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Structuring Intergovernmental Grants to Local Governments: Lessons from South Africa

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Abstract. South Africa has been going through a period of transition over the past three years as it changes its system of public finance from a structure suited to the old apartheid system to one consistent with the new South African Constitution. While the former system was highly centralized, the new constitution makes a clear commitment to municipal governments as important providers of government services, with greater tax and spending powers. Even as local autonomy has been substantially increased, there remains uncertainty as to the most appropriate design of a system of intergovernmental fiscal grants to metropolitan areas and townships.

JEL classification: H11, H77.

1. Introduction

The Republic of South Africa has been going through a period of transition over the past three years as it changes its system of public finance from a structure suited to the old apartheid system to one that is consistent with the new South African Constitution. While the system under apartheid was highly centralized, the new system is in a period of transition to a more decentralized system in which local governments have greater tax and spending powers, and substantially increasing local autonomy.

In this paper I describe and then evaluate the set of issues that surround the design of intergovernmental grants in South Africa. The system remains in a transitional stage, which makes this analysis one of continuing importance. I begin with some background.

On October 11th 1996, South Africa adopted a new Constitution. The Constitution set out a three-tiered fiscal system: a central authority, nine provinces, and a multitude of local governments, ranging from a number of significant metropolitan areas ("metros") to a large number of smaller rural towns. The Constitution currently assigns significant fiscal powers to the nine provinces, which have the power to set spending and regulatory policies for a range of public services, including education, the environment, health, housing, local government, transportation, and economic development. Under the Constitution, provinces have been given the right to impose taxes. However, the available tax instruments are restricted: they exclude income taxes, value-added taxes, general sales taxes, and custom

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duties. Available taxes include surcharges on national residential income taxes, and general sales taxes. Actual tax revenues raised by the provinces have historically been quite low, with the shortfall being made up by an extensive system of grants from the center to the provinces.[1]

The South African fiscal system remains in flux. Much of the responsibility for putting the system of provincial and local government grants in place has been shared by the Ministry of Finance and the Financial and Fiscal Commission (FFC). The FFC, in particular, was given the responsibility to design a system of grants and, more generally, to develop a set of principles for allocating fiscal resources. In the discussion that follows I focus solely on issues relating to local governments.

The Constitution of South Africa makes a clear commitment to municipal governments as important providers of government services in a manner that is democratic, politically accountable, and economically sustainable.[2] However, there remains significant debate as to whether the responsibilities of the provinces should be curtailed, and there remains substantial uncertainty as to the most appropriate design of a system of fiscal grants to the metro areas and the townships.

The Constitution requires that "Local government and each province is entitled to an equitable share of revenue raised nationally to enable it to provide basic services and perform functions allocated to it."[3] The Constitution does not spell out how this should be accomplished. But, the Constitution does recognize three types of municipalities, each of which has been, and is likely to be, treated differentially when the system of grants has been put fully into place:

1) Municipalities or "independent cities" which have exclusive legislative and executive authority in their areas; these include a number of the smaller cities and towns;

2) Municipal "substructures" which share executive and legislative authority with the third category of cities; and

3) Municipalities ("metros") which are governed by "Transitional Municipal Councils" (TMCs) and have executive and legislative authority in areas that include more than one municipal substructure.[4]

An example may help to clarify the distinctions among these types of governments. The concentration of population in South Africa is in Gauteng province. Gauteng contains two metros governed by TMCs: Pretoria and Johannesburg. Pretoria contains three substructures, while Johannesburg has four. Also, within Gauteng are a large independent municipality, Midrand, a number of smaller independent cities, and a large number of more rural towns. A similar pattern applies to other provinces.[5]

TMCs are given access to the revenues from a national payroll tax on wages within their area and a national turnover tax on economic transactions. Independent cities and municipal substructures may assess property taxes within their boundaries. Finally, surcharges on fees for services (water and electricity) offer a source of additional revenue for municipalities.[6] The programmatic responsibilities of municipalities include electricity, fire protection, transport, parks and recreation, water, sanitation, and refuse removal.[7]

The Constitution's commitment to local government as a provider of public services is significant in the South African federalist system. Consistent with principles of democracy and efficiency, local governments can provide public services in a manner that is responsive to the needs of local residents. However, to the extent that there are externalities (created by service inequities or spillovers), extensive reliance on local government financing may not be appropriate. In an ideal system, the national government designs grants to ensure service fairness and to correct inter-community misallocations, while local governments remain free to provide the services that benefit their constituents, subject to the constraints set by the national grants policies. Ideally, the structure of intergovernmental transfers in South Africa, in Sweden, and elsewhere should be governed by (1) rationality—there must be a sensible argument showing how each policy promotes economic growth and efficiency, economic fairness, or democratic institution building; (2) predictability—with instabilities, a valuable economic and democratic institution might be lost; and (3) accountability—without accountability, agency problems will cause valuable resources to be wasted.

