant, and has for the past 14 years steadily increased by more than 10%p from 75% in 1997 to 85% in 2011. Since general grants for local governments and local education offices are 39.5 percent of DTR and national tax revenue was 192 trillion Won in 2011, 10%p increase in λ means about a 7.58 trillion Won increase in general grants. This amount is as great as the combined amounts of national subsidies for the benefits to the old and benefits to the families with children, which, for the last six years, have created great controversy over how to split the related fiscal burden between central and local governments.[10]

Figure 3. Ratio of DTR to central government tax revenue (λ)



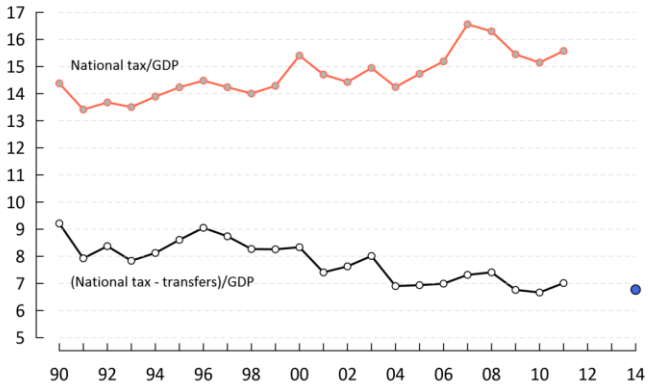
The result of these various and persistent tax revenue transfers from central to local governments is shrinking fiscal space for the central government. As shown in Fig. 4, the shares of gross and net (gross minus intergovernmental transfers) national tax revenue in GDP were, respectively, 14.4% and 9.2% in 1990. By 2011, gross national tax revenue has grown to 15.6% of GDP, but net national tax revenue has declined to 7.0% of GDP. This means that intergovernmental grants have grown from 5.2 % of GDP in 1990 to 8.6% of GDP in 2011. This size of Korea's intergovernmental transfers is among the highest in the OECD countries, while Korea's tax revenue (except social security contributions) is among the

[10] 0.395 x 0.1 x 192 trillion Won = 7.58 trillion Won.

lowest in the OECD countries.[11] This indicates the degree of impact the local public sector has on public finance in Korea. It should also be noted that the effect of the Local Consumption Tax introduced in 2010 is not counted as intergovernmental grants in the calculation above: its effect is to lower the size of national tax revenue. Since its share in VAT revenue will most likely increase from 5% currently to 10% in 2014, the share of net national tax revenue in GDP will drop to about 6.8% in 2014.

A fundamental question in this situation is whether the central government is aware of the long-term trend of shrinking national tax revenue due to myopic decision-making over national mandates and the peculiarity of the general grants system in Korea. According to interviews the author has conducted with budget officials in the Ministry of Finance, they are not generally aware of these problems. The budgeting procedure in Korea remains almost exclusively focused on the next year's budget despite an introduction of a medium-term fiscal framework about 10 years ago. Additionally, budget officials tend to regard general grants and mandatory expenditures as expenditure items beyond their control. Therefore they are not interested in analyzing the long-term implications of the current system of intergovernmental fiscal relations. The consistently declining trend of net national tax revenue in Fig. 4 shows the cumulative effects of the *ad hoc* approach taken by the central government toward the complicated issues of intergovernmental fiscal relations.

Figure 4. Trend of GDP shares of gross and net national tax revenue (%)



Note: GDP share of net national tax revenue in 2014 is based on the assumption that the VAT share of Local Consumption Tax will be 10 percent in 2014.

[11] The share of intergovernmental grants in the GDP in 2010 was 11.5% in the Netherlands, 10% in the UK, 7.2% in Italy and then below 6% in most other unitary countries. The share of Korea's tax revenue (excluding social security contributions) in GDP was 19.34% in 2010. In the Nordic countries, it is higher than 30%. It is also higher than 25% in France, UK, and Italy. In the US (18.47%), Japan (16.28%), Spain (20.1%), and Germany (22.0%), tax burden is relatively low.

