ATPC

Work in Progress

No. 58

Economic Commission for Africa

African Trade Policy Centre

Fiscal Decentralization and Public Service Delivery in South Africa

Adam B. Elhiraika

February 2007

ATPC is a project of the Economic Commission for Africa
with financial support of the Canada Fund for Africa

ATPC

Work in Progress

Economic Commission for Africa

Fiscal Decentralization and Public Service Delivery in South Africa

Adam B. Elhiraika*

*Economic Affairs Officer, Trade, Finance and Economic Development Division (TFED), UN Economic Commission for Africa (UNECA). This paper was presented at the workshop on "Public expenditure and service delivery in Africa: Managing public expenditure to improve service quality and access" organized by ECA from 11-13 October 2006, Lusaka, Zambia. Comments from participants at the workshop and my colleague Amal Elbeshbishi are gratefully acknowledged.

ATPC is a project of the Economic Commission for Africa with financial support of the Canada Fund for Africa

This publication was produced with the support of the United Nations Development Programme (UNDP).

Abstract

This paper uses provincial level data from South Africa to examine how fiscal decentralization impacts basic service delivery, focusing on the role of own-source revenue. Theory suggests that fiscal decentralization and particularly revenue autonomy as represented by own-source revenue enhances service delivery through increased accountability and transparency of policy makers and service providers as well as increased responsiveness to local preferences and needs. The South African federal system is characterized by a relatively high degree of fiscal decentralization in terms of expenditure responsibilities and administration. However, owing to acute historical imbalances across provinces and municipalities, constitutional and institutional arrangements allow for extremely limited revenue autonomy. Compared to other developing countries, sub-national governments in South Africa are highly dependent on intergovernmental transfers from the central government. Accordingly, own-source revenue does not play the expected positive role to stimulate efficiency in public service delivery. Richer provinces appear to mobilize own-source revenue mainly to finance services other than education and health. Despite the focus of sub-national government financing on equity and redistribution, huge disparities exist across provinces regarding per capita revenue as well as per capita expenditure on health and education. While it is not possible to adequately assess the intergovernmental transfer system due to data limitations, the paper argues for increased fiscal decentralization and greater revenue autonomy in particular if sub-national governments in South Africa are to improve service delivery by enhancing transparency and shifting accountability to the local population rather than the central government as implied by the current heavy dependence on subventions.

Table of Contents

I. Introduction

Public service delivery by sub-national governments (SNGs) in many African countries is tightly linked to subventions from central government. Inflexible transfer systems that are rarely well-defined often constrain the ability of local governments to plan and to efficiently deliver basic public services, especially education and health. Meanwhile, on-going political reforms on the continent will inevitably involve more decentralization, where local governments are assigned greater responsibilities of delivering key development projects and public services. This process should include legal and administrative reforms that facilitate planning at the local government level, in terms of identification of opportunities and mobilization of local as well as external resources, including private savings, to meet the development goals of the local community.

While decentralization of service delivery may be attributed to different reasons in different countries, improving service delivery has been a common factor (Ahmed et al. 2005; Shah and Thompson 2004). However, decentralization has not always been effective in improving service delivery by local governments, mainly because of lack of commensurate revenue assignments, inadequate access to financial markets, and lack of necessary administrative capacity on the part of local authorities. For decentralization to lead to greater accountability and hence to increased prospects that services would reach targeted groups, it is important to strengthen the institutional capability at the local level (Fosu and Ryan 2004). Institutions are needed in order to ensure greater public participation and accountability on the part of policy-makers, service providers, and users.

In many countries, government is yet to fully define the institutional arrangement necessary to guarantee fiscal decentralization or models for revenue sharing between central and local governments (Bahl 2001). Often the central government keeps very tight political and economic control over regional and local governments that also lack administrative capacity to formulate and implement adequate responses to local community needs and constraints (Guimaraes 1997).

This paper attempts to examine the impact of fiscal decentralization on service delivery by sub-national governments in South Africa. The aim of the paper is to highlight key policy options for addressing the fiscal and financing constraints affecting service delivery by provincial governments. It is hypothesized that while local authorities will always rely to some degree on grants from central government, their effectiveness in planning and delivering services depends crucially on the nature of the system of transfers and on their ability to mobilize own-source revenue, including own tax revenue, borrowing from capital markets and public-private sector partnerships. Close linkage between expenditure assignments and revenue sources enhances accountability and transparency in policymaking and services delivery (De Mello 2000a).

Originally, the paper was intended to use data from a group of African countries, including South Africa, Ethiopia, Tanzania and Sudan to examine the evolution of fiscal decentralization and its effects on service delivery, namely education and health. These countries have different institutional structures and other factors influencing SNGs performance. Unfortunately, owing to data constraints, the analysis is confined to South Africa only.

The paper is particularly important and relevant as South Africa, as well as the majority of African countries, is still at the early stages of the process of fiscal decentralization despite notable progress regarding political decentralization. There is a high degree of revenue centralization and the financial system is not yet ready to play a meaningful role in local government financing. The next section reviews the literature on the objectives, advantages and limitations of fiscal decentralization in developing countries. Section 3 outlines the analytical framework of the paper. Section 4 examines progress in fiscal decentralization, overall fiscal performance and services delivery in South Africa. The section also presents and discusses econometric findings on the effect of fiscal decentralization on service delivery in South Africa. Finally, section 5 concludes with key policy implications.

II. Objectives and implications of fiscal decentralization in developing countries

The literature indicates that only a few developing countries have adopted comprehensive political, fiscal and administrative decentralization. Fiscal decentralization has four major "components: (1) allocation of expenditure responsibilities by central and local governments; (2) assignment of taxes by government tiers; (3) the design of an intergovernmental grant system; and (4) the budgeting and monitoring of fiscal flows between different government tiers" (Ahmed et al 2005: 6). It should be noted that lack of meaningful political and administrative decentralization often renders fiscal decentralization ineffective and hence complicates the analysis (Guimaraes 1997). Instead of genuine political decentralization, central governments in many countries appoint officials of sub-national governments, replacing administrative decentralization with administrative deconcetration (where decision making is shifted to regional or local officials of the central government) or administrative delegation (where local governments undertake activities on behalf of central government).