In this paper I sketch out a set of principles that underlie the design of a grants system for South Africa. Section 2 outlines the principles for the design of grants to local governments. Section 3 offers a detailed grants proposal for municipal governments aimed at ensuring the fair delivery of basic municipal services, at promoting economic efficiency in both the public and private sectors of the economy, and at guaranteeing all local governments access to the physical infrastructure necessary for democratic decisionmaking. Ideally, this design should yield a predictable flow of grants revenues, that generates incentives for local governments to provide services efficiently, and which ensures that local governments will be accountable to their citizens. Section 4 contains some brief concluding remarks.

2. The Principles Underlying an Ideal Grant Structure

An ideal grant structure should follow four basic principles:

1) Local governments should play a significant role in the efficient financing and delivery of government services. However, when local financing leads to inequitable or inefficient allocations of public and private resources, intergovernmental grants should be used to improve economic fairness and efficiency in the provision of local public services.

2) Because households, labor, and capital are mobile across municipalities and provinces, the redistribution of income and the guarantee of basic public services should be managed by the central government. While central government financing and central government standards are required, local governments are likely to be the most efficient administrators of income transfers and providers of basic services. In this case, centrally financed grants to local governments to fund national standards are appropriate. In the case of national standards for the provision of essential municipal services, a national municipal basic services grant (an S grant) should be provided to each municipal government responsible for the provision of the municipal basic services.

3) When there are significant economic spillovers from one local government to another, either because of public service interdependencies or because local tax rates affect

the location of economic activity between communities, fiscal competition between local governments may be economically inefficient. In such instances, a matching intergovernmental grant (an M grant) to correct public service inefficiencies, and a tax base equalization grant (a T grant) to ensure that tax rates reflect only the true economic costs and benefits of government services and economic locations will be required.

4) To ensure that all local governments have sufficient public facilities to engage in meaningful democratic decisionmaking, a centrally funded municipal institutions grant (an I grant) to each eligible local government is appropriate. In the sections that follow I discuss each of these principles in the South African context. I then discuss the conceptual problem of setting equitable vertical and horizontal shares. Finally, I comment briefly on the need to protect these equitable shares against macro-economic shocks.

2.1. Local Governments and the Provision of Government Services

Consistent with a general theory of the political economy of federalism, local governments in South Africa should have the most direct say in the financing and provision of government services. Significantly, fiscal competition for residents and firms among municipalities both within and between metropolitan areas provides an important disciplinary device for elected officials to do their job well. By monitoring the performance of other local governments, citizens can in principle decide to organise politically for improved services in their own communities. If political reform is not feasible and government inefficiencies are sufficiently large, exit rather than voice can be an option.[8]

Nonetheless, there are three situations in which this fiscal competition among jurisdictions may not encourage the correct level of local government services, making central government policies appropriate: 1) when fairness is an important national policy objective; 2) when there are spillovers; and 3) when there are significant disparities in tax bases across jurisdictions and metropolitan areas.

With respect to fairness, local governments cannot be relied on to guarantee a minimum standard of basic public services for all citizens. Communities with relatively small poverty-level-populations may have the resources to provide minimum services, whereas communities with large pockets of poverty will find it very costly to meet the minimum standard. One possible alternative, evidenced in South Africa, is the decision to discriminate in the provision of basic services—with the better services going to the wealthier areas. Alternatively, some municipalities have chosen not to meet the minimum for all citizens, allowing richer neighborhoods to provide the basic services privately. One must recognize an important economic reality here: communities that discriminate in their provision of basic services will be attractive to businesses and to upper income residents. In effect, fiscal competition encourages an inequitable distribution of basic services.