Irreversibility of tax revenue transfers

What is notable in the trends shown in Fig. 4 is that there is a kind of "ratchet effect" in the sense that, from a national tax revenue point of view, "good years" of rising gross tax revenue are followed by "bad years" of declining net tax revenue. To test the hypothesis of this ratchet effect[12], let x denote the share of gross tax revenue in GDP, and y the share of net tax revenue in GDP, and subscript t the year. Let Δ denote the growth rate so that $\Delta x_t = (x_t - x_{t-1})/x_{t-1}$ and $\Delta y_t = (y_t - y_{t-1})/y_{t-1}$ and let $\overline{\Delta x}$ and $\overline{\Delta y}$ denote an average of the variable x and y. Then an increase in the growth of x above the average, Δx_t^p, and a decrease in the growth of x below the average, Δx_t^n, can be defined as below (both Δx_t^p and Δx_t^n are defined to have positive values):

$$\Delta x_t^p = (\Delta x_t - \overline{\Delta x})d_t, \qquad d_t = 1 \text{ if } \Delta x_t > \overline{\Delta x}$$

$$\Delta x_t^n = (\Delta x_t - \overline{\Delta x})(1 - d_t), \qquad d_t = 0 \text{ if } \Delta x_t < \overline{\Delta x}$$

Then, the effect of the growth rates of gross tax revenue in year t-1 on the growth rates of net tax revenue in year t can be tested from the specification below:

$$\Delta y_t = \beta_0 + \beta_1 \Delta x_{t-1}^p + \beta_2 \Delta x_{t-1}^n + \varepsilon_t$$

From this equation, β_1 captures the effect of "good years": the value of β_1 will be negative if a high growth rate in gross tax revenue in a good year is followed by a relatively large tax revenue transfers in the next year. On the other hand, β_2 captures the effect of "bad years": the value of β_2 will be positive if a low growth rate in gross tax revenue in a bad year is followed by a relatively small amount of tax revenue transfers in the next year. Note that this empirical model not only deals with the effect of direct tax revenue transfers, such as the Local Consumption Tax, but also the effect of *implicit* transfers embedded within the system of general grants. It also deals with the effect of conditional matching grants which tend to expand in good years.

Table 5 shows the result of estimating the above equation. The estimate of β_1 is -2.98 and statistically significant with a confidence of 99%. On the other hand, the estimate of β_2 is 2.28 and statistically significant with a confidence of 90%. It thus confirms the ratchet effect hypothesis that the effect of lower growth rate of net tax revenue after a good year is stronger than the effect of higher growth rate of net tax revenue after a bad year. This process has been ongoing for more than 20 years now, and its cumulative effect is by no means negligible.

[12] The empirical model below is based on Hercowitz and Strawczynski (2004).

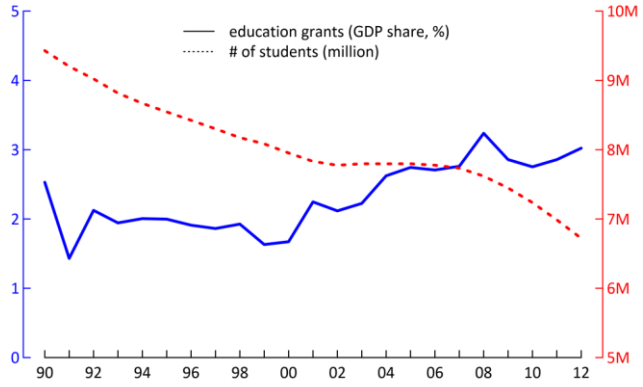
Table 5. Test of ratchet effect of tax revenue transfers

Variables	estimate	Standard error	t-value	p-value
constant	0.077	0.037	2.11	0.05
Δx_t^p	-2.98	0.925	-3.22	0.005***
Δx_t^n	2.28	1.085	2.1	0.052*

Significance levels: * 0.05 < p < 0.1, ** 0.01 < p < 0.05, *** p < 0.01.

