Fiscal Equalization: The Case of German Municipalities

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Given increased mobility of capital, many countries face difficulties in taxing corporate income. Some observers fear a race to the bottom and wonder whether international economic integration has gone too far. In fact, experience with the finances of local jurisdictions – cities, towns, and municipalities – suggests that governments operating under conditions of high mobility are forced to rely more heavily on the taxation of property and land than on personel and corporate income taxes. Although this is true for local governments in most countries, it is not true for Germany.

Germany currently has about 12,500 municipal governments, each of which runs its own budget, employs public servants and raises revenue from various sources. These municipal governments have some tax autonomy in the sense that they decide on the actual tax rate of land tax and of business income tax. But, quite contrary to what might be expected, the revenue share of business tax is substantial in this case, and the average statutory tax rate is suprisingly high. Even after the 2008 tax reform it is above 13 percent.

While the strong reliance on business taxation seems to contradict conventional wisdom, it is important to emphasize that there are some specific institutions that govern the fiscal policies of local jurisdictions in Germany. Most notably, German municipalities are subject to a system of vertical and horizontal fiscal transfers. Closer inspection reveals that this comprehensive system of fiscal equalization can partly explain why local governments rely so heavily on business income tax.

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There are basically two features of municipal finances in Germany that could explain the unusual tax mix and the heavy reliance on business taxes:

(1) The fiscal equalization system tends to reduce the marginal cost of using business income tax in a setting with high mobility.
(2) The fiscal equalization system provides protection against revenue fluctuations that are inherent to business income taxation.

It should be pointed out, however, that there are further institutional characteristics in Germany that play an important role. Most important, the tax law is given and tax collection is generally centralized at the state level. Otherwise, one could expect that the administrative complexity of business taxation would overwhelm local authorities. Moreover, local business taxation in Germany is further simplified due to a system of formula apportionment that avoids many of the problems of profit-shifting between affiliated firms, an issue which in the context of multinational corporations has recently received considerable attention. Furthermore, until the 2008 reform, the business tax was deductible in personal and corporate income taxation, implying that the effective burden on firms was lower.

Sources of funds

Besides user fees and income from private sector activity, municipal governments in Germany obtain funds mainly from three sources. First, municipalities receive a 15 percent share of personal income taxes paid by its residents and a share of VAT. The municipalities have no discretion with regard to the tax rate, and tax collection is centralized at the state level.

Second, local municipalities raise their own tax revenue. This relates mainly to the local business tax and to the land tax. Except for special cases, the business tax is essentially a tax on the profits of local

Table

Main sources of municipal public funds in North Rhine-Westphalia in 2005

	Mean	Std.Dev	Min	Max	CV[b]
	in € per capita				
Local business tax revenue	361.7	236.2	25.10	1,486	0.653
Land tax revenue	119.2	20.12	69.82	238.9	0.169
Shared tax revenue[a]	295.9	50.67	181.7	469.2	0.171
Fiscal equalization grants	207.5	133.2	0	599.5	0.642

[a] Shares from personal income taxes and VAT. – [b] Coefficient of variation.

Source: Own calculations and Statistical Office of North Rhine-Westphalia.

firms. While the tax law is a federal law that applies equally to all municipalities, the municipal council decides on the actual tax rate. With regard to land taxation, again, all responsibilities of tax administration, including assessment, are centralized at the federal or state level. There are, however, two tax rates that the municipality determines: one is levied on land devoted to agricultural use and the second to land used for residential and commercial purposes.