What can be done? My preferred solution is to finance the provision of basic services through the center and to provide each local government with a basic service grant sufficient to provide the minimal standard for all citizens. With this grant, all citizens in the country contribute to the national objective of basic service equity. In addition, the incentives in communities with large poverty populations to discriminate against the poor in the provision of these services should significantly, if not totally, be reduced.

With spillovers, however, fiscal competition is likely to lead to inefficient public services or taxation. The solution is a matching grant designed and partially financed by the central government. The grant supplements only the costs associated with the spillover, still leaving public officials responsible for providing their own citizens with the efficient level of the service.

An important reality of any federalist system that allows for movement of labor and resources and that relies on local government autonomy is that residents and businesses will want to live in jurisdictions which provide the most valuable services at the lowest tax rates. The result is that fiscal competition will encourage households, workers, and business capital to seek those communities with low rate rates, all else the same. Differences in tax rates can arise because of differences in service costs and/or disparities in tax bases. For fiscal competition to be an effective check on fiscal performance, however, it is essential that rates vary *only* because of variations in local service costs. Large tax bases can mask cost inefficiencies, limiting the ability of residents and businesses to identify fiscal waste and mismanagement. Disparities in local tax bases undermine the ability of fiscal competition, and thus the ability of jurisdictions themselves, to encourage efficient public services.

There are two consequences of unfair fiscal competition. First, inefficient municipal governments can be sustained over time. Second, households, labor, and capital may locate according to the differences in tax base, not according to differences in the economic productivities of the city or the region. Because of disparities in tax bases across municipal governments, public sector inefficiencies will be allowed to stand, and new private sector inefficiencies will be created. The solution is to equalize tax bases across competing jurisdictions through a central government tax base equalization grant.

2.2. *Ensuring Basic Service Equity*

For fairness and economic efficiency, national equity standards should be financed by national taxation on all citizens and uniformly enforced across the entire country. Fairness requires that all citizens contribute to the financing of the national equity objectives through a uniformly set and administered tax system. Efficiency can be achieved if the enforcement of equity standards encourages households, labor, and capital not to be induced to relocate away from their most efficient location because of differences in redistributive taxes, transfers, or basic services.

South African municipal governments can play an essential role in the provision of basic public services to set national minimum standards. These arguably would include services that play a role in defining the basic physical environment necessary for citizen health and safety, such as municipal sanitation, refuse removal, water facilities, and municipal roads.

A centrally funded *S grant* can ensure that national standards for basic municipal services will be met. This basic services grant is a *conditional non-matching grant* that is designed to provide a minimal level of core municipal services. It has, in fact, been authorized in South Africa as part of a Conditional Municipal Infrastructure Program (CMIP).[9] Because central government revenues are severely limited in South Africa, the municipal services grant would best be designed to fill the gap between what the municipality will provide on its own without the grant and the national standard of service provision. Differences in costs across provinces and indeed across metro areas can be accounted for by adjusting payments using a national cost-of-service index.

2.3. Ensuring Efficiency in the Local Public Sector

There are three important instances in which the efficient provision and financing of services provided by municipal governments may not be achieved in South Africa: municipal spillovers, tax base disparities, redistribution.

1. Spillovers: The appropriate intergovernmental grant to ensure that the community creating the economic spillover provides the correct level of public services is a matching (M) grant that pays a portion of the capital and recurrent maintenance costs of the service responsible for the spillover benefits through the CMIP.

2. Tax Base Disparities: A tax base equalization program (a T grant) can ensure that only the right signals of government performance and economic productivity are seen when citizens and firms compare tax rates. Ideally, such a grant would be applied across all jurisdictions competing against each other for residents and firms. Currently, in South Africa such a program has been put in place within metro areas to ensure equalization among substructures. A broader program of equalization across metro areas and among independent municipalities is a subject for future discussion.

It is important to stress three things that tax base equalization does *not* do. First, it does not penalize unfairly economic regions that have experienced, or are now experiencing, significant economic growth. Past economic growth is not the best predictor of future economic growth and, most importantly, past growth should not provide a competitive advantage unrelated to future economic efficiency.