Inability of central government to meet increasing demand for local services underpins moves towards decentralization in developing countries. Decentralization of fiscal responsibilities is envisaged to increase efficiency in service delivery and reduce information and transaction costs associated with the provision of public services (De Mello 2000b). Accordingly, De Mello (2000b: 365) summarizes the arguments for fiscal decentralization as follows:

1. Fiscal decentralization enables sub-national governments to take account of local differences in culture, environment, endowment of natural resources, and economic and social institutions.
2. Information on local preferences and needs can be extracted more cheaply and accurately by local governments, which are closer to the people and hence more identified with local causes.
3. Bringing expenditure assignments closer to revenue sources can enhance accountability and transparency in government actions.
4. Fiscal decentralization can help promote streamlining public sector activities and the development of local democratic traditions.
5. By promoting allocative efficiency, fiscal decentralization can influence macroeconomic governance, promote local growth and poverty alleviation directly as well as through spillovers.

However, fiscal decentralization has its own limitations, which include:

1. Failure to adequately address the question of how to manage intergovernmental fiscal relations in order to meet the growing needs for public services at the local level while preserving fiscal discipline nationally and sub-nationally. This requires institutional clarity and transparency to avoid coordination failures that lead to inefficient spending by local governments manifested in deficit bias and higher borrowing costs that can aggravate macroeconomic imbalances and instability. To avoid such undesirable outcomes, there is a need for incentives and capacity building on top of institutional checks and balances to ensure prudence in sub-national fiscal management.
2. Assignment of expenditure and financing responsibilities to sub-national governments can adversely affect service delivery in different ways. For example decentralization of water and sanitation services to small local governments in Latin America have led to a loss of economies of scale in service delivery. Many governments in Latin America and Africa keep the financing of health and education at national level because the spillover effects from health and education outcomes and their impact on equity are national. Assignment of certain business taxes to local levels in the United States have led to inefficient tax competition, constraining the ability of municipalities to generate revenue and deliver services.

The adverse effects of decentralization on service delivery arise due to a number of common factors. These factors include, first, lack of capacity at sub-national government level, which restricts local service delivery because local authorities lack the ability to manage public finances and keep proper accounting procedures. Second, misalignment of responsibilities owing to incomplete decentralization or political factors. For example, while local authorities may be responsible for education, higher levels of government pay teachers. Third, political capture by local elites when civic participation in local government is low. Finally, other problems including a soft budget constraint that leads to over borrowing by sub-national governments. To overcome these challenges, optimal assignment of expenditure and tax responsibilities should be based on such criteria as economies of scale, spillover benefits, cost of administering taxes, tax efficiency, and equity. In practice, however, fiscal decentralization often depends on political realities/expediencies and historical legacies (Ahmed et al 2005).

In practice, country experiences indicate that the effect of fiscal decentralization on service delivery is mixed and that this effect mainly manifests itself by:

1. Altering the accountability of lower level governments to central governments. However, concurrence of expenditure and financing responsibilities towards health and education – where policy, delivery standards and financing are decided nationally, implementation is decided at provincial level – is often a source of misunderstanding and failures. Because of ill-defined responsibilities, local authorities may spend their grants and leave central governments to make up for deficits. Central

governments may however provide certain funding and leave local governments to make up for the gap or alternatively they may fully fund services and contract provinces to deliver services under effective monitoring and enforcement mechanisms.

2. Enhancing the accountability of local authorities to local clients when sub-national governments have the right to levy their own taxes and adjust tax rates (instead of relying on central transfers or bailouts that soften the budget constraint).
3. Influencing the accountability of sub-national government through the design and implantation of intergovernmental fiscal transfers' system. Fiscal transfers are almost always needed and they have a conditional as well as unconditional portion. The former makes SNGs accountable to central governments and the latter relates to accountability to constituencies. Transfers enhance planning and service delivery when they are predictable, and they are generally so when they are formula-based. But transfers are also subject to political manipulation, in addition to efficiency and equity considerations. This makes less politically favorable states receive less transfer. On the other hand over dependence on central transfers reduces accountability of SNGs to the local electorates and allows them to shift blames for inefficient service delivery to central government.

Fiscal interdependence implies that budgeting and evaluation of transfers are essential in ensuring efficient service delivery. Some countries, e.g. South Africa, have implemented a medium term expenditure framework (MTEF) that allows SNGs to participate in a multi-year budgeting system. Besides improving public financial management, some countries facilitate public monitoring of SNGs that makes budget information comprehensible to citizens. Moreover, access to capital markets is particularly important for long term financing of SNGs – infrastructure – and in signaling their performance (De Vera and Kim 2003).

III. Analytical framework

We adopt a simple theoretical framework for empirical investigation. The sub-national government is assumed to choose levels of education expenditure (E), health expenditure (H) and other expenditure (O) in order to maximize a social welfare function. It is assumed that government expenditure provides consumable services (using expenditure rather than actual quantities of commodities). In the absence of true democratic representation in Sub-Saharan Africa, government officials make choices based on a weighted average of various political coalitions rather than preferences of the median voter (Fosu 2006). The government maximizes a general welfare function of the form

$$U(E, H, O) \qquad (1)$$

Subject to the budget constraint

$$E+H+O=R \qquad (2)$$

where R is sub-national government revenue, which consists of

$$R=OS+TR+OR \qquad (3)$$

Where OS is own-source revenue (tax and non-tax), TR is transfer from central government and OR is revenue from other sources including borrowing (domestic and foreign). The marginal utilities of expenditure on education (UE), health (UH) and other services (UO) are assumed to satisfy the first-order conditions:

$$UE=UH=UO \qquad (4)$$

$$E+H+O=OS+TR+OR \qquad (5)$$

The social welfare function is assumed to have the usual properties of strict quasi-concavity such that the second-order conditions are: UEE<0, UHH <0, UOO, UEEUOO>0, UHHUOO>0. UEE, UHH , UOO are the second order partial utilities. Accordingly we can write the demand functions as:

$$E=E(RP) \tag{6}$$

$$H=H(RP) \tag{7}$$

Where RP is the predetermined component of R (such as transfers). Assuming that E and H are normal goods, demand for education and health is expected to vary positively with R. And to the extent that sub-national government action can determine revenue levels, R will be endogenous. This is particularly true for OS. However, if sub-national governments' own-source revenue, particularly the tax base and tax rate, are fixed by the central government, then OS will be exogenous. The degree of endogeneity will depend on the freedom given to SNGs to determine tax rate and tax base. Normally SNGs determine the tax rate and tax base within certain limits.

