Research Projects

The main focus of the Commission's research strategy is on second generation issues of how much the quantum of public funds and its allocation can be translated into service delivery outputs which actually have an impact on communities. The focus is on outcomes and impact of government interventions, premised on seeking to identify a broader set of institutional and governing arrangements that are capable of achieving positive public expenditure outcomes. Four goals or thematic areas have been determined to take the Plan forward. These are:

1. *Policy Outcomes*
2. *Accountable Institutions*
3. *Equitable Growth and Distribution of Resources*
4. *Flexible Response*

To transform these broad objectives into interventions, the Commission has approved the following projects for the 2009/2010 research cycle:

A. New Projects

1. Review of the Local Government Equitable Share Formula

The problem confronting the local government equitable share (LGES) can be perfectly linked to those identified by Kim and Smoke (2001). The evident institutionalisation of the grant has resulted in the negative incentives which sometimes manifest in the low fiscal effort of certain types of municipalities. It is also not very clear which objectives is the LGES intended to achieve. There continues to be serious debates around whether the equitable share is redistributing resources to poor municipalities or not, subsidies or fully fund local services and whether the subsidy or the fund reflect the true cost of services.

The debates on redistribution implicitly suggest that sole objective of the equitable share is to fund poorly resourced municipalities. However this view violates constitutional imperatives of the equitable share and further implies other municipalities are not fiscally stressed. Without a full understanding of expenditure needs of municipalities, especially poor municipalities, these debates will remain an academic or political exercise. In other words, it cannot be established with greater level of certainty on whether the equitable share indeed under fund poor municipalities, unless it is explicitly stated that the equitable share's main aim is to increase proportional funding levels of weak municipalities relative to the others.

More importantly, it remains an open debate on whether efforts to improve revenue of poorly resourced municipality should be undertaken through the equitable share formula or outside the formula through other grants and policy interventions. Current proposals are biased to the former and therefore reinforce the view that the equitable share is seen as a panacea for all local government problems. This fails to recognise the importance of integrating the equitable share transfers with other national policies such as rural development, aimed at enhancing rural economies (profound in poor municipalities). In essence, there is visible lack of coordination between the equitable share and other policies related to local government on broader development goals. As a result the equitable share is expected to carry the burden of underdevelopment attributed to national policy failures and sometimes inefficiencies of the local government system.

Ambiguities regarding the objectives of the LGES are embedded in the structure of the allocation methodology used to disburse funds across the 283 municipalities. Up to 90 percent of the LGES is allocated through the basic component which uses the number of poor households with and without access to service to the five basic services including water, electricity, refuse, sanitation and environmental health as indicators of needs within the municipality. Despite the fact that not all local services are considered, the formula puts an over emphasis on the number of poor people by using multiple definitions of poverty.

Calculations of other components of the formula such as the RRC, C are highly obscure and inconsistent with some general practice in formula design. For example, the revenue raising component which essentially constitute a proxy for local fiscal capacity, not only account for a small percentage of the equitable share but it is also calculated through unequal bands that does not benefit intended recipients. A much bigger concern even relate to the inconsistencies in which other sources of revenue (e.g. fuel levy) which do not constitute local revenue are considered as part of the local government own revenue in the RRC component. This revenue is even subjected to a different calculation regime in the formula.

Furthermore, the calculation mechanism of the formula is such that it determines the total vertical allocation of local government, which is sometimes bigger or less than the amount allocated to the local sphere through a separate consultative process. Resultantly, the formula has to be adjusted to fit within constraints of allocated revenue pool where municipalities either receive a top up while other experiences reduction in their allocation.

The objectives of this project are to evaluate the performance of the LGES against the general principle of grant design and to contribute to ongoing work on the review of the Local Government Equitable Share Formula.

2. The Efficiency of Regionalising Electricity Distribution Services

Integrating local government functions and services such as the electricity distribution industry (EDI) into regional electricity distributors (REDs) requires grappling with both public, technical, economic and management policy challenges. Within the current distribution environment there is Eskom and 187 municipalities, licensed by the National Energy Regulator of South Africa (NERSA) to operate the current EDI. The public policy challenge of migrating towards REDs begins with defining the emerging role for local government as electricity distribution evolves toward regionalisation. Municipalities will have to seriously have to cope with the public and management policy challenges that will emerge through the transition to REDs. The South African government has been for years trying to rationalise the 'fragmented' EDI into six REDs. The expectation is that there will be significant efficiency gains achieved by establishing such blocks. It is expected that this will lead to a greatly simplified licensing and tariff-setting role for the NERSA.

To progress with the EDI reforms, government established the EDI Holdings Company to oversee the establishment of REDs and rationalise the following segments in the electricity distribution value chain:

- Ownership, governance and legal;
- Operations framework design and formalization; and
- Trading and ring fencing of revenues, (DME, 2000).

Making choices about electricity restructuring often requires tradeoffs among competing objectives. In this regard, the choice of the market design must be weighed against the likely impact on the effective functioning of municipalities.