Somewhat perplexing is the trend toward a consistent decline in net national tax revenue as a share of GDP, even as gross tax revenue as a share of GDP grows. When there is a shortage of fiscal revenue due to a high level of tax revenue transfers, which is as much as 8.6% of GDP, it is natural for the Ministry of Finance to try to reduce the size of tax revenue transfers. As a matter of fact, there have been efforts to reduce the size of general grants, but local governments and local education offices are regarded as as having fiscal rights to these grants, and general grants are thus extremely difficult to reduce. Recently, for example, the rigidity of the general grant for education is being criticized because its size, at 20.27% of DTR, keeps growing while the number of students is quickly declining due to demographic changes (Fig. 5). Despite such criticism, it is very unlikely that the share of general grants in DTR will be adjusted downward in any time soon.

Figure 5. Trends of education grants and number of students



3. Related literature on national mandates

In a study on the funding of new competencies for local governments in European countries, Lotz (2009) addresses many issues related to the transfer of government functions from central to local governments. Lotz notes that, despite local governments haveing their own financial means (local taxes) to finance new functions, intergovernmental grants are used to finance them in the majority of 23 surveyed countries. The reason, he notes, is that use of grants makes central government accountable for the new functions designed by the center and also makes it easier to decentralize new functions. With regard to the choice

between general and earmarked grants, he reports that as many countries use earmarked grants as use general grants.

These practices with regard to new functions for local governments in Europe seem quite similar to the ones in Korea: both in Korea and in many European countries, conditional grants are popularly used fiscal tools to finance new functions of local governments. There is a very important difference, however, between mandate expenditures in Korea and new functions in European countries. Only eight countries responded affirmatively to a question on the existence of an "agent function" function in their country, where an "agent function" was defined as a functions that left no freedom for local governments in implementation. Out of these eight countries, five of them responded that such agent functions are financed by general grants, not conditional matching grants. So in most of European countries, the type of mandatory expenditures found in Korea is not a common form of local function.

In a study closely related to the issues discussed in this paper, Spahn (2013) discusses standards and norms imposed on local governments by federal government in Germany. In Germany, a commission was established by the Federal government in 2010 to look into standards imposed by federal legislation that would have financial implications for local budgets and to estimate the volume of such financial implications.[13] Through a survey of federal regulatory restrictions that affected local administrations and local budgets, the commission identified 300 norms and, out of those, 220 norms applying to mainly social and labor policies were investigated. Spahn's findings were as follows. Firstly, three quarters of the norms did not entail financial implications for other tiers at all (Category I). One quarter of the norms entailed fiscal burden of local governments and were mainly related to the area of social spending. In particular, norms and standards set by federal laws and regulations on social spending such as housing and heating support for the socially disadvantaged, child care, support for adolescents, aid to families, institutional care, basic support for the elderly, etc. were found to entail fiscal burdens for local governments.[14]

Spahn notes that, based on these findings, local governments tried to shift the fiscal burden onto federal governments, but federal government rejected stipulations that would reduce local governments' spending at the expense of the federation, based on a argument that these problems can only be addressed as part of an overall package that also includes a reform of local revenues (Spahn, 2013, p. 141).

[13] In the commission's investigation, a standard is defined as "a uniform or unified applicable or desirable way, fixed by federal regulations, as to how a political goal or task is to be fulfilled or performed" (Spahn, 2013, p. 138).

[14] For example, a federal act on child care establishes that municipalities are to provide day care for 35 percent of all children under the age of three until 2013, and from then on all children will be legally entitled to day care from their first year on (Spahn, 2013, p. 138).