Ideally, the specification of education and health equations should take account of the institutional framework for government decision-making, and this would imply a structural model. However, as Fosu (2006) argues the estimation of structural models can be highly sensitive to their specification. Meanwhile, the process of decentralizing fiscal responsibilities is not always well defined in developing countries, especially those that lack true democratic representation. Under such circumstances, the choice of a reduced-form model may be preferred as it can give robust results across different types of institutional settings governing public choice.

As indicated previously, the demand for education and services will depend on income, the level of development, and the factors determining R. As some of the explanatory variables are not explicitly accounted for in the model, it is arguable that the model would yield more robust results through use of instrumental estimation methods. However, as some researchers suggest the potential endogeneity problem may be addressed by using the share of education and health expenditure in the government budget assuming that the relative allocation of the budget is neutral with respect to domestic resources. Thus, the education and health equations to be estimated are:

$$E = a1 + a2OS + a3TR + a4Y + u \tag{8}$$

$$H = b1 + b2OS + b3TR + b4Y + u \tag{9}$$

Where Y is income measured by regional GDP per capita, OS share of own-source revenue in total revenue; TR is the share of transfers in total revenue, and u is the stochastic disturbance term. The focus of this study is on OS while other variables serve as control factors. For fiscal decentralization to increase the efficiency of service delivery the coefficient of the own-source revenue must be positive. Demand for education and health is expected to rise with per capita income. However, some studies suggest that the income elasticity of demand for health service, for example, is unitary so that the income coefficient is not significantly different from zero. The effect of transfers depends on the transfer system and its objectives and could take either sign. Similarly the effect of OR, which includes aid is ambiguous as it depends on its nature and the conditionality placed on aid. This is particularly true if the aid is non-sector specific.

IV. Fiscal decentralization and determinants of service delivery in South Africa

The key question regarding fiscal decentralization has to do with finding the right balance between central and sub-national government responsibilities that ensures efficient service delivery. Fiscal decentralization is effective only when it enhances service delivery. All the South African data employed in the paper come from one source: the Department of Statistics of the National government of South Africa. The data are obtained for the nine provinces as well as the national government. All the data are available for the period 1996-2005 except provincial GDP data, which goes only up to 2004.

4.1 Progress of fiscal decentralization in South Africa

The South African Constitution adopted in 1996 established three levels of government: a national government, nine provincial governments and 284 local governments (Etienne 2005). The main aim of fiscal decentralization in South Africa is to improve the efficiency of services delivery by aligning sub-national government expenditure with regional and local priorities.

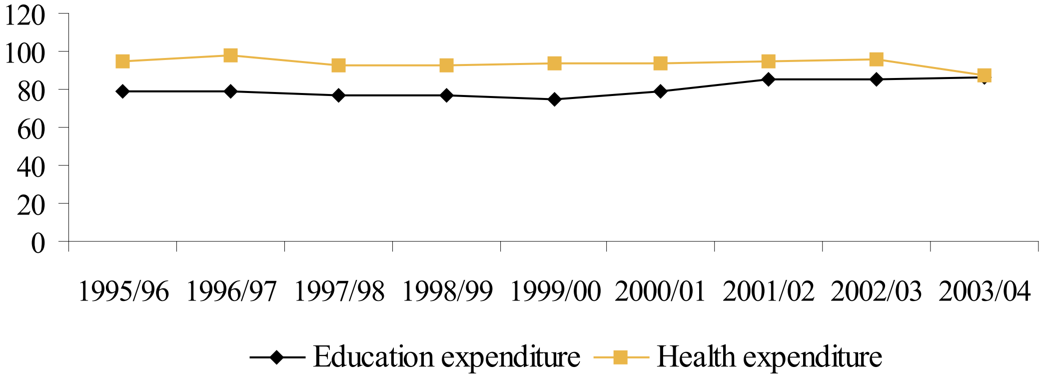
The Constitution defines the major functions and powers of various levels of government. Major functions of the national government include protection services, higher education, national roads, public works, water affairs, foreign and home affairs and policy functions. Provincial governments are responsible for school education, health, social welfare, housing and provincial roads. However, while provincial governments are responsible for implementation of these functions, the national government is responsible for policy. Moreover, with the exception of roads provinces do not have significant exclusive budgetary functions.

Local authorities' functions consist mainly of user fee-based services such as electricity, water and sanitation besides provision of other public goods like municipal and household infrastructure, streetlights and garbage collection.

It is important to note that the South African Constitution obliges the three levels of government to work cooperatively. Accordingly, numerous intergovernmental bodies, such as the Budget Council and the Budget Forum, have been established in order to facilitate consultation and cooperation in the budget process (Momoniat 2001). It is also worth noting that all the public servants employed by the national and provincial governments have uniform terms of services and that they are highly unionized.

The degree of fiscal decentralization may be assessed in terms of a number of indicators such as the percentage of total government expenditure executed by sub-national governments given the size and nature of transfers, the level of revenue autonomy and the borrowing capacity (highlight later) of sub-national governments. Table 1 below shows the extent of fiscal decentralization in South Africa since 1996. While provincial governments account for only 43 per cent of public sector expenditure in 1996-2004, they are responsible for the bulk of education (80 per cent) and health (94 per cent) expenditure (Figure 1). The share of provinces in total public sector expenditure as well as in education and health expenditure varied considerably from one year to another.