The objective of this project is to evaluate some fundamental principles which can be used as a test for the regionalisation of electricity services through the proposed market design. The project also evaluates risks embedded in the current electricity distribution industry. These include risks of lack of maintenance, fragmented electricity tariffs, energy efficiency and demand side management. In a regulated electricity market design, all these risks are bundled and effectively placed on the consumer, through the mechanism of regulated tariffs (Brennan et al, 2002). The expectation is that through REDs, these risks can be unbundled and reallocated to the entities best equipped to manage them.

3. Improving Revenue Enhancement Strategies for Local Government in South Africa

The design of South Africa's intergovernmental fiscal system is such that local government is generally self financing. It raises a significant proportion of its revenue from constitutionally assigned own sources such as rates, taxes and services charges. Municipalities generate, in aggregate, about 92 percent of their own revenues. The remaining revenues are transfers from the national and provincial governments. This represents an important feature of a decentralised intergovernmental system where municipalities are directly accountable to local residents from whom they generate revenue.

Despite having access to a plethora of own revenue sources local governments in South Africa are generally perceived to be hard pressed for revenue. Several primary reasons are attributed to this challenge. Firstly, there are structural imbalances on available local revenue sources and expenditure functions across municipalities. Secondly, the prevailing level of economic activity, uneven geographic distribution of the tax base and socio economic circumstances within the area of municipalities hampers revenue collection. The third factor entails the level of fiscal effort with respect to optimizing and collecting available revenue. Fourthly and perhaps most importantly low revenue is attributed to non-payment of municipal services by consumers. In other instances increasing expenditure needs and associated cost pushes traditional sources of revenue beyond the extent of their legal, economic and political limits.

Collectively, these attributes put pressure on municipalities to priorities revenue enhancement and rightly exploit ways and means that may help them address revenue challenges in order to remain financially sustainable (DBSA 2004). In essence, revenue enhancement is common feature in fiscally stressed municipalities, digging deeper into their revenue base to generate additional financing. This project explores these issues in greater detail and gives quantitative magnitudes to some of the important arguments.

4. Budget Analysis of Local Governments

5.1 Analyze revenue growth and volatility in urban, semi-urban and rural municipalities.

A comparison will be made between trends and spatial variations in the real growth and volatility of municipal own revenue (in/excluding Local Equitable Share) and conditional grant revenue sources for metropolitan, urban and rural municipalities).

5.2 Estimate own revenue-generating potential (generally and for domestic municipal water and electricity services) by type of municipality.

Own-revenue generating potential (excluding unconditional grants) can be initially estimated as a benchmark proportion of municipal Gross Value Added. More complex estimations of municipal potential to generate revenue from electricity and water based on municipal distributions of personal income could be attempted but are dependent on 2001 Census data, which should be updated. Updates of the Municipal Infrastructure Investment Framework model of the DBSA can be invoked here.

5.3 Estimate the maintenance gap on built infrastructure assets by type of municipality.

This involves estimating the maintenance backlog for public sector economic infrastructure as a whole. The methodology does not allow for further disaggregation but could be compared against independent estimates of the backlog's water, transport, energy, environmental health and other components.

5. Budget Analysis of Provincial Governments

The issue under review is the extent to which the administrative costs of running provinces may be crowding out spending on essential services (notably those listed in the Bill of Rights). This can be tracked over time. The current National Treasury Database provides a consistent overview of most provincial departments for the period 2005/06 to 2008/09 (for spending) and 2009/10 to 2001/12 for budgets. Whilst data is available from 2000, a longer-term analysis will not be undertaken this year.

The second issue under focus is that of spending on maintenance of infrastructure and equipment; and on the goods and services (NPNC) necessary to sustain public service delivery during recessionary conditions.

6. Options for Institutionalizing and Funding Rural Development

Food security is a Constitutional right. The Department of Agriculture defines food security as physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy life. Objectives of the study:

- Consider different definitions of rural development, particularly in respect of its relationship with (a) food security, (b) agricultural development, (c) land reform, (d) infrastructure provision and (e) other economic development functions in the short-, medium- and long-terms.
- Identify the institutional base that has been established to enable agriculture-based rural development and identify the institutional gaps and co-ordination blockages remaining at national, provincial and local government levels.
- Identify existing conditional grants, Provincial Equitable Share spending programmes and national financing facilities and identify the potential funding gaps in enabling an agriculture-based rural development strategy at national, provincial and local government levels.

7. Financing and Implementation of Inclusive Education in the South African Schooling System

Ensuring equity in the financing of social services is one of the key mandates of the Financial and Fiscal Commission (FFC). The financing of inclusive education is based on the premise that inclusive education in South Africa has not been promoted as simply one more option for education, but as an educational strategy that can contribute to a democratic society. The research will explore government's inclusive education and training policy by asking whether provincial education departments have access to sufficient funding and implementation capacity. In addition, the research will investigate the funding and service delivery challenges/bottlenecks that provinces face in implementing inclusive education and training policies.