So the situation in Germany with regard to central government mandates on social spending that create fiscal burdens for local governments is quite similar to that in Korea. This is perhaps because, in both countries, tax sharing is a major source of sub-national government revenue. When national tax revenue is allocated by a scheme of tax sharing to central and sub-national governments, much of sub-national governments' revenue is determined by law or constitution, not by local residents. Under this circumstance, a kind of "expenditure sharing" set up by law and regulations is inevitable, especially in the area of social expenditures, which are regarded as national interests rather than locally-decided issues.

Kommentar [EL5]: Seems like this needs to be inserted?

However, there is still a noticeable difference between the two countries. In Korea, there has never been an intergovernmental committee which looks into the fiscal implications of national mandates. Also, the conditional matching grants that are widely used in Korea are not a fiscal tool for expanding social expenditures in Germany.

A paper recently published by Baicker et al. (2012) address the issues of federal mandates in the United States. In analyzing the long history (1952-2006) of fiscal policies in the US, they argue as follows:

> "The greater role of states cannot be easily explained by changes in Tiebout forces of fiscal competition, such as mobility and voting patterns, and are not accounted for by demographic or income trends. Rather, we demonstrate that much of the growth in state budgets has been driven by changes in intergovernmental interactions. Restricted federal grants to states have increased, and federal policy and legal constraints have also mandated or heavily incentivized state own-source spending, particularly in the areas of education, health and public welfare." (Baicker et al., 2012, p. 1079)

According to Baicker et al., federal grants to states and localities rose from 0.8% of GDP to 3.3% of GDP between 1952 and 2006. At the same time, state own source revenues more than doubled from 4.1% to 10.4% and local own source revenues increased from 4.0% to 7.1% during this period. On the other hand, federal own-source revenues declined as a share of GDP from 19.0% to 18.4%. Based on this observation, Baicker et al. argue that the classic Tiebout model – an emphasis on mobility and the aggregation of voter preferences – does not have a high explanatory power for the empirical facts of the structure of U.S. state revenue and expenditures. Rather, they argue that state budgets can be mainly explained by changes in the nature of intergovernmental interactions over time. In particular, they argue that such external forces as federal mandates, court orders (e.g., school finance equalization), and matching funds have played an important role in shaping the size and composition of U.S. state budgets.

From a theoretical point of view, this paper shows that, in the final analysis, there is not much difference between the U.S and European countries in terms of economic models for explaining intergovernmental fiscal relations. Many European scholars have argued that the model of administrative federalism has at least as much explanatory power as fiscal federalism in analyzing the intergovernmental fiscal relations in European countries.[15] The study by Baicker et al. shows that it may be also the case in the U.S.

Kommentar [EL6]: Not certain that this was intended.

From a policy point of view, this study also shows that there is a close similarity between Korea and the U.S. in that intergovernmental fiscal relations in both countries are heavily influenced by mandates and conditional matching grants. It is also notable that the two countries are among the few countries in the OECD which employ a presidential system.

However, there is an important difference between Korea and the U.S. in the process of increasing the role of sub-national governments for providing such public services as education, health, and public welfare. In the U.S., an increase in sub-national expenditures for welfare programs was matched by an increase in the sub-national tax burden. That way, the tax price signal of the burden of welfare expenditures was sent to local residents. It should be noted that the tax burden imposed by the federal government in the U.S. has, on the other hand, declined as a share of GDP from 19.0% to 18.4% during the past 50 years.

The situation is completely different in Korea. Welfare programs in Korea are provided by local governments, but are mainly financed by intergovernmental tax revenue transfers. Ideally, payers of national taxes should be aware of the full cost of such welfare expenditures, but they are only aware of the fact that, in recent years, the central government has been running budget deficits and government debt is rapidly accumulating. This puts pressure on the central government to tighten the level of welfare expenditures, but it also creates pressure for the central government to more aggressively use conditional matching grants to shift the fiscal burden onto local governments. Unfortunately, this latter strategy doesn't seem to work in the long run.

[15] For more detailed discussions on the issues of administrative federalism versus fiscal federalism, see Kim, Lotz and Mau (2013). See also Rattsø (2002) for a discussion on administrative federalism in the Nordic countries.

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