A third source of municipal funds comprises grants from the state governments. Most notably, all German states (except for Berlin, Bremen, and Hamburg which have city-state governments) engage in a system of fiscal transfers from the state to the municipal level. While a part of these vertical transfers are paid as matching grants, the lion's share of grants is unconditional, in that recipient governments can freely decide upon their use. However, the distribution of these funds takes place through systems of *fiscal equalization* at the level of the states. These systems determine grants based on indicators of *fiscal capacity* and *fiscal need*. The latter is basically the conceded budget per resident; the former is a measure of tax revenue at standardized tax rates. If a jurisdiction displays a fiscal capacity above fiscal need, it will not receive equalization grants, and in some settings, it may even be a net contributor to the fiscal equalization system. If its capacity falls short of fiscal need, however, the jurisdiction is a recipient of grants such that grants partly compensate for the gap between fiscal need and fiscal capacity.

In order to illustrate the relative importance of the respective sources of revenue, the Table provides information on the composition of municipal revenue in North Rhine-Westphalia, Germany's largest state.

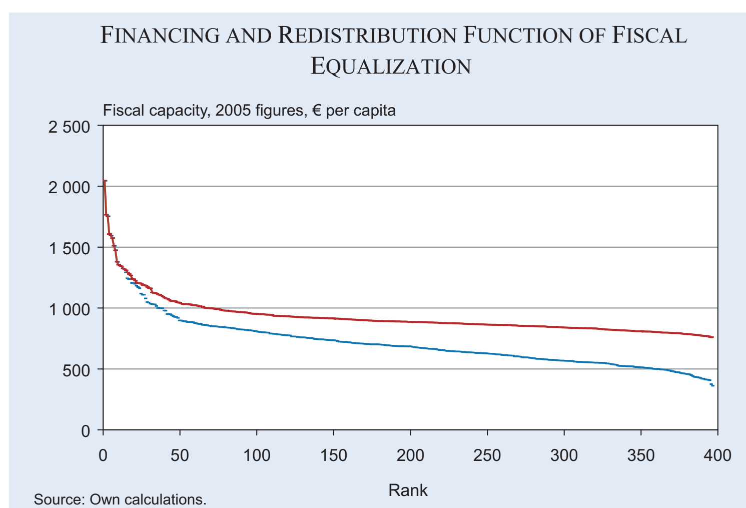
The data reveal several characteristics of municipal finance in Germany. First, municipalities strongly rely on rather distortive taxes. In particular, average per capita revenue from the local business tax is more than three times larger than revenue from the land tax. At the same time, local business tax revenues display substantial inter-jurisdictional disparities. As indicated by the coefficient of variation, the dispersion of local business tax revenue is almost four times larger than the dispersion of land tax revenue.

The last line of the Table highlights the prominent role of fiscal equalization in municipal finance in Germany. On average fiscal equalization transfers amount to more than a quarter of total revenues. However, dispersion is also very high with respect to this source of revenue. While some jurisdictions (with low fiscal need and high fiscal capacity) are not eligible for fiscal equalization, others receive rather substantial transfers from the state.

The role of fiscal equalization grants

We can distinguish at least three effects of fiscal equalization on municipal budgets. First, since equalization grants are financed through vertical trans-

Figure 1



Source: Own calculations.

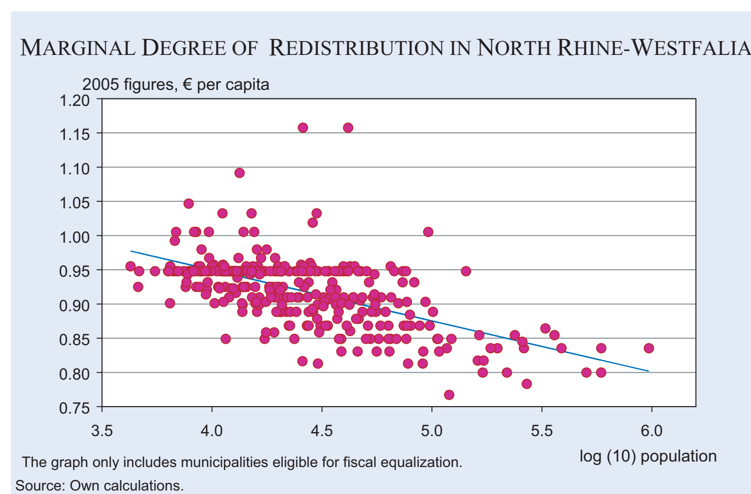
fers, they raise funds disposable to local governments. Second, due to its redistributive nature, fiscal equalization compensates for disparities in the fiscal capacity of jurisdictions. Third, fiscal equaliza-tion provides insurance against revenue shocks since an unexpected change in revenues will be partly compensated by offsetting changes in equalization grants.