The research therefore explores government's inclusive education and training policy by asking whether provincial education departments have access to sufficient funding and implementation capacity. In addition, the research will investigate whether there is any funding and service delivery challenges/bottlenecks that provinces may face in implementing inclusive education and training policies.

8. Determining Adequate Levels of Funding for Basic Education/Schooling

The cost of basic education is unknown. Financing it is ad hoc. There is therefore a need to address the following key issues:

- An understanding of what is meant by the term basic education within the context of the South African schooling.
- An understanding of the term adequate funding for basic education.
- An assessment of the relationship between the determined adequate level of funding for schooling and learner outcomes.

9. Performance of Public Hospitals: An Evaluation of NHI Policy Proposal

Public hospitals play a strategic role in the smooth operation of the public health care system. The objective of this project is the evaluation of the NHI policy proposal in relation to access, equity and quality of public health care services.

10. Environmental Related Impacts and Fiscal Policy in South Africa

The object of this project is among others to investigate the administration and impacts of the use of environmental taxes within South Africa's intergovernmental fiscal relations.

11. The Performance of Conditional Fiscal Transfers in the South African Intergovernmental Fiscal Relations System

This project provides a 10 year review of conditional fiscal transfers in the South African intergovernmental fiscal relations system. The review spans from 2000/01 to 2009/10 financial years. Provincial and local governments have played a valuable role in supporting the implementation of national programmes and in discharging their own assigned duties. But challenges remain persistent in the misalignment between national priorities and sub-national budgets for concurrent and exclusive functions. These challenges continue to exist notwithstanding the establishment of technical and political intergovernmental forums tasked with improving intergovernmental coordination.

In dealing with these challenges there have been innovative ways to fund concurrent functions and other national priorities. Some of the innovative ways have been funding national priorities through conditional transfers. In its submission on the 2009 Division of Revenue Bill, the Financial and Fiscal Commission expressed its reservations that there is a proliferation of conditional grants. The Constitution does not offer guidance on how concurrent functions are to be shared or funded. Moreover, there has never been a comprehensive review in South Africa that analyses whether conditional grants are better instruments to bring about better service delivery in the South African public service. Of relevance to the study is whether conditional transfers can play a greater role in improving performance and service delivery at sub-national government level? This project attempts to give answer(s) to such pivotal question in the South African intergovernmental fiscal relations system.

12. Funding and Delivery of Housing in South Africa: Location and Funding of Housing in South Africa

The delivery of human settlement in South Africa cannot be separated from the historical regime of apartheid. Although government delivered about 2.6 million subsidized houses since 1994 a housing backlog remain a challenge and was estimated at about 2.1 million by 2008. Contributing to the demand for housing is an increase in population growth as well as declining average household size among other things. Furthermore, urbanisation puts more pressures on the demand for housing in big cities that are perceived to have economic opportunities and this implies an increased demand for housing within these cities. As the Housing Act No. 107 of 1997 provides for accreditation of municipalities to undertake the housing function, the Financial and Fiscal Commission has previously recommended accreditation of municipalities where capacity exit. The progress on the process of accrediting municipalities is not satisfactory. The National Department of Housing cited lack of capacity at the municipal level as one of the major reasons why there has been delays in the accreditation process. This project therefore intends to assess which sphere of government is the best to deliver human settlements. The project looks beyond the accreditation process.

13. Public Transport: Bus Subsidies in South Africa

The legacy of apartheid in South Africa has created a state where poor people have been placed on the periphery of the cities remote from areas of opportunity. This condition together with an objective of reducing road congestions associated with the use of private cars necessitated an introduction of public transport subsidies in the form of bus subsidies in South Africa. Generally and according to the literature, public transport subsidies are aimed at achieving social, economic and environmental objectives.

Historically, transport subsidies in South Africa have been used to foster and facilitate the spatial organisation of urban areas and have strongly been associated with the geographical dislocation of historically disadvantaged communities from the centre of urban areas to the urban periphery. However, since the dawn of democracy, government has shifted the focus towards an effective public transport system. The aim is to enable all South Africans, including the unemployed and poor, to enjoy greater access to economic and employment opportunities as well as social recreation. This project intends to examine and analyse the design of bus subsidies in South Africa which includes funding and funding allocation, disbursement, and intended beneficiaries among other things as well the progress made thus far on the devolution of transport subsidies to municipalities and problems encountered in the process.

14. Macroeconomic Effects of South Africa’s Fiscal Policy

From the Commission’s perspective, the impact and effectiveness of increased public expenditure and taxation on real national output has long generated significant debates in macroeconomic stabilization literature. This debate stems from the extreme views on the impact of fiscal policy on macroeconomic performance. As Swanepoel and Schoeman (2002) note, unlike monetary policy, the divergent views on fiscal policy effect have two common conclusions: (i) that fiscal policy instruments have a potentially significant long-term impact (via the long-term impact of debt and the long-run growth rate of the economy), and (ii) that different fiscal policy instruments are likely to have different effects in both the long and short-run. Furthermore, in terms of the country’s intergovernmental fiscal relations, the issue at stake is not so much the quantum of public funds nor its allocation, but rather whether these financial resources can be translated into service delivery outputs which actually have an impact on communities.