Second, tax base equalization neither equalizes public sector service outcomes, nor does it equalize the location of people and businesses. The grant is an *unconditional* grant; local governments remain as independent, autonomous fiscal units, setting their own taxes and choosing their own levels of local services. Of course, the spatial concentration of labor and capital across jurisdictions and regions will depend on the inherent economic advantages of the locations. As a result, after tax base equalization, the differences that do emerge reflect only the underlying economic preferences and productivities of citizens and firms. Tax base equalization equalizes the *opportunity* for municipal governments and their economic regions to compete fairly, not the outcome of that competition.

Third, tax base equalization does not ensure that particular metro areas or municipalities will be effective in competing internationally in attracting capital. National, macro-based policies that make South Africa an attractive location for long-term investment, are likely to be most important in this regard. If tax base equalization within metro areas involves substantial local redistribution (from regions with strong tax bases to regions with weak tax bases), then it may be appropriate for the center to either subsidize this redistribution (thus reducing the magnitude of the burden on the richer regions) or to require partial rather than complete within-metro equalization.

3. Redistribution Within TMCs: As I mentioned, the immediate use of a tax base equalization program in South Africa has occurred within metro areas. In principle, there are at least two ways this could have been accomplished. First, a TMC could choose a level of redistribution by applying a uniform property tax rate across all rateable property in its jurisdiction (as Johannesburg has done in part, and as other metros have also done). This rate is set so as to generate a surplus in the richer areas sufficient to cover the deficits of the poorer substructures. Second, a TMC can simply apply a levy on a substructure that is equal to an agreed percentage of its revenue from the property tax (as Pretoria has done).

The potential political problems inherent in a metro redistribution program with fixed tax rates can be appreciated by considering the case of the Johannesburg TMC, which has, in the past, levied a uniform property tax rate across the metropolitan area's four substructures and then "taxed" (i.e., redistributed) any substructure budgetary surpluses that are generated. During the 1997 budget year, for example, the uniform rate grew considerably, in part to reduce the TMC's reliance on user charge revenues. The result was an increase of approximately 100% in the tax rate of one of the wealthy high-tax base suburbs, Sandton. As a consequence, the Eastern Metropolitan Substructure, which includes Sandton, had a substantial budget surplus. The Johannesburg TMC then utilized its right to appropriate the substructure's budgetary surplus. The result was a large fiscal transfer from the Eastern Substructure to the TMC.

One possible response of the Eastern Substructure to this potentially large redistribution could have been to drive their budgetary surplus to zero by spending their surplus revenues on any and all public services and public projects, whether necessary or not. This would have adversely affected the allocation of mobile factors of production both within the Johannesburg TMC and between Johannesburg and other major economic centres in South Africa (e.g., the Midrand).

The appropriate policy response is to create a within-TMC tax base equalization system that introduces certainty in the redistribution process (a benefit to businesses in particular) and that corrects for the adverse location incentives created by the current process. South Africa has begun to do so, through its within-TMC fiscal equalization *T grant* program, and with some use of *M grants* to correct public sector inefficiencies.

2.4. Ensuring Local Democracy

To ensure that all citizens have access to the infrastructures of government, each municipality now lacking such facilities should be provided with a municipal institution grant sufficient to build the needed infrastructure—an *I grant*. This is an *unconditional* grant given to all municipalities lacking a functioning property tax or other sources of local own revenues. Once these communities obtain the administrative capacity to impose their own taxes, this unconditional grant could be phased out over time.

2.5. Setting the "Vertical" and "Horizontal" Shares

To this point I have suggested that there is a role for four distinct grant types in structuring a system of local government grants: S, M, T, and I grants. The principles of grants design when coupled with the facts of South Africa's local public economy—municipal government's tax and expenditure assignments, their administrative and political capacities, and the economic realities of each municipality's private economy—will dictate the appropriate level of funding for each grant.

The principles of grants design recommend a "bottom-up" approach to setting the *vertical shares* of national revenues for each of the three tiers of government—national, provincial, and municipal–and the *horizontal share* to be given to each government within the provincial and municipal tiers. In an ideal system one would first decide the funding that is necessary for an equitable and efficient municipal public sector using each appropriate grant. Then one would add the individual grant totals together to specify the total intergovernmental grants budget for municipal governments. With similar analyses of grants to provinces and of central spending programs, the vertical share of national revenues can then be set, giving to each tier of government all, or a proportional share, when a national revenue constraint is binding, of its appropriate grants and spending levels.

These principles would also provide guidance as to the appropriate *horizontal share* of total municipal grants to be allocated to individual municipal governments. Each government's horizontal share is simply its own total of individual grants received under the S, M, T, and I programs. When the national revenue constraint is binding, as is likely, each municipal government should then receive a proportional share of its own S, M, T, and I allocations.

Political realities and budgetary limitations have limited the willingness and ability of the South African government to put such a complete system into place at this date. It does remain today, however, a subject of extensive discussion.

2.6. Protecting the Equitable Share

Once a vertical share has been selected, a central planner must also decide how the allocation of grants should change over time. Here macroeconomic considerations come into play. In this regard, it is useful to distinguish between two types of economic shocks. First are nationwide shocks which can result from movements in terms of trade, changes in world growth rates, national economic policies, etc. Second, region-specific economic shocks may be significant because sub-national economies differ significantly.

If local government transfers are linked via a pool of available intergovernmental grant funds to a national tax base, then the uncertainty from region-specific economic shocks can be reduced for the region. Suppose, for example, that the available pool of transfers is chosen as a fixed percentage of an agreed national tax base. If a regional economy suffers an economic downturn that is region-specific, for example, and its transfers are linked to the national tax base, then its transfers will remain unaffected, even if its local tax revenues decline.

However, this approach only fixes the transfer pool relative to national tax revenue. Fluctuations in the national economy continue to be passed directly to local governments. Revenue sharing alone does not reduce uncertainty at the local level associated with national shocks. Uncertainty can be eliminated, however, if the center guarantees the size of the transfer pool to local governments in real terms. This is a reasonable approach, since again, the center has a broader tax base and can more readily diversify against uncertainty.

3. Implementation of Grant Policies for Local Government

I have outlined four distinct grant programs for local governments in South Africa. In this section I provide a detailed outline of the structure of these programs. In each case I (i) describe the grants formula, (ii) explain how funds will be allocated, (iii) outline the key policy options, and (iv) discuss some significant implementation issues. Recall that the four programs are:

1) A Municipal Basic Services, *S Grant*, to ensure that residents of all local governments receive on an on-going basis access to basic municipal services such as water, sanitation, roads, and electricity up to a nationally determined standard.

2) A Capital, *M Grant*, to assist communities to provide essential infrastructure for services that create significant positive economic spillovers for residents of other communities.

3) A Tax Base Equalization, *T Grant*, to ensure the efficient allocation of households, capital investment, and labor both within and among the major economic centers.

4) A Municipal Institutions, *I Grant*, to fund a minimal level of unconditional resources for municipal budgeting and to provide and maintain basic facilities for the operation of the local government (e.g., community centers and an office for elected officials).

3.1. Designing A Municipal Basic Services S Grant

Formula: $S = \sum_g [GAP_g]$ where GAP_g is the service gap to be filled by the grant for the basic service g (in any particular municipality).

$GAP_g = \alpha_g (S_g^* - S_g^0) \cdot H_g;$

α_g = Percent of the *GAP* to be closed each year;

S_g^* = Target level of service expenditure per qualifying household for basis service g;

S_g^0 = Benchmark level of service g per qualifying household provided without the grant; and

H_g= Number of qualifying households for service g.

Allocation: A jurisdiction receives a larger S grant per qualifying household as the central government fills a greater percentage of the service gap (i.e., as α_g rises), as the target level of service expenditure rises (i.e., as S_g^* increases), and as the benchmark level of services provided without S declines (i.e., as S_g^0 falls). Municipalities with a larger qualifying population (i.e., as H_g rises) will also receive a larger grant.

Policy Choices: In setting the minimum standards grant, the national government chooses:

g = The services to be supported by a minimum standards grant;

α_g = The percent of the *GAP* to be closed each year;

S_g^* = The target level of service expenditure per household for g;

S_g^0 = The benchmark level of service per household that would be provided in locality g without the grant S;[10] and

H_g = Number of qualifying households for service g.

If poverty is adopted as the standard for qualification, then the S grant will be designed to fill the basic service *GAP* for poverty households only.