The substantial impact of equalization grants on the amount of funds available at the lower level as well as its redistributive nature are illustrated in Figure 1. The horizontal axis ranks all 396 municipalities in North Rhine-Westphalia according to fiscal capacity, and the vertical axis measures revenues in per capita-terms. Municipalities with large funds are closer to the left of the diagram. The lower curve shows fiscal capacity before fiscal equalization whereas the upper curve shows the revenue capacity, i.e., the sum of fiscal capacity and equalization grants. As the figure shows, most municipalities receive additional funds from equalization. Only municipalities that display an unusually large fiscal capacity do not. This is illustrated by the fact that the curves overlap in the left corner of the diagram. Moreover, the slope of the upper curve is flatter, which indicates that the disparities between more and less wealthy jurisdictions are reduced by fiscal equalization.

While the transfers can be expected to create important income effects on municipalities, it should be noted that those effects would actually tend to result in low rather than high tax rates. Thus, they cannot explain why business tax rates are so high. However, the systems of fiscal equalization that are in place in Germany also produce strong incentive effects on tax rates. Basically, the fiscal equalization systems reduce some of the costs associated with using business income taxes as a source of local funds. This is a result of the negative relationship between fiscal equalization grants and fiscal capacity. In particular, since fiscal capacity is usually determined by multiplying the tax base by a certain standardized tax rate, fiscal equalization grants are essentially determined by the local tax base. In the presence of fiscal equalization grants the revenue consequences of a change in the local tax base are partly offset by changes in the grants received. Figure 2 provides some indication of the importance of this effect in Germany by depicting the marginal degree of redistribution faced by municipalities in North Rhine-Westphalia that receive equalization grants. The marginal degree of redistribution is defined here as the fraction of a unit increase in business tax revenues that is implicitly appropriated by the transfer system. This fraction is displayed on the vertical axis. The figures point to a substantial degree of fiscal redistribution. On average more than 86 cents of an additional euro of business tax revenues is transferred; only 14 cents remain with the budget of the municipality.

The rather strong degree of redistribution has potentially important consequences for tax policy. In order to illustrate this, let us consider the impact of an increase of the local business tax rate. In addition to withdrawing resources from the private sector, a higher tax effort depresses the local tax base. This is due to an outflow of capital and the discouragement of private investment, which usually go along with higher tax rates. The reduction in the tax base due to taxation results in an excess burden that raises the *marginal cost of funds* and provides a strong incentive to lower tax rates. Since a decrease in the tax base is compensated with an increase in transfers, however, fiscal equalization works in the opposite direction. The disincentive to tax mobile capital that is usually faced due to an adverse effect on the tax base is compensated by an increase in grants. Thus, in the presence of fiscal equalization, tax rates will generally be higher than in a situation without redistributive transfers. Recent literature on fiscal federalism has stressed the role of fiscal equalization in altering the incentives faced by local tax policy. In particular, it has been shown that redistributive intergovernmental transfer

Figure 2



The graph only includes municipalities eligible for fiscal equalization.
Source: Own calculations.

schemes in general may induce governments to raise even possibly distorting taxes (Smart 1998; Koethenbuerger 2002). Hence, the rather strong degree of redistribution experienced by the municipalities in all German states and illustrated for North Rhine- Westphalia in Figure 2 might serve as an explanation for why, despite its distortive effects, local business taxation plays such a prominent role in municipal finance in Germany. In fact, Buettner (2006) identifies this incentive effect of the marginal contribution rate as an important tax driver in the context of German municipalities.