The studies outlined above highlight the important role fiscal policy plays in achieving macroeconomic policy objectives. Recent developments both in theory and the practice of monetary policy have emphasized the link between fiscal and monetary policy. At the macroeconomic level, many of the institutional provisions outlined in the South Africa’s macroeconomic policy framework have been rationalized in terms of constraints on fiscal policy to enable the Reserve Bank’s monetary policy achieve its primary mandate of price stability. Despite these, very little attention has been devoted towards utilizing an empirical approach to understand the macroeconomic effects of fiscal policy in South Africa. This project fills in this gap.

15. The Impact of the Global Financial and Economic Crisis on South Africa

The global financial crisis and resulting economic crisis is creating widespread concern around the world. Although a recovery is expected in 2010 as a result of the monetary and fiscal stimulus programs undertaken in most industrialized countries, the IMF recognizes a significant risk of deeper economic contraction than currently expected. The financial crisis in the world's major economies and the subsequent world recession has also now deeply affected South Africa. Some of the impacts are felt in investor and consumer confidence, while international exports and the prices of commodities that South Africa exports have strongly declined. Consequently, most of the economy has slid into recession, with many employed losing their jobs, and international price changes (e.g. oil and food prices) also affecting the poor detrimentally.

In this context, it is likely that poverty is on the increase and that this increased poverty will affect children. The concern is around the extent to which the crisis will undermine gains in child well-being in recent years, as well as risks to the achievement of child-related targets of the Vision 2014 and the Millennium Development Goals. It will be important to consider how this effect is mediated via three mechanisms that may partly protect children from such shocks:

- The child support grant, which has been expanded greatly in recent years, is particularly aimed at children in poor families. It offers a potential source of protection against poverty for poor children, if the care-givers (receivers of the grant on behalf of the children) regard such grants as firstly for the benefit of the children concerned.
- In some families, spending on children is a priority. Thus, for instance, research using panel data in Ethiopia has shown that, in times of crisis, spending on behalf of children declines less than that on women: Women (usually mothers) often cut back more on consumption in difficult times to protect their children. Similarly, in South Africa there is evidence that children, and especially girls, benefit from the grants to old age pensioners, the majority of whom are women.
- Government spending on social services that directly support child-well being, including health, education, nutrition, early childhood development, water, sanitation, etc.

The project will provide insights to magnitude of the shocks associated with the crisis in macroeconomic terms in South Africa, the country's capacity to withstand or cushion these shocks, and the extent of fragility in terms of poverty levels and key indicators of child well-being. Specifically, the study is to provide projections on the vulnerability of South Africa, at the macro level and with respect to multi-dimensional child poverty, as a result of the shocks resulting from the global economic crisis. In addition, the study is intended to simulate the effectiveness, cost and affordability of relevant policy options to safeguard children from these shocks. This involves *ex ante* simulation of the effects of the crisis and of policy options at macro and micro levels in South Africa.

Furthermore, the study is intended to, as the crisis unfolds, inform priority-setting by the government of South Africa, with a view to safeguarding children's interests and long term development goals, as set out in the Presidential Medium Term Strategic Framework 2009-2014, the Vision 2014, the work of the Financial and Fiscal Commission, other national plans, as well as the Millennium Development Goals (MDGs).

16. Spatial Perspective of Unemployment and the EPWP Incentive Grant

The focus of this study would be to investigate the severe problem of the levels of unemployment in South Africa today, and the corresponding problem of mass poverty. This proposal would be to review current policies that are stimulating the economy such as job creation and then to assess the status quo in order to answer some of the following questions: Is the EPWP targeting the right people? Would the creation of jobs and in particular projects such as the Expanded Work Programme Phase II assist in alleviating unemployment and poverty? Are these programmes currently targeting the areas which are in most need?

The latter is expected to assist in evaluating policy interventions geared towards the poor, to assess the available information and to make recommendations about targeting interventions. The study will provide an analysis of where the poor and unemployed are and whether the Expanded Public Works Programme are indeed targeting the right areas. It will therefore also attempt at monitoring and evaluating the Expanded Public Works programme to assess whether this should be an incentive grant and evaluate whether this incentive grant works.

B. Ongoing Projects

17. Review of the Provincial Equitable Share Formula

The guiding principles for the review of the provincial equitable share formula in the Commission's view should be the provisions in the Bill of Rights of the Constitution and the clauses that relate to the equitable division of nationally raised revenue as stated in Chapter 13 Section 214 (2) (a-j) of the Constitution, and the Government's stated policy objectives and priorities for the next five years.