Figure 1: Provincial expenditure on education and health (% of national expenditure on education and health)



Source: Statistics South Africa (http://www.statssa.gov.za/)

South Africa compares well with other developing economies regarding expenditure responsibilities and autonomy of SNGs. Sub-national expenditure in developing countries rose from 12.7 per cent of total public expenditure in 1980 to 19.6 per cent in 1998 (Shah and Thompson 2004). Similarly, education spending by SNGs increased from 21 per cent of total public sector education expenditure in 1980 to 40 per cent in 2000 while health expenditure increased from 22 per cent in 1980 to 57 per cent in 1999. Although the trends vary widely across countries, there are areas of shared responsibilities among central and sub-national governments in almost all countries. On average expenditure autonomy, i.e. percentage of sub-national expenditure financed from own-source revenue, in developing countries was 58 per cent in 2000.

Provincial governments' revenue amounts to about 50 per cent of total public sector revenue in South Africa. But on average 96 per cent of provincial revenue is in the form of transfers from the national government to provinces. Approximately 70 per cent of the transfers (in 2002-2004) are in the form of equitable share and the rest conditional grants. Tax receipts represented on average 49 per cent of own-source (and 2 per cent of total) provincial revenue during 2001-2004. Main taxes include Casino taxes, motor vehicles licenses and horseracing. Other sources of own revenue include sale of goods and services, sales of capital assets, fines, penalties and forfeits, interest and dividends and financial transactions in assets and liabilities.

Unlike the case in many developing countries, such as Brazil and India, sub-national governments in South Africa are not allowed to levy value added tax (VAT) or income tax. Thus they have very limited tax powers compared to developing countries in general. According to Shah and Thompson (2004) tax systems in these countries have a number of common characteristics that explain some of the constraints to fiscal decentralization in developing countries.

First, tax responsibilities of SNGs may not fully match their expenditure and regulatory functions because taxes on mobile bases and multi-stage taxes are better assigned to national government to ensure tax harmonization. But centralization of tax responsibilities is greater than the level justifiable by economic considerations. Second, a dominant central government role in revenue systems and heavy reliance on indirect taxes such as VAT, excises, taxes on external trade and fuel taxes. Third, local governments have very limited access to own-source revenues such as property taxes and user charges, and even for these limited tax bases, they typically have autonomy with respect to rate setting within certain limits. Even property taxes are under central or state control in some countries. Finally, assignment of taxes does not always entail control over tax base, tax rates or collection authority and that in many countries the private sector participates in collecting taxes and user fees on behalf of local government.

Nevertheless, sub-national own revenues represent 17 per cent of public revenue in developing countries compared to only 4 per cent in South Africa. Moreover, while fiscal transfers provide 96 per cent of provincial revenue in South Africa, they represent only 42 per cent of revenue for SNGs in developing countries. This heavy reliance on transfers in South Africa has continued over the last decade despite the fact that sub-national governments have the legal power to formulate their budgets and allocate revenue to different categories of expenditure within the context of the government's broad medium-term strategic plan.

The relatively high degree of revenue centralization in South Africa has been dictated by historical inequality of income and opportunities across provinces as a result of former apartheid's policies. To address these inequalities the South African government introduced an equitable share system in 1996, which consists of 5 separate formulas with a variety of components. The formulas were later simplified by the national treasury to include mainly population and previous levels of spending (Smoke 2000). The equitable share system takes account of inequalities among provinces in terms of such indicators as poverty levels, land area, number of learners and non-insured persons and so on. While poorer provinces receive a higher share of the equitable share system, some richer provinces receive a greater share of other types of transfers.

These types of transfers account for about 30 per cent of total transfers from the central government and include conditional grants and agency payment or payments to provincial governments to deliver services on behalf of a central department. Most of conditional grants are directed to health, finance, housing, and transport.

The way the intergovernmental transfer system is designed plays a critical role for efficiency and equity of local service delivery, autonomy, and fiscal health of SNGs (Shah 2004). To enhance accountability it is important to match revenue means with expenditure needs at all levels of government, but higher level governments may be given greater flexibility to fulfill regional efficiency and equity objectives through transfers. Grant design varies by objective. To bridge fiscal gaps, grant design should include tax decentralization or tax base sharing; to reduce regional disparities, there is a need for fiscal capacity equalization; to set national minimum standards, block transfers and conditions on service standards are preferable; to enhance benefit spillovers, matching grants have the greatest potential; to influence local priorities, there is a need for open-ended matching; and for stabilization purposes, capital with upkeep requirement is the best option.

Table 1: Indicators of fiscal decentralization in South Africa (1996-2004)

	Mean	Standard deviation	Maximum	Minimum
Provincial expenditure				
As % of GDP	11..8	0.97	13.39	10.50
As % of public sector expenditure	42.95	3.31	48.95	37.97
Education expenditure (% of public sector education expenditure)	80.03	4.10	85.83	74.51
Health expenditure (% of public sector health expenditure)	93.63	2.62	97.73	87.84
Total provincial revenue				
As % of GDP	11.84	0.69	12.95	10.81
As % of public sector revenue	48.42	3.11	56.17	44/79
Fiscal transfers to provinces				
As % of public sector revenue	46.41	3.13	42.27	53.94
As % of total provincial revenue	95.85	0.59	94.39	96.49

Source: Statistics South Africa (http://www.statssa.gov.za/)

Obviously, compared to experiences in other developing countries, the South African sub-national government financing system needs to strike a better balance between own-source revenue and subventions. Unfortunately, owing to data limitations a full assessment of the intergovernmental transfers system is beyond the scope of this paper. However, it seems that the transfer system (equitable share and capital grant) does play an important role in reducing vertical imbalances across provinces. The equitable share induces equality among provinces and localities regarding income and basic services in general, whereas the capital grants components targets basic service delivery to certain disadvantaged communities (Momoniat 2001).