The close relationship between equalization transfers and local taxing capacity gives rise, however, to further incentive effects on the tax policy of local municipalities. In this context, it is important to note that business income tax revenues are not only a problematic source of local funds due to the mobility of tax payers. Fluctuation in business income taxes resulting from the varying fortunes of firms also leads to a strong fluctuation in tax revenue. Facing debt limitations, municipalities are less able to engage in tax and expenditure smoothing and, hence, the attempt to rely on shaky tax revenues implies further budgetary problems that undermine steady policies. In this situation, fiscal equalization serves as an insurance mechanism that provides assistance, in particular in times of unfavorable revenue developments, and contributes to more stable sources of revenues. Given the large degree of redistribution inherent to the Geman equalization system, it can well be expected that a substantial degree of insurance is provided, even if practical implementation issues result in a considerable time lag.

Comparing US municipalities with those in Germany, Buettner (2007) has found that in fact own-source revenues of US municipalities display much less fluctuation than the tax revenues of German municipalities. At the same time the role of fiscal equalization transfers in restoring fiscal balance is much more important in Germany when compared with state and federal grants in the US. Nevertheless, empirical evidence points to higher expenditure fluctuations in Germany. This indicates that another incentive effect is present that is related to moral hazard. Perhaps the large degree of protection provided by the equalization system allows German municipalities to rely much more on unstable revenues like business taxes rather than on land taxes. In comparison, US municipalities cannot rely on grants for fiscal stability and thus must resort to property taxes.

Conclusion

Given the large differences in taxing capacity, the systems of fiscal equalization are quite effective in ensuring that municipalities with small revenues have financial means that are not vastly different from the average. The system further provides some insurance against revenue fluctuations that helps municipalities to provide a steadier flow of services. However, the fiscal equalization system also generates important incentive effects.

The incentive effect that originates in a reduced tax rate sensitivity of the budget can be seen, to a limited extent, as a means to improve the efficiency of local finances. This relates to the existence of fiscal externalities that arise in tax competition. When governments raise taxes on mobile tax bases, such as business income, they may just induce a reallocation of mobile firms and hence cause an inflow of capital to other jurisdictions. This contributes to a rise in the tax revenue of these jurisdictions. If local governments only consider their own revenue losses and neglect this beneficial effect on other regions they will set taxes at an inefficiently low level. In this case fiscal equalization transfers may be interpreted as Pigouvian subsidies (Wildasin 1989) that induce a more efficient local tax policy. However, the large degree of redistribution seems problematic. The reason is that the taxation of mobile capital not only distorts the interregional allocation but also lowers overall capital demand in the economy. Therefore, an almost complete redistribution might over-subsidize taxation in the sense that it also refunds tax-induced reductions in the tax base that reflect a reduction in total capital supply (Bucovetsky and Smart 2006).

Another disincentive effect of the large degree of redistribution is related to the choice of the revenue structure. Here, we might observe a moral hazard problem in the sense that jurisdictions are tempted not to rely on rather stable land taxes but on unstable business taxes.

A further problem relates to interjurisdictional heterogeneity. German municipalities differ considerably in size and show a rather skewed distribution in terms of population size and density. This corresponds to a skewed distribution in terms of tax revenue both in absolute value and on a per-capita basis such that tax revenue is disproportionally higher in large cities as compared to small municipalities. As a consequence, fiscal equalization tends to systemati-

cally redistribute from large cities to small and, perhaps, peripheral jurisdictions. This could potentially have important distortionary effects on the spatial structure of the economy. To avoid those effects, systems of equalization tend to have special provisions for cities.

All this suggests that the equalization system needs to support municipalities in their difficult task to finance local budgets without reducing their responsibility too much. In this regard, it seems generally advantageous for municipal fiscal equalization to take place at the state level so that different institutional settings can be compared and discussed.

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