- The review will involve a quantitative and qualitative evaluation of outcomes (including reference to the issues raised by the Commission in the review of the formula) that impact on the implementation of the formula. This is an exercise that the FFC has carried out in the past albeit evaluating the formula over a short period time, primarily five years. The envisaged timeframe is longer and this means more reliable long term data that will give a fairly high degree of confidence in the results as compared to the last time the exercise was carried out.
- The review should consider advances made to the Commission's costed norms approach with the introduction of cost functions for estimating the cost of public services. In its submission in 2000, the FFC proposed that the provincial equitable share allocations formula should be based on a "costed-norms" approach. Such an approach would be driven by the need to ensure that provinces are funded in such a way as to ensure that they have sufficient resources to enable them to deliver on their Constitutional mandates. Government did not accept this recommendation because of the lack of data and the absence of clear policy parameters. However, government acknowledged the importance of a costing approach as an analytical tool that could be used to assess performance relating to the provision of basic services when the conceptual and data issues required to operationalise the approach have been resolved. The FFC has continued to work on the conceptual issues and some of the work can inform the review process. The first phase (conceptual model) is complete and the data issues are being addressed in the next phase.
- The review should evaluate the appropriateness and measurement/indicators for the different components. This should be done in a manner that is objective and transparent rather than one driven by outcomes with respect to relative shares resulting from simulations.
- The review should address the need to balance the constitutional principles with respect to the provision of basic services and provincial independence/autonomy/discretion against the achievement of nationally determined priorities and norms and standards.
- The review should examine the implications of a demographically driven allocation formula against the need to uplift economically backward provinces and deal with the apartheid legacy. This should also include an investigation into the impact of migration (domestic and international) on the ability of provinces to deliver basic services as prescribed by the Constitution.
- The Western Cape Province has proposed a formula based on the National Spatial Development Perspective (NSDP) policy. The review should thoroughly investigate the Western Cape's proposal and the extent to which it is consistent with the current intergovernmental system and the need to address equity and redistribution.

- The reviewed Provincial Equitable Share Formula should seek to address the issue of differences in the cost of delivering services across provinces, especially with respect to the capital and housing infrastructure as a result of among others major differences in topography and distance.

- Finally, the institutional issues raised by the Western Cape and KwaZulu-Natal provinces need to be considered by the Commission. While it is clear that the formula as it currently stands in no way relates to the vertical division of revenue issues, the fact that it is a key instrument in the allocation of revenue across provinces makes it imperative for the Commission to look into the issues. The Intergovernmental Fiscal Relations Act sets out a process for the budget and there is a need for the process to be accorded its due credence in as far as the legislative framework is concerned. The perceptions that have been expressed by KwaZulu-Natal in particular with respect to the Commission and its role in the budget process should be considered.

18. Public Infrastructure, Economic Effects and Division of Revenue

This project examines the dynamic effects of public sector investment in South Africa using time-series data for post-democratic South Africa. It employs a structural vector error correction model and investigate the dynamic responses of output to shocks in investment and consumption by examining estimated impulse response functions. The results so far indicate that the type of public sector expenditure matters as public investment and public consumption expenditure have significantly positive and negative impacts on output in the long-run, respectively. Estimates of impulse response functions show that output responds positively to shocks to private investment and public sector consumption. However, shocks to public investment elicit a negative output response. Further analysis of this finding led to evaluation of dynamic relationship between private capital and shocks to public investment. The results indicate that private capital responds negatively to public capital shocks, suggesting that public investment crowds out investment by the private sector.

Three main activities are proposed during the final phase of the project:
- Dissemination of findings
- Training activities
- Further model refinement as better data becomes available

19. Impacts of Public Spending in Education Sector on Growth and Poverty Reduction

This project investigates the expected outcomes of a pro-education policy that aims to tackle skills shortages in South Africa by improving school quality. From an analytical perspective, the goals of the project are twofold. The first task was to understand how students' decisions with respect to ongoing skills acquisition in the education system are affected by improved school quality. Having done that, it was then important to consider interactions between education and the rest of the economy. The first phase of the project has done this modelling work and quantifying these interactions allowed the project to compare likely policy options.

The education policy could be funded as a part of the government's operating budget without any specific fiscal policy to pay for the program, or the government could combine the policy with an increase in household taxes to fund improved education. The policy accomplishes its goals for the education system in both cases: fewer students drop out, fewer students repeat grades, and more students continue on to graduate at higher levels of education, leading to more skilled labour in future years. When considering the interactions between education and the rest of the economy, it becomes important to discern between short term and long term consequences. When funded by government spending, the policy increases wages and employment across sectors in the short run, but it also negatively affects public finances and the current account deficit. When funded by a tax, the policy increases real wages and employment in the education sector, but production levels decline in comparison to the business as usual approach due to falling household buying power. A common feature of the long run analysis is that increasing the supply of skilled labour reduces wages for that segment of the labour market, having distributional implications for household revenue.