Regarding capital grants, Smoke (2000) argues that while it may be presumed that government capital grants target priority sectors (including job creation, water, housing, roads, electricity and transport), the grant system has a number of shortcomings. First, there is a great variety of programs and conditions for disbursement of funds and reporting. Second, the mechanisms for allocating grants are highly fragmented and centralized. Third, the wide range of grants creates important planning and budgeting problems at national as well as sub-national government levels. Finally, concerns are often voiced regarding the equity in the distribution of grants.

In view of the above limitations, Smoke (2000) supports proposals by the central government to consolidate all capital grants into unconditional grants. However, capital grants still represent a significant proportion of intergovernmental transfers, and as he argues greater local control over resources would be more appropriate as provincial governments develop administrative capacity. Indeed, sub-national governments control over resources should be expanded to cover a significant proportion of own-source (especially tax) revenue that can be efficiently collected and managed by sub-national governments and has the potential to improve service delivery. Lower revenue centralization would improve service delivery by making sub-national governments more accountable to local constituencies as opposed to the grant system, which makes them more accountable to central authorities.

Finally it is worth noting that sub national governments in South Africa have very limited powers to borrow or issue debt obligations, which are supervised by the central government in order to ensure improved macroeconomic policy coordination and management. Also other sources of revenue, including foreign aid, as well as public-private sector partnerships do not have a major role in sub-national government financing in the country. However, some provinces and local authorities in South Africa have implemented several private-public sector partnerships in the form of build-operate-train and transfer (BoTT) arrangements. These arrangements allow the private sector to provide funding for specific projects that enhance public sector service delivery, especially in the area of water and sanitation (see Box 1).

Box 1

Public-private sector partnership arrangements in South Africa for the development of water supply for rural and peri-urban communities

In 1996, 14 million people in South Africa, living mostly in rural areas, had no regular or safe access to drinking water. To achieve the objective of giving access to drinking water to the entire population, the government launched in 1997 an innovative type of partnership with the private sector, the Build, Operate, Train, and Transfer (BoTT). In addition to funding, private operators provide valuable training to municipal staff and the local community to efficiently manage water projects after transfer of ownership.

The program largely relies on community and local authority participation in including training and capacity building, empowerment of communities to run the systems on a financially viable basis, and operation and maintenance of the system until the community structures have been adequately trained to take over the system. WSSA, Suez local company, manages two of the four consortia dedicated to this project, in the Eastern Cape province and in the Northern province. Each consortium is a partnership including a South African NGO.

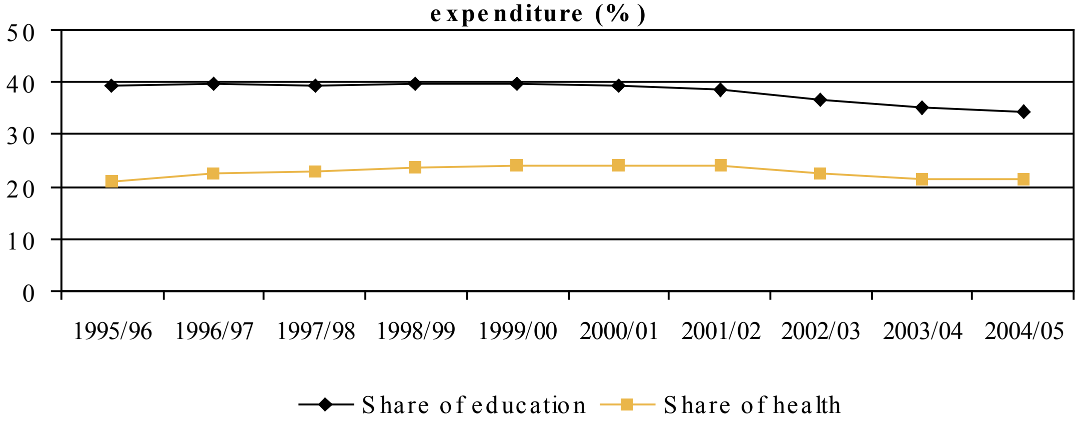
Beyond the substantial number of people (2.5 million) who have been connected or for whom the quality of water services has dramatically improved since 1997, the program is also stimulating the development of the water industry in both provinces, in particular through the empowerment of emerging companies. This BOTT scheme is a good example of large-scale involvement of the private sector in the water supply and sanitation of rural areas in developing countries.

Source: World Bank (2007)

4.2 Sources of revenue, per capita income, and service delivery by provincial governments

On average provincial expenditure on education as a percentage of their total expenditure amounted to about 40 per cent, while health expenditure was about 25 per cent. Since around the year 2000, the share of education and health in total provincial expenditure has been slowly declining (Figure 2). This decline is perhaps a reflection of the fact that demand for education and health service increase with development up to a certain point, where demand for other services become more important. Once that point is reached governments will be inclined to spend relatively more of their revenue on services other than education and health, although education and health still account for more than 60 per cent of total expenditure.

Figure 2: Share of education and health in total provincial expenditure (%)



Source: Statistics South Africa (http://www.statssa.gov.za/)

In Table 2 we compare the nine South African provinces in terms of per capita GDP, own revenue as a percentage of total revenue, and the shares of education and health in total provincial expenditure. In most cases there appears to be a direct relationship between the share of own-sources revenue in total revenue and the share of education. But there is no clear relationship between own source revenue and the share of health in total expenditure. This suggests that as provinces endeavor to collect more revenue from local sources, they tend to raise spending on basic services other than health. It is also possible that to meet higher demand for education and other services, provinces tend to collect more revenue locally. To the extent that this is true, own-source revenue will be endogenous.

As for real GDP per capita, the data in Table 2 suggests that generally as provinces get richer their expenditure preferences change. There appears to be a negative correlation between real GDP per capita and expenditure on education as a percentage of total expenditure, but a positive relationship between per capita income and the share of health in total expenditure. Again the relationship appears to be stronger in the case of education. One of the poorest provinces, Limpopo, has the highest education share in total expenditure.