Implementation Issues: In South Africa administrative issues are highly significant. Consequently, it is important to consider which institutions within the municipal area should receive the grant and be held accountable for the delivery of basic services. While the metro and municipal governments are the likely candidates, certain services could, in principle, be more efficiently provided by NGO's or by private for-profit contractors. To the extent that this is true, serious consideration should be given to allocating the grant funds as vouchers to the households buying the services. Vouchers ensure accountability to recipients and foster competition between NGO's and between private firms. If vouchers are not used, and the minimum standard grants are given directly to NGO's or private providers, the grants should be awarded only as short-term contracts with clear performance requirements and with monitoring by the granting agency.

3.2. *A Capital-Matching M Grant*

Formula: $M = \sum_g [M_g]$, where

$M_g = \beta_g \cdot m_g \cdot CAP_g + \beta_g \cdot \mu_g \cdot CAP_g^{(t-1)}$; and where

β_g = the percent of capital expenditures and recurrent maintenance costs to be covered each year for service g;

m_g = the matching rate equal to the estimated ratio of spillover service benefit enjoyed by non-residents to the total (resident plus non-resident) benefits produced by the project for service g;

CAP_g = proposed capital expenditures for the project providing service g;

μ_g = the ratio of recurrent maintenance costs to capital expenditure for $CMIP_g$ expenditures;

$CAP_g^{(t-1)}$ = the value of CAP construction in place at the end of the previous fiscal year.

Allowances should be also made for depreciation of infrastructure put in place in previous years.

Allocation: A municipality receives a larger M grant as the central government contributes a greater percentage of capital and recurrent costs (i.e., β_g increases), as the estimated ratio of non-resident to total benefits rises (i.e., m rises), as the planned level of the project spending rises (i.e., *CAP* rises), as the ratio of recurrent to capital expenditure rises (i.e., μ_g increases), and as the value of previous funded project spending rises (i.e., $CAP_g^{(t-1)}$ rises).

Policy Choices: The national government needs to determine: β_g = the percent of the capital and recurrent expenditures to be covered by the national government. This choice affects the overall budget balance and the incentives of municipalities to undertake capital and maintenance expenditures on their own.

The desired matching rate, m_g, the level of the municipality's own capital spending, the ratio of recurrent maintenance costs to capital spending, μ_g, and previous municipal investments for "spillover" capital projects, $CAP_g^{(t-1)}$, should be considered as basic technological attributes of the capital projects under consideration for central government funding. The policy choice is to fund some ($\beta_g < 1$) or all ($\beta_g = 1$) of capital projects with significant inter-community benefits.

Implementation Issues: A simple M grant would select a common percentage of capital spending support, β_g, for chosen capital projects, while a more complex grant program would allow the β_g's to vary by type of capital expenditure. Selecting higher values of β_g will increase the size of the M grants and allocate more national resources to municipal investments. An M grant that supports recurrent maintenance costs should be allocated only for the reasonable economic life of the infrastructure project.

3.3. A Tax Base Equalization (T) Grant

Formula (within TMCs): $T = \sum_s G_s \cdot H_s$, where
$G_s = t^*[\theta(B^* - B_s)]$;
G_s = the per capita equalization grant to substructure s;
T = the pool available to supplement equalization within each TMC;
t^* = the target tax rate in each metropolitan area to apply to B^* and B_s;
$0 \leq \theta \leq 1$ is a parameter which selects the degree of equalization across substructures;
B^* = the target per capita tax base of substructures in each TMC;
B_s = the actual per capita tax base of substructure s; and
H_s = population of substructure s.

Allocation: The substructures within each TMC will receive higher levels of within-metropolitan tax base equalization assistance per capita for higher values of the metropolitan target rate (i.e., as t^* rises), for higher values of the metro target tax base per capita (i.e., as B^* rises), for lower values of their own measured tax base (i.e., as B_s falls), and for higher values of the net grants pool available to supplement equalization (i.e., as T rises).

Policy Choices: The national government must choose:
t^* = the tax rate to apply to the target TMC tax base (B^*), and the actual tax base (B_s) of each substructure within the TMC. This target tax rate can be chosen directly by the national government (Canada), set equal to an average of previous years tax rates (Australia), or set equal to each substructure's own current period tax rate (a U.S. district power equalization policy).

B^* = the target per capita tax base for all substructures within a TMC. The target tax base for within metropolitan equalization should be the substructure tax base. All or part of the property tax base could be included in the equalization program. Further, the equalized tax base can be limited to the residential portion or the commercial-industrial share of the tax base. Finally, the equalization program can be limited to a new tax base (e.g., Minnesota's tax base sharing program). Given the choice of B^*, each substructure's actual tax base B_s will be measured equivalently.