After the presentation of the Phase 1 intermediate report, Phase 2 of the project is focusing on:

* Training activities and dissemination activities
* Further developments of the existing dynamic education model

20. Assessing the Performance of Local Government Capacity Building Programs and Grants in South Africa

Local governments in South Africa face multiple challenges which affect their ability to deliver quality services on a sustained basis. The challenges are not only confined to managerial, financial, technical and project management skills but also dire socioeconomic difficulties such as high poverty and unemployment rates. The latter put enormous pressure on meagre resources available to local government in meeting the services delivery needs of the poor and developmental goals envisaged in the Local Government White Paper. Collectively, these challenges represent a capacity constraint or lack thereof on the part of municipalities.

Over the past years since the new local government dispensation, national government put capacity building within municipality as a key priority. Numerous capacity building programs and grant funding have been introduced primarily to deal with capacity challenges faced by local government. Against this background this study evaluates the performances of capacity support mechanisms against the key principles underpinning capacity development.

The study finds that while more that 20 programs have been introduced over the past 14 years, the impact on overall performance of municipalities is negligible or non existent. Municipalities continue to require external assistance, receive negative audit opinions and service delivery backlogs remain unacceptably high. The study attributes the ineffectiveness of capacity building programs to lack of incentives for performance and capacity enhancement; the reactive nature of capacity building programs introduced in response to crises; the absence of objectively measurable targets and post support monitoring mechanisms; lack of comprehensive approaches and coherence of support programs, and the arbitrary criteria for selecting eligible municipalities.

The study thus far notes the following: firstly, that different types of municipalities experience different capacity constraints and therefore various forms of intervention are required. Secondly, that legislative, policy and institutional prescripts which provide a framework within which to build capacity need review. Thirdly, that lack of coordination between various capacity building programs undermines the overall impact on municipal performance. Lastly the study concludes that a singular focus on implementing sophisticated programmes or interventions on a weak institutional, economic and managerial base almost invariably leads to a return to original problems. This highlights the need for a proper understanding of capacity problems facing municipalities as well as a coherent, timely and sequenced approach to capacity building.

21. Quantifying efficiency and equity effects of social grants (and proposed Social Security Reform) in South Africa

Social security systems provide protection against risks of income loss due to contingencies such as old age, unemployment, disability, or injuries sustained at work. As such, they play an important consumption-smoothing role by redistributing income across time. Apart from this function, social security systems also redistribute income between generations and amongst the insured according to risk and vulnerability. Social security systems typically consist of three parts:

- *Social insurance*: benefits organised by the state and funded by means of specified contributions by employers and employees
- *Social assistance (grants):* non-contributory cash or in-kind grants to provide protection to the most needy
- *Informal insurance*: cash or in-kind assistance from the extended family and other social networks

Despite being a middle-income country, South Africa has an extensive formal social security system with many of the trappings of a modern welfare state. The first phase of this project focused on the social assistance part of the system, which is particularly well developed by international standards. To date the project has outlined the evolution and the present nature and coverage of the social security system in South Africa. It has discussed the role and economic effects of social grants in other countries, as well as broad currents in the reforms of social assistance systems. Against this background, the project has surveyed existing literature and presented new evidence on the efficiency and equity effects of social grants in South Africa. An FFC report of this first phase is now available.

In the second phase the project now focuses on two major issues as follows:

1. Feasibility of Conditional Cash Transfers (CCTs)
2. Social security systems often are complemented by other social programmes such as education and training programmes, health insurance schemes, specialised care facilities and protective labour-market policies, free basic services (water and electricity). These programmes will be part of the scope of this second phase.

In the third and final phase of the project, the overarching research objective will be to use models built elsewhere in the Unit to measure the impact of alternative reforms to the Social Security System in South Africa (specifically at Pension Reform). Proposed specific experiments/simulations to be carried out using the built apparatus (laboratory) are as follows:

- Pension Reform (PR) - Change in SS taxes: a proportion of these taxes (80%) are oriented to other destiny but government income.
- Changes in physical capital accumulation that productivity introduces to the economy. This amount is calculated as perpetuity say at a 20% rate of annual funds.
- Funds captured by the government closure includes that its result (government savings) are held constant by an increase in VAT.
- Cut in Social Security taxes.
- Increase in labour supply (exogenous)
- Increase in labour supply towards formal sector. We will change the formal/informal supply relationship. This would be equivalent to an increase in SS valuation (exogenous)
- Reduction of household savings

22. Assessing Development Strategies to Achieve the MDGs in South Africa

On September 6 – 8, 2000, the heads of States participating in the United Nations Millennium Summit approved a bold and wide-ranging agenda for reducing poverty and improving lives in the world. This initiative was embedded in the framework of the Millennium Development Goals (MDGs), embracing also more specific targets for 2015.

So far, success towards achieving the MDGs has been very uneven in the developing world, largely because initial conditions and historical experience tend to differ among countries. There are no blueprints for the most effective way to achieve the MDGs. Countries will need to tailor strategies according to their own needs, institutional strength and resource availability.

In this respect, answers to **three key questions** are required. **First**, what is the trajectory that the country will follow under current policies and investments, and what is the likelihood of achieving the goals (or a subset of them) under those circumstances? If projections based on the continuation of the status quo suggest important departures from the desired outcomes, then **the second question** is: What changes in development strategy, institutions, policies, and investments may be needed to achieve the goals? To answer the second question requires analysis of the links between policy choices and economic outcomes. While much progress has been made in understanding these links, much more (country-specific) research needs to be done. Given the important roles of governments and international institutions in financing development programs, a related **third question** is: What are the costs of different strategies, policies, and investment alternatives?

To answer these questions, this project will design and evaluate alternative national development strategies - including an assessment of related costs - to achieve the MDGs. This will be achieved by drawing on an integrated methodological framework, focusing on dynamic processes and the impact of MDG-related policies at the level of the economy at large, that of social sectors, and at the household level. The project focuses on a core set of MDGs related to extreme poverty reduction, education, health, and water and sanitation. The methodology covers macro and micro aspects in an economy-wide framework. The latter is necessary since many of the key-related policies and required financing mechanisms that affect the MDGs have effects across the various sectors of the economy which feed back into processes of labour market adjustment, relative prices, government resources, household incomes and so on, which in turn determine MDG achievement.

23. South Africa's Intergovernmental Revenue Sharing System: Assessment Using Macro-Micro Modelling Techniques

There has been sustained debate around issues of revenue raising and sharing in South Africa. Questions range from those relating to the effectiveness of the equitable sharing of revenue and to those questioning the impact of this revenue on provision of public goods and services. The Financial and Fiscal Commission has in the past proposed the Costed Norms and subsequently the Constitutionally Mandated Basic Services model to aid this debate. Indeed, the Commission is currently spearheading consultations with and amongst national and provincial governments and other stakeholders on whether there is scope for changing the provincial equitable share formulae and of course if changed, what it should look like and what the impact of that reform would be. Elsewhere, there have even been calls from certain quarters on whether we need provinces at all and whether they are effective or not. While this present work will not answer all of these questions, it seeks to contribute substantially to these debates using objective and transparent techniques.

The study has three related objectives, namely:

1. Irrespective of the grant mechanism used, assess and quantify the incidence or the horizontal allocative impacts of that respective intergovernmental grant (conditional, unconditional and mixed)
2. Make a study of the current provincial and local tax structure, including a determination of how the current tax structure affects various sectors of the economy, such as business, industry, and individuals
3. Analyze who bears the ultimate tax burden with respect to any particular tax

It is important for the FFC and government to take stock of the effects of these kinds of revenue sharing on the different regions and on the whole economy. Similarly, there is a need to understand and quantify the likely impacts of different assignments of tax revenue heads on the economy and revenue raising capabilities in particular. In the main, a regional computable general equilibrium (CGE) model is proposed to aid in this exercise. The CGE model will closely follow recent pioneering work by Nechyba (2004), taking into account South African specificities. The work should be viewed in part as extending the previous work by the FFC on the costed norms and CMBS model to allow pricing behaviour and macroeconomic dynamics to play a stronger role in the allocative process than in the previous models.

The CGE model is defined over endowments and regions in which people live. Each household is defined over their income, type of dwelling (which is a proxy for endowments) and over their region. Each of the households then maximises utility which is defined over income, dwelling, region and a given set of public goods – divided between national and regional. National and sub-national goods are produced by a process of converting private goods. National goods are funded by national taxes while regional goods are funded by regional property taxes and various transfers from the centre. Equilibrium is obtained through voting to determine property prices, and then using these prices the equilibrium of national and regional public goods is obtained. The rest of the CGE model production will be standard, with production modelled with largely constant elasticity of substitution (CES) technology and household demands being determined according to the Linear Expenditure System (LES).

To date the following have been accomplished:
- A survey of government focused models
- A national macroeconomic model with government
- Econometric analysis of convergence using panel data methods

The work for the next phases of the project underway includes:
- Regionalising the models
- Run further simulations such as
    - What is the impact of the equitable formula (both local and provincial) on national and sub-national performances
    - The effects of varying the equitable formula to provinces: a move from population based to needs based using poverty status of provinces
    - The effect of matching grants versus block grants
    - The effect of conditional grants
    - The effect of changing the component shares of conditional grants per province.
    - The effects of various funding possibilities for raising revenue of regional public goods:
        - Revenue neutral financing
        - Redistributive taxes
- National Dissemination Workshops and Training
- Publications, Books and Journals

24. Analysing Impacts of Alternative Policy Responses to High Oil Prices Using and Energy Focused Macro-Micro Modelling Technique for South Africa

The recent oil price increase has created widespread concern about its impact on world economic growth and on poor people in many countries. Analysts have pointed out that higher oil prices are inevitable and it is unlikely that prices will be reduced in the long term without sufficient sources of oil or alternative energy sources. Moreover, they are unanimous that the management of the higher oil prices by government will have significant repercussions on the economies involved in terms of income distribution and poverty reduction.