Sub-national per capita expenditure on education and health seems to increase with per capita revenue (Figure 3). However, there are huge disparities across provinces in terms of per capita revenue as well per capita expenditure on education and health (Figure 4). It is clear that poorer provinces, e.g. Eastern Cape, have higher per capita expenditure on education relative to its per capita income level. This suggests that the intergovernmental transfer system helps to lower disparity among provinces in terms of per capita revenue and expenditure as compared to per capita income. However, richer provinces such as Gauteng and Western Cape still have higher per capita revenue, perhaps because they can mobilize greater own-source revenue.

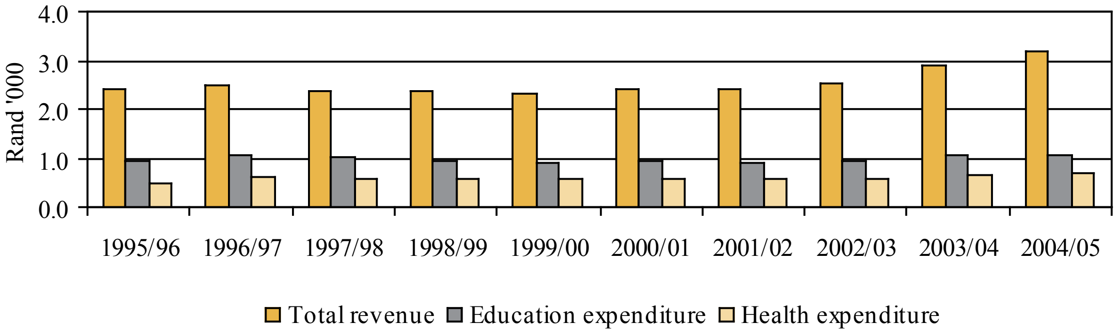
Overall, higher total provincial revenue implies increased allocations to public services in terms of health and education and relatively less allocations to other types of expenditure including administration. This means that fiscal decentralization, especially greater revenue autonomy, can be conducive to greater efficiency in public service provision.

Table 2: Own revenue share, per capita income and share of education and health in provincial expenditure (to replace Fig 3)

Province	Own revenue (% of total)	GNP per capita (R 000)	Education expenditure (% of total)	Health Expenditure (% of total)
Eastern cape	1.97	11.20	37.76	18.40
Free State	4.34	17.73	37.30	22.94
Gauteng	6.01	38.87	35.87	31.60
Kwazulu-Natal	3.61	16.92	36.31	24.75
Limpopo	2.41	11.37	42.51	16.51
Mpumalanga	3.14	20.73	40.76	16.60
Northern Cape	3.11	24.43	34.82	17.35
North West	6.53	16.89	38.56	16.81
Western Cape	6.74	31.46	34.94	28.19

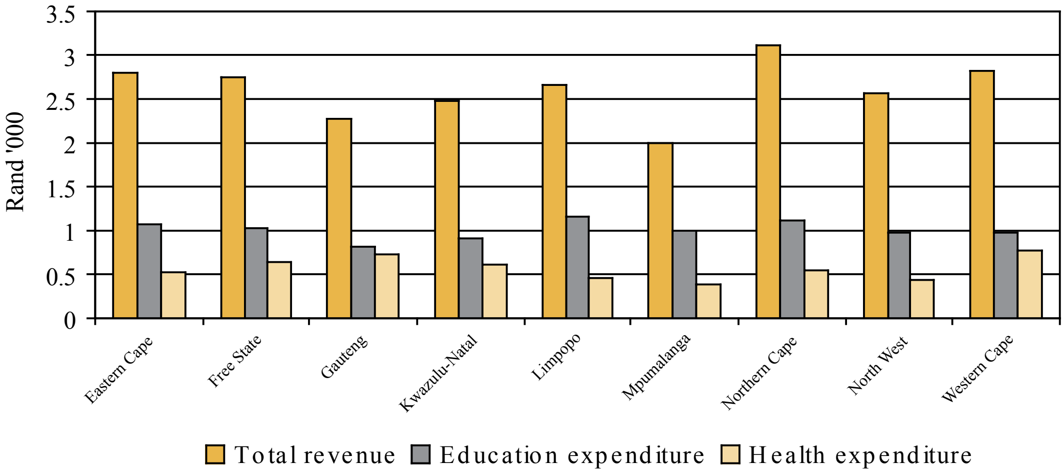
Source: Own calculations based on data from Statistics South Africa (http://www.statssa.gov.za/)

Figure 3: Provincial total revenue and expenditure on education and health (per capita)



Source: Statistics South Africa (http://www.statssa.gov.za/)

Figure 4: Per capita revenue and per capita expenditure on education and health across Provinces (1996-2005)



Source: Statistics South Africa (http://www.statssa.gov.za/)

4.3 Model estimation

The model has been estimated using cross-sectional data for the nine provinces and for the period 1996-2005. The use of this type of data is preferable as it can account for differences across provinces. We have estimated the education and health equations using random effects and fixed effects procedures. In all cases, the Haussman Chi-Square test suggests that the random effects model is superior to the fixed effects one.

The econometric findings on the determinants of education and health in South Africa are presented in Table 3. All estimated equations have a good fit in terms of SEE and the overall R2. Nevertheless, the findings of the estimated models should be interpreted with caution given the many relevant variables that are not included in the equations. Because of high degree of correlation between own-source revenue and transfers, which almost add to 100 per cent of total revenue, the two variables are entered separately. They turned out to have opposite effects in the education demand function as well as in the health demand function.

Table 3: Determinants of education and health expenditure in South Africa (Dependent variable= Percentage of provincial expenditure on education and health)

Education		Health		
Constant	46.7(17.6)**	54.9(2.52)**	15.6(5.2)**	-12.72(0.35)
OSS	0.10(0.36)	-	-0.3(2.22)*	-
TR	-	-0.10(0.36)	-	0.28(2.10)*
Y	-0.40(3.6)**	-0.40(3.6)**	0.34(2.8)**	0.34(2.8)**
R2-	-	-	-	-
R2 – between and total?	0.31(0.21)		0.51(0.48)	0.51(0.48)
SEE	1.84	1.86	1.32	1.33
N	81	81	81	81
Chi2 (df)#	39.9	39.9	3.1	3.1

Notes: Method of estimation: Random Effects; * and ** indicate significance at the 5 per cent and 1 per cent levels, respectively; # Hausman chi-square test statistics for the Random-effects versus Fixed-effects model with the degrees of freedom in parentheses.