T = the pool to supplement equalization within the TMC. When T is zero then the equalization scheme is self-financing. When $T > 0$ and funds are contributed from outside of the property tax pool—e.g., from funds transferred by the national government to the TMC or from a pool of turnover and payroll tax levies—then the richer substructures will need to contribute less to the overall equalization pool. At very high levels of T no substructures will be paying for redistribution, i.e., $G_s \geq 0$ for all substructures.

θ = the equalization parameter. If $\theta = 1$ there is full tax base equalization, for $0 < \theta < 1$ there is partial equalization and when $\theta + 0$ there is no equalization. As θ falls (for a given T) the size of the transfer from contributing substructures (those with a relatively strong tax base) to recipient substructures (those with a weak tax base) falls. This may be a reasonable outcome given that the poor substructures within TMCs will be receiving additional funds from the S and I grants to make up any fall in the redistribution from neighbouring substructures under a partial equalization model.

Formula (for Equalization Across TMCs): $T = \sum_m G_m \cdot H_m$, where
$G_m = t^*[\theta(B^* - B_m]$;
G_m = the per capita equalization grant to TMC m;
$0 \leq \theta \leq 1$ is a parameter which selects the degree of equalization across TMCs;
T = the pool available to supplement equalization across TMCs;
t^* = the target tax rate in each metropolitan area to apply to B^* and B_m;
B^* = target per capita tax base of TMCs to be included in equalization;
B_m = the actual per capita tax base of metropolitan area m; and,
H_m = the number of individuals within metropolitan area m.

Allocation: The metropolitan areas will receive higher levels of tax base equalization assistance per capita for higher values of the metropolitan target rate (i.e., as t^* rises), for higher values of the metropolitan target tax base per capita (i.e., as B^*_m rises), for lower values of their own measured tax base (i.e., as B_m falls), and for higher values of the net grants pool available for equalization (i.e., as T rises). It is possible that some metropolitan areas will receive "negative assistance".

Policy Choices: The central government must make choices concerning:
t^* = the tax rate to apply to the target across metropolitan tax base (B^*) and the actual tax base (B_m) of each metropolitan area;
B^*= the target per capita tax base for all qualifying metropolitan areas;
T = the pool available to supplement across TMC equalization;
θ = the equalization parameter.

Qualifying TMCs: The central government must choose the list of qualifying TMCs: These could be chosen according to their standard as the major economic centers of South Africa (i.e., regions that compete with one another). Johannesburg, Midrand, Pretoria, Cape

Town, Durban, and Port Elizabeth are possible candidates. Alternatively, one could focus on within-province base equalization, beginning with Gauteng.

Implementation Issues: Equalization raises a number of important implementation issues: Should the tax base include all or a portion of the residential, commercial, and industrial property? Should the program be phased in? Currently, South Africa has utilized a broad property tax base for its within-metro redistribution program. However, the program has only been applied to major metro areas, so the phase-in process, if there is indeed one, will be slow.

I believe it important that any equalization system be monitored at the center. Because there are lags in reassessments, municipalities could have an incentive not to revalue their properties, and more generally, to underestimate the value of their property tax base. A centrally managed equalization program should make an independent judgment as to the correct, "equalized" valuation of each municipality.

It should be noted that for some metro areas the equalization program could involve substantial changes in the flow of funds among substructures. Because sudden and substantial changes in these flows can create adverse economic effects and may involve substantial redistribution, a system of partial equalization seems appropriate. I also note that there may be concern about the out-migration of capital from high tax base substructures and the provision of public services by low tax base substructures. If so, it may be appropriate to put into place a program of partial equalization, combined with a centrally funded program that allows for full equalization for those substructures below the average.[11]

3.4. *Institutional Development Grant*

Formula: An unconditional basic revenues (R) grant should be provided for municipalities currently lacking the capacity to administer their own taxes. A capital grant (K) for the provision of a community meeting hall and for an office for elected officials should be provided where these facilities are lacking. The total municipal institutional grant in a municipality (I) is equal to $I = K + R$, where

$K = \Delta \cdot BLD$;

Δ = the percent of capital outlays to be funded by the central government;

BLD = the required capital spending needed to fund the construction of a community meeting hall and an office for elected officials;

$R_i = \sigma \cdot TR$;

σ = the municipality's share in population of qualifying communities; and

TR = total revenues for the basic revenue grant.