Because oil is such a basic component of manufacturing, variation of oil prices will directly affect the whole economy, income distribution and poverty reduction. Removal of oil price subsidies will impact on oil-dependent businesses because their costs will increase substantially. Higher oil prices due to reduction and elimination of the use of subsidise will lower oil consumption in favour of other sources of energy, e.g. coal, which are known as more damaging for the environment.

In contrast, government subsidies on oil prices distort the real market signal; the market reflects no real costs and as a result, people have no motivation to save on oil use. Subsidising oil products sends the wrong message to consumers who are in fact encouraged to consume more of these products, particularly in the manufacturing sector, and consequently, contribute more to the emission of greenhouse gases (GHG).

Furthermore, subsidising oil prices, even though beneficial to competitiveness and the whole economy in the long term, raises the risk of increasing the trade deficit with increased oil imports. It may cause higher prices for domestic goods, higher inflation, and lower consumption. Consequently, higher inflation will pressure the government to increase interest rates; thereby reducing short-term investments and restricting predicted growth in the domestic economy.

Owing to these comprehensive impacts on the whole economy, the government should target its policy and seek sustainable strategies to reduce the undesirable impact of higher-oil prices on the economy and on poor people. This study attempts to evaluate the impacts of government response to the higher-oil prices on economic growth, environment, and poverty reduction in South Africa. The study will explore different policy strategies that the Government could implement to ensure economic growth and higher income for poor people. It will compare the policy tests under likely environmental policy scenarios and proposed sustainable pro-poor policy strategies. In strict Financial and Fiscal Commission parlance, the study seeks to provide an analytical tool for measuring the impact of exogenous energy shocks on the South African economy, and how these affect overall macroeconomic performance as established in S 214 (2) a-j of the Constitution by examining:

- Relationship between economic variables and energy price shocks
- Transmission mechanisms of energy prices
- Relationship between energy shocks, nationally raised revenues and economic growth
- The impact that energy shocks have on funding delivery of CMBS at sub-national level;
- Recommendations on developing coherent macroeconomic policies to ameliorate adverse effects of energy price shocks

To understand the likely impacts of higher-oil prices on economic growth and poor households, analysts generally rely on Computable General Equilibrium (CGE) Models, which simulate the working of the economy by taking into account the structure of the economy and interactions between sectors and agents, as well as the direct and indirect effects of policy measures. Although, the representative household model gives interesting insights on the average impacts on household groups, it cannot capture the substantial heterogeneity among households within a given group as CGE microsimulation models do. Therefore, this study integrates all actual households from the national income and expenditure survey of South Africa to assess the impact of higher-oil price on economic growth and poverty reduction owing to South Africa's environmental commitments.

To date the project has achieved the following:

- A survey of energy-CGE modelling
- CGE model specification
- Building of an Energy-SAM
- CGE model development
- Microsimulation Model of:
    - 100% increase of import price of oil + 50 % increase of export price of oil + floating domestic oil prices; a sub-test have been done by increasing the export price of oil till 100%
    - 100% increase of import price of oil + 50 % increase of export price of oil + full subsidy of domestic oil prices increase (fixed price); a sub-test have been done by increasing the export price of oil till 100%
- Major Outputs of the Project So Far:
    - FFC Published Reports

- o 3 Journal Articles in international peer reviewed journals

The next phases of the project will include:

- Coupling the microsimulation model with an environmental module
- Environmental – Energy – SAM development
- Simulating scenarios 1, 2, 3 and 4 with the environmental specification
- Simulating a few other environmental focused scenarios
- National Dissemination Workshops and Training
- More publications

25. Estimating Infrastructure Backlogs

The purpose of this project is to take stock of South Africa's "basic" infrastructure facility, determine the service levels from, and access to basic infrastructure bundles distributed across the nine provinces and its districts. Thereafter, account for any observed service delivery deficiencies and suggest policy options.

Rooted in historical antecedents, the spatial distribution across provinces and its districts, of physical infrastructure necessary to support the delivery of basic social services is highly uneven. According to the Commission, major investment to expand and upgrade existing infrastructure will be necessary in order to address imbalances, backlogs and support developmental efforts particularly in areas struggling to lift out of abject poverty. For instance, provinces that inherited former homelands and "self-governing" territories have unique and huge developmental challenges because these old structures typically had poor infrastructure and a disproportionately large numbers of uneducated populace having limited employment opportunities.

Furthermore, it important to note that although South Africa's Constitution confers on all its citizens the right to health care, access to food and water, and education, the fulfilment of this right by the relevant government agencies can be hampered by deficient infrastructure; either in having a distorted mix within a jurisdiction or in being inappropriately distributed or both. While acknowledging progress within the last ten years in addressing problems with the delivery of basic services particularly in areas that were ostensibly severely under-resourced, the comparative picture is still very disturbing and confronts the various tiers of government with uncomfortable questions about commitment to their constitutional responsibilities.