The main results of interest relate to own-source (OS) revenue and intergovernmental transfers (TR), which determine the ability of provincial governments to meet their expenditure responsibilities. Starting with the education equation, we observe that the coefficient of the own-source revenue variable has the right positive sign, but it is statistically insignificant. Being directly accountable to local community, provincial governments are supposed to closely link more revenue collection from local sources to increased services provision. But in a system that is highly dependent on transfers from central government, provincial governments might be able to increase spending on education without having to raise local revenue collection.

Demand for education services also turned out to be independent of changes in the share of intergovernmental transfers in total provincial revenue. This is possibly due to the fact that demand for education service is inelastic with respect to changes in revenue and that such changes affect other types of services that are easy for provinces to adjust when revenue changes.

The real per capita GDP variable has a negative and significant coefficient, suggesting that a 1 per cent rise in per capita income leads to a 0.4 per cent decline in the share of education expenditure in total expenditure. It is theoretically possible that demand for education rises with income up to a certain level and then starts to decline. When provinces get richer and basic education needs are satisfied, they tend to spend more on other services, including roads, sanitation, water, safety and recreation. It is also true that as per capita income rises, demand for services becomes more diversified and hence the share of education in total expenditure decreases.

The own-source revenue variable has a negative and significant impact on demand for health relative to demand for other public services. It shows that for a 1 per cent increase in the share of own-source revenue in total provincial revenue, the share of the health sector in total expenditure decreases by 0.3 per cent. This is clearly a reflection of the South African intergovernmental fiscal relations system. Health financing is largely the responsibility of the central government through equitable share and capital grants programs. The capital grants program largely targets basic services – health and education – for disadvantaged communities. Compared to own-source revenue, central government transfers have the exact but opposite effect on health demand. This confirms the observation that health services are by design highly dependent on transfers.

Finally, demand for health service, as opposed to demand for education service, is found to increase with real per capita income. This means that as their populations get richer, provincial governments are forced to spend relatively more of their revenue on health service. The results show that the South African fiscal decentralization system is not efficient regarding revenue autonomy as represented by own-source revenue. The transfer system shifts accountability from local populations to central government, which together with sub-national governments assumes responsibility for expenditure optimization.

V. Conclusion and policy implications

South Africa has a unique system of fiscal decentralization in which relatively large expenditure assignments to provincial governments are associated with very limited revenue assignments. While provincial governments are responsible for 43 per cent of total public sector expenditure, their own-source revenue represents only 4 per cent of their total revenue, and 2 per cent of total public sector revenue. This indicates extremely limited revenue decntralization in South Africa, especially when compared to other developing countries, where own-source revenue accounts for 58 per cent of sub-national governments revenue.

It is difficult to assess the efficiency of the intergovernmental transfer system in South Africa owing to lack of enough information. However, heavy dependence of provincial governments on transfers from the central government suggests that the benefits from fiscal decentralization in terms of improved service delivery due to enhanced transparency and accountability to local citizens are likely to be limited. The intergovernmental transfer system makes provinces more accountable to central government and hence the design of central fiscal management standards is critical and more important than accountability to local constituencies.

The analysis in this paper shows that despite the emphasis of the intergovernmental transfer system on redistribution and equity, richer provinces in South Africa still enjoy higher levels of revenue per capita and have higher per capita expenditure on education and health. The findings of the paper indicate that both own-source revenue and transfers from central government have no important impact on education services across provinces. A certain fraction of transfers is always used to finance education services. Thus, it seems that the transfer system is effective in securing a minimum level of spending on education services that is not disturbed by changes in the relative share of transfers and own-source revenue in total provincial revenue. While transfers are always associated with higher spending on health, the relative share of health declines as provinces mobilize more own revenue, which they spend on other services. This is an outcome of the fiscal system and institutional arrangements that tie service delivery to central government transfers. Sub-national governments in South Africa have very little room to maneuver in terms of the link between sources of revenue and expenditure allocations. Accordingly, they are less responsive to the preferences of the local people and they are less accountable to them.

To the extent that the argument that fiscal decentralization is more conducive to efficiency in service delivery is true, there is clearly a need for increased fiscal decentralization in South Africa. The need is particularly high regarding revenue autonomy of sub-national governments. In view of limited revenue autonomy, fiscal decentralization in South Africa could only enhance the efficiency of service delivery if the central government is able to efficiently respond to local preferences as identified by provincial governments. Despite the important equity and redistributive role of the existing transfer system, the question regarding its relative strength in ensuring efficient service delivery remains open.

References

Ahmed, J., Devarajan, S., Khemani, S., and S. Shah (2005) "Decentralization and services delivery", World Bank Policy research Paper 3603, World Bank. Washington, D.C.

Andrew, M and A. Shah (2005) "Assessing Local Government performance in Developing Countries", in A. Shah (ed.) "Public Services Delivery", World Bank.

Bahl, R. (2001) "Fiscal decentralization: lessons for South Africa", Policy Research Centre, Georgia State University.

De Mello, L. Jr (2000a) "Can fiscal decentralization strengthen social capital?," IMF Working Paper WP/00/129.

De Mello, l. Jr (2000b) "Fiscal decentralization and intergovernmental fiscal relations: A cross-country analysis," World Development. Vol. 28, No. 2, pp.365-380.

De Vera, R. and Y. Kim (2003) "Local government finance, private resources, and local credit markets in Asia," Asian Development Bank Working Paper Series No. 46.

Etienne, Yemek (2005) "Understanding fiscal decentralization in South Africa," IDASA Occasional Papers. www.idasa.org.za [date accessed: 12 September 2006].

Fielding, D. (1997) "Modelling the determinants of government expenditure in Sub-Saharan Africa," Journal of African Economies. Vol. 6(3):377-39.

Fosu A. (2006) "Fiscal allocation for education in Sub-Saharan Africa: Implications of the external debt constraint," Forthcoming in World Development.

Fosu, A. and T. Ryan (2004) "Public Sector Delivery: A Synthesis", Journal of African Economies. Vol. 13 Supplement 1, pp. 137141.

Guimaraes, J. P. (1997) "The new federal system in the Sudan: Some main aspects and implications for planning", East Africa Social Science Research Review, Vol. XIII, No.1, pp.37-53.

Momoniat, I (2001) "Fiscal decentralization in South Africa: A practitioner's perspective," Intergovernmental Relations Division, National treasury. Pretoria. South Africa.

Shah, A. and T. Thompson (2004) "Implementing decentralized local governance: A treacherous road with potholes, detours, and road closures," Policy Research Working Paper 3353. The World Bank. Washington, D.C.

Shah, A. (2004) "Fiscal decentralization in developing and transition economies: progress, problems and the promise'" Policy Research Working Paper 3282. The World Bank. Washington, D.C.

Smoke, P. (2000) "Fiscal decentralization in East and Southern Africa: A Selective Review of Experiences and Thoughts on Moving Forward", A paper presented at a Conference on Fiscal decentralization organized by the IMF. Washington, D.C. 20-21 November 2000.

World Bank (2007) "Development outreach: putting knowledge to work for development," www1.worldbank.org/devoutreach/fall02/article.aspid=179 [date accessed: 8 February 2007].

Other documents published by ATPC

No.1 Les processus de création du marche commun africain: une vue d'ensemble

No. 2 Cancún and Post-Cancún Briefing Papers on Africa and the Doha Development Agenda: *The Current State of Play in the Negotiations*

No. 3 Trade Liberalization under the Doha Development Agenda: Options and Consequences for Africa

No. 4 Trade Facilitation to Integrate Africa into the World Economy

No. 5 Fiscal Implications of Trade Liberalization on African Countries

No. 6 Trade Liberalization and Development: *Lessons for Africa*

No. 7 Libéralisation commerciale et développement: *Quelles leçons pour l'Afrique?*

No. 8 Exclure l'Afrique des marches? *Evaluation de l'accès aux marches pour les pays africains*

No. 9 Economic and Statistical Analyses of Trade Capacity Building in Sub-Saharan Africa

No. 10 Economic and Welfare Impacts of the EU-Africa Economic Partnership Agreements

No. 11 Unrestricted Market Access for sub-Saharan Africa: Important Benefits with Little Cost to the QUAD

No. 12 Trade Preferences and Africa: The State of Play and the Issues at Stake

No. 13 Assessing the Consequences of the Economic Partnership Agreement on the Rwandan Economy

No. 14 Doha Round entre promesses, désillusions et résignations

No. 15 Évaluation de l'impact de l'Accord de partenariat économique entre les pays de la CEMAC et l'Union européenne

No. 16 Peut-on mettre la globalisation au service du développement?

No. 17 Comment sauver le textile maghrébin?

No. 18 Le cycle de Doha peut-il bénéficier à l'industrie africaine?

No. 19 Facilitation du commerce intra-africain: Démanteler les barrières pour le commerce intra-africain

No. 20 Pourquoi l'Afrique s'est-elle marginalisée dans le commerce international?

No. 21 Foreign Direct Investment in Africa: Performance,Challenges and Responsibilities

No. 22 Effets des accords de partenariat économique entre l'UE et l'Afrique sur l'économie et le bien-être

No. 23 Evaluation de l'impact de l'accord de partenariat économique entre les pays de la COMESA et l'Union européenne

No. 24 Evaluation de l'Accord de Partenariat Economique entre l'Union européenne et le Mali

No. 25 Non-Tariff Barriers – Their Prevalence and Relevance for African Countries

No. 26 L'Acces aux marches peut-il aider l'agriculture africaine?

No. 27 L'Afrique et les préférences commerciales – Etat des lieux et enjeux

No. 28 The EU-SADC Economic Partnership Agreement: A Regional Perspective

No. 29 Evaluation de l'impact de l'accord de partenariat économique entre les pays de la CEDEAO et l'Union européenne (also available in English)

No. 30 Progress Report on Regional Integration Efforts in Africa towards the Promotion of Intra-african Trade

No. 31 Trade Regimes, Liberalization and Macroeconomic Instability in Africa

No. 32 Emerging Issues and Concerns of African Countries in the WTO Negotiations on Agriculture and the Doha Round

No. 34 Non-Agricultural Market Access (NAMA) Negotiations in WTO:*Modalities for a positive post Hong Kong African agenda*

No. 35 Diversification: towards a new paradigm for Africa's development

N0. 36 La Diversification: vers un nouveau paradigme pour la développement en Afrique

No. .37 Assessment of the impact of the Economic Partnership Agreement between the COMESA countries and the European Union.

N0. 38 Multilateral Agricultural Liberalization: What's in it for Africa?

No. 39 Did Africa benefit in Hong Kong?

No. 40 Market Access for Non-Agricultural products - The impact of Doha Round on African Economies; A simulation exercise

No. 41 Non-Agricultural Market Access: Which modalities for a positive agenda for Africa

No. 42 Can market access help African Agriculture

No.43 Assessing the consequences of the Economic Partnership Agreement on the Ethiopian economy

No.44 The cost of Non-Maghreb: Achieving the gains from economic integration

No.45 Can the Doha Round benefit Africa's Industrial sectro?

No.46 Facilitating frim entry, growth and survival with special attention to SMEs

No.47 Global trade models and economic policy analysis relevance. Risks and repercussions for Africa

No.48 Financing development in Africa: trends, issues and challenges

No.49 TRIPS and public health: what should African countries do?

No.50 The process of trade mainstreaming into natinal development strategies in Tanzania

No.51 Mainstreaming trade into South Africa's national development strategy

No.52 Nigeria: mainstreaming trade policy into national development strategies

No. 53 Commerce et stratégies de développement: Le cas Tunisien

No. 54 Encouraging Innovation for Productivity Growth in Africa

No. 55 The Effect of Mode 4 Liberalization on Illegal Immigration