Allocation: Municipalities currently lacking a community meeting hall and an officials' office can be provided with a one-time construction grant. Municipalities currently lacking the capacity to administer their own tax system will receive a share of the R institution grant, with the share being allocated to each municipality according to their share in the population of qualifying communities. The larger the aggregate TR pool, and the larger the qualifying municipality's population, the greater the qualifying municipality's grant will be.

Policy Choices: The central government must decide whether a community is a qualifying community as specified by the lack of adequate infrastructure for democratic decisionmaking, and by the lack of adequate administrative capacity to collect own revenues. Among this subset of qualifying municipalities, the central government must choose the share of infrastructure costs to be funded centrally (Δ), and the size of the aggregate pool (TR) of basic revenues.

Implementation Issues: The capital grant that is allocated under the CMIP program should include a recurrent grant program to ensure that capital facilities are maintained. If direct implementation is not possible, the center should consider conditioning the capital grants themselves on a commitment by municipalities to maintain recurrent expenditures out of their own budgets.

4. Conclusions

This paper proposes four grant programs for the allocation of funds to local governments that use the new South African Constitution as a starting point, and which are consistent with basic principles of public finance and of economic efficiency. With effective implementation, such a system could serve as the basis for a predictable, efficient system of fiscal finance that gives to local governments substantial autonomy and choice, while at the same time holding the national government accountable for the overall budgetary management of the system.

Notes

1. The design of grants to the provinces is described in Inman (1999).
2. The Constitution, Chapter 7, Section 152.1.
3. The Constitution, Chapter 13, Section 227.1.
4. The Constitution, Chapter 7, Section 155.1.
5. Substructures within metros were created by combining former white local areas with black local areas. For example, in Johannesburg the local authorities of Alexandra, Diepmeadow, Dobsonvilled, Ennerdale, Jahannesburg, Lenasia South East, Randburg, Roodeport, Sandton, Soweto, and the former Regional Service Councils, were combined into four substructures under the Johannesburg Metropolitan Municipality.
6. The Constitution, Chapter 13, Section 229.1. The Constitution (Chapter 13, Section 229.1) does not allow municipalities to impose an income tax, a value-added tax, a general sales tax or custom duties. The Constitution prohibits municipal property tax rates and surcharges on fees from "materially" affecting "national economic policies, economic activities across municipal boundaries, or the national mobility of goods, service, capital or labour" (Chapter 13, Section 229.2). These taxes may be regulated by national legislation (Chapter 13, Section 229.2). Section 229.4 states that "nothing in this Section precludes the sharing of revenue raised in terms of this Section between municipalities that have fiscal power and functions in the same area."
7. The Constitution, Chapter 7, Section 156.1 and Schedules 4 and 5.
8. While there has been substantial migration from rural to urban areas in South Africa, the population is, in general, significantly less mobile than the U.S. population.
9. CMIP provides for the basic infrastructure needs of citizens for water, roads, solid waste, and community lighting. In addition to meeting the capital needs of basic services for residents, the CMIP program may also be used to provide for the economically efficient level of infrastructure when there are important economic spillovers between communities.

10. Ideally, the benchmark should provide a measure of the level of the service that would be demanded by an "average" municipality with a given set of socioeconomic characteristics. In practice, the benchmark might be measured by an index reflecting income, poverty, and/or measures of the actual service level attained. One possible index would be $S_g^0 = a \cdot Inc_g - b \cdot P_g$, where Inc_g is a measure of per capita income in the municipality, P_g is a poverty measure for the municipality, and a and b are policy parameters that determine the weight to be placed on income and poverty. S_g^0 is constrained to be positive or zero. The values of the parameters a and b can be chosen on the basis of an econometric analysis of South African service levels, income, and poverty.
11. If equalization across all metro areas is not undertaken immediately, serious consideration should be given to an equalization program that applies across all governmental units within the Gauteng region. This region deserves particular attention because of the substantial degree of competition, particularly for capital. Without such a program, equalization within the metros of Johannesburg and Pretoria could encourage some households and/or businesses to move to non-metro jurisdictions, such as the MidRand.

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