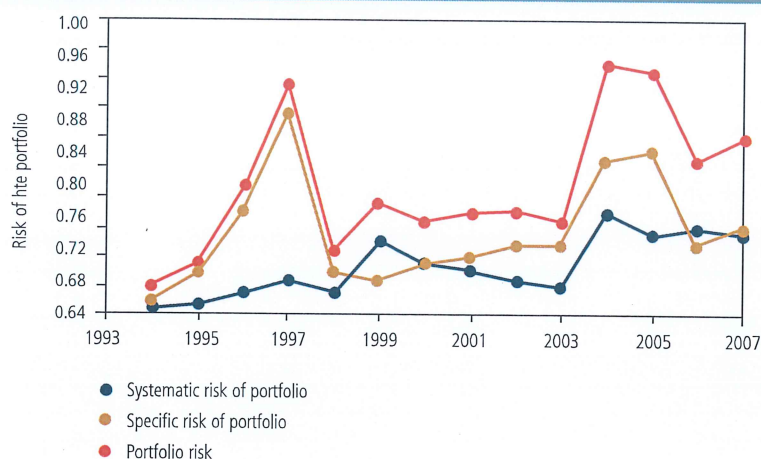Figure 2: The systematic risk, specific risk and the total portfolio risk for South Africa's crude oil imports for the period 1994-2007

- Systematic risk of portfolio
- Specific risk of portfolio
- Portfolio risk

Specific risk of oil imports is risk associated with events or conditions specific to individual or small groups of suppliers rather than the general happenings in the international crude oil market. For example, internal political strife or accidents that hinder productive capacity and limit the export quantity generated by a particular oil-producing nation would have implications for oil-energy security of countries that rely on such a nation for their crude imports.

Africa import risk portfolio. This is reflected in the witnessed high oil prices.

The largest decrease, between 9 to 10% in specific risk would occur if 10% of Middle Eastern oil imports were diversified to Europe, the region with the least risk weighting of 5.4%. Least reduction in specific risks, 6% would occur if 10% of Middle East imports supplies were transferred to suppliers in Africa, with a risk weight of 19.2%. Overall, reductions in the specific risk index will be greatest if 10% of Middle Eastern imports were to be diversified to Europe, North America, Russia, South America and Africa.

DIVERSIFY OIL SUPPLIERS

Our analyses show that fluctuations in both international oil prices and in South Africa's oil imports result in variability in the systematic risk of South Africa's oil import portfolio. Results also indicate that, while diversification of supply sources contributes to a lowering of risks, increased diversification that increases supplies from relatively risky oil producing regions would only serve to enhance the specific risks of South Africa's oil imports. Reduction in specific risks of imports can be achieved if some of the Middle Eastern supplies

can be diversified to less risky regions of Europe, North America, Russia and Africa in that order.

And while the analysis provides a number of interesting insights into the issue of oil-energy security for South Africa, rising demand for energy in the country's transport, manufacturing, construction and commercial sectors implies that future assessments of energy security will benefit from the inclusion of all types of energy resources and supplies.

POLICY RECOMMENDATIONS

1. A policy of having constant monthly imports from each supply region reduces the specific and systematic risks of the oil import portfolio by an average rate of 71% and 2.9% respectively.
2. Significant reduction in specific risks of South Africa's oil imports is achieved if imports from risky regions (mainly the Middle East) can be diversified to the relatively less risky regions of Europe and North America.
3. To ensure low import risks, South Africa needs to advance strategic partnerships and cooperation between subsidiaries of the government-owned Central Energy Fund (CEF) and private firms in the sourcing of crude oil; establish specific bilateral relations with less risky oil suppliers like Europe, North America and Russia, taking careful considerations of other cost factors.

This article is an extract from Wabiri, N. & Amusa, H. 'Quantifying South Africa's crude oil import risk: A multi-criteria portfolio model', which appeared in Economic Modelling 27 (2010): 445–453.

Dr Njeri Wabiri, chief research manager and mathematical statistician, HIV/AIDS, STIs and TB research programme.

NEW ANGLES ON THE IMPACT OF

The Land Redistribution for Agricultural Development (LRAD) programme showed that it has considerable impact on household consumption for participants, established MALCOLM KESWELL, MICHAEL CARTER and KLAUS DEININGER in a recent study. Yet much work remains to be done to fully understand the connection between asset transfer programmes like the LRAD and a reduction in persistent poverty.

onvincing empirical evidence of the direct impact of land redistributions is scant because history shows that land reforms often occur immediately after periods of intense conflict, when there is mu ch else going on at the same time as the land transfers themselves.

This makes it difficult to distinguish the impact of the redistribution from other influences, making evaluation of the impacts of these programmes challenging. In countries where land reforms do not involve outright transfers of land to the poor, this problem becomes even more difficult to deal with.

The programme works on the basis of a grant that is awarded to beneficiaries on a sliding scale, depending on the amount of the applicants' own contributions.

THE CHALLENGES

These factors, however, are less relevant in South Africa's case, making it an ideal case study of the redistributive efficacy of asset-transfer programmes. The Land Redistribution for Agricultural Development (LRAD) programme, launched in 2001, has been the main vehicle for enacting land transfers to the poor.

Styled on the so-called market-assisted land reform model, the LRAD programme provides land to individuals with an interest in farming. The programme works on the basis of a grant that is awarded to

LAND REDISBRIBUTION

beneficiaries on a sliding scale, depending on the amount of the applicants' own contributions, and these funds are then used to purchase land, which is then transferred to the beneficiaries.

While studying the impact of this programme presents relatively fewer challenges than, say, some of the land reforms undertaken in India a generation ago, the self-selectivity of the programme still makes it difficult to evaluate. Fortunately, the programme implementation and negotiation process creates an element of randomness about when programme applicants actually become programme beneficiaries, thus creating opportunities for innovative quasi-experimental approaches to identifying its impact.

Our study exploited this feature of the LRAD implementation process to disentangle the effect of the programme from the statistical bias that is induced by the programme's self-selectivity.

This gain is large enough to bump the average participating household over the poverty threshold by a significant amount.

THE APPROACH

To statistically identify the impact of the programme, we did a qualitative study of the screening and administrative processes through which LRAD applicants were required to pass, and used this to inform an empirical model of a household's selection

probability.

The key idea behind this approach was to identify instances where random events experienced by applicants to the LRAD programme resulted in indefinite delays in them becoming beneficiaries, and then using this fact to construct a control group of households that had similar observable characteristics and probabilities of selection into the treatment group (i.e. households who were already beneficiaries of the programme).

This sampling strategy was then complemented by econometrically matching treated and control households with similar observable characteristics to control for self-selectivity bias induced by differences in individual characteristics.

THE RESULTS

The results of this study shows considerable impacts of the LRAD programme on household consumption for participants: accounting for differences in the length of exposure to the programme, monetary impacts of the programme peak at approximately R275 per capita monthly consumption. Assuming an inter-temporal discount rate of 5%, this estimate translates to a discounted gain in monthly per capita consumption of about 50% after three years of exposure to the programme.

It is hard to simulate the precise magnitude by which rural poverty could be expected to decrease as a result of the LRAD programme because such simulations are by nature somewhat arbitrary. This is

exacerbated in the case of South Africa where there is some controversy over where to set the poverty threshold for rural areas.

The study estimate of average per capita consumption expenditure for households in the LRAD control group is R467.06 per month. Compared to a notional poverty threshold of R486.27 per capita (based upon a meta-analysis of suitable poverty thresholds typically reported in poverty measurement studies for South Africa), this finding reveals that households in the control group are defined as poor.

Yet much work remains to be done on fully understanding the causal pathways through which asset transfer programmes like LRAD might effect a reduction in persistent poverty.

A simple method of inferring the poverty impact of the LRAD programme would therefore be to evaluate where the average non-participating household would stand once exposed to the programme. By this approach, the impact on the (the depth of) rural poverty is R104.86 per capita monthly consumption. This gain is large enough to bump the average participating household over the poverty threshold by a significant amount. The study also analyses the longer-term impacts and finds that these gains rise till about three

years into the programme and then declines, where the decline is probably due to households that entered the LRAD programme at an early stage when it was arguably easier to pass the screening process.

FUTURE DIRECTIONS

Does this new evidence suggest scaling-up the LRAD programme? While analyses of land reform and agricultural development programmes often privilege technical productivity and investment indicators, our work focuses on a consumption-based metric of welfare, thus allowing a direct input into the debate on poverty alleviation strategies. Yet much work remains to be done on fully understanding the causal pathways through which asset-transfer programmes like LRAD might effect a reduction in persistent poverty.

... little is known about whether this evidence necessarily links back to an improvement in female bargaining power within the household.

To fully trace the intergenerational effects, the types of child-centric outcomes (educational attainment and health) that have been the central focus of the evaluation work on cash-transfer programmes, like the South African Child Support Grant, also require attention.

A further gap in our understanding that could help to harness or tailor the targeting of the LRAD programme is to look at impacts by gender. Particularly, do the land transfers have a gender differentiated effect by influencing women's bargaining power and resource control within households?

While much is known about the impact of cash transfers on child outcomes in South Africa, little is known about whether this evidence necessarily links back to an improvement in female bargaining power within the household. One promising method of probing this issue is to link ownership of the (prospective) asset transfer to the gender of the (prospective) beneficiary, and then trace the effect out onto the 'sharing rule' the household adopts by looking at the change in the demand for gender-specific goods that is caused by the change in income attributable to the exogenous asset shift. Such an approach could also be usefully complemented through qualitative work that seeks to probe the complex ways in which households assign residual rights of control and authority over household resources, both to get alternative ways of inferring bargaining power, as well as to sharpen the list of what constitute gender-exclusive or gender-assignable goods that might be useful analytically.

Dr Malcolm Keswell, UCT, submitted while at the HSRC; Michael Carter, University of California at Davis; and Klaus Deininger, World Bank.

ROUTINE HIV TESTING:
what it means for rights to healthcare
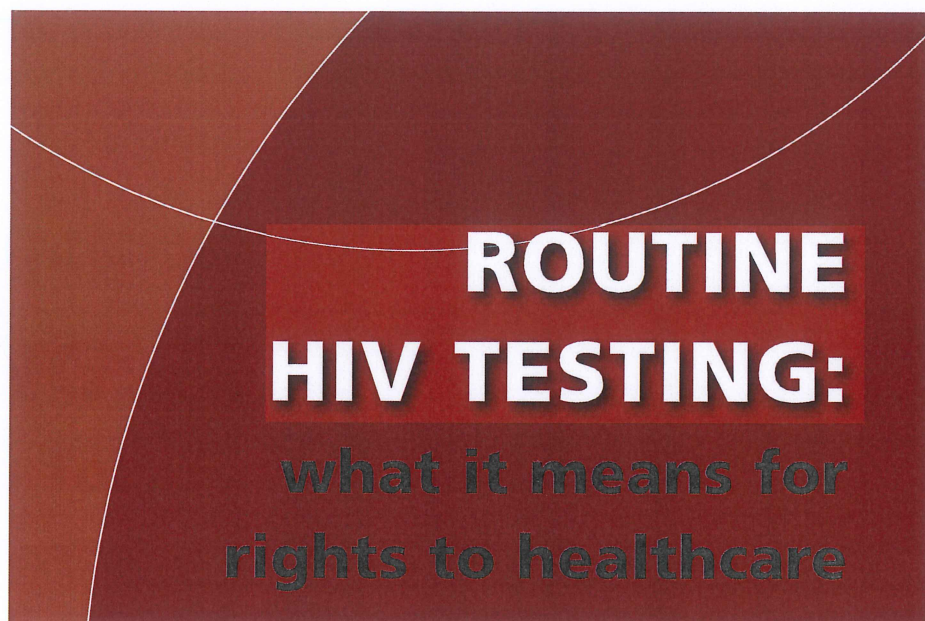
Will the impact of routine HIV testing, which forms part of the government's national HIV counselling and testing campaign, lead to resource constraints at state antiretroviral therapy facilities? And if so, who will decide who receives antiretroviral drugs and who doesn't? ADLAI DAVIDS and LINDI COETZEE explore these questions.

HCT AND TREATMENT EXPECTATIONS

Routine HIV testing forms part of the government's national HIV Counselling and Testing (HCT) campaign in South Africa, announced on 25 March 2010. This approach will see provider-initiated, but voluntary and confidential HCT offered to all seeking healthcare at public health facilities. In addition to an HIV test, patients will also be checked for hypertension, diabetes mellitus, anaemia and tuberculosis (TB). The campaign will serve the objectives of mobilising people to know their HIV status and to fight HIV-related stigma.

At this stage, more than one million HIV-positive people are receiving antiretroviral therapy (ART) through state facilities — the largest programme of its kind in the world. The implementation of routine HIV testing will reduce delays in HIV diagnosis and speed up the initiation of treatment for HIV-infected persons and will thereby increase the number of clients that will access free ART.

But during the latter part of 2009, some provinces ran out of antiretroviral drugs due to financial shortfalls and stock-outs, leading to interruptions in the ART of some patients. It is therefore likely that with a rapid increase in the number of patients wanting to access ART subsequent to the government's nationwide HCT campaign, the same may occur.

The questions our research raise is whether the impact of routine HIV testing will lead to resource constraints at some ART facilities and to decision-making at that level as to who gets access to antiretroviral drugs and who does not.

THE LAW ON ACCESS TO TREATMENT

Access to ART services in South Africa speaks to the socioeconomic right of access to healthcare, on which duties are imposed by international instruments, the South African Constitution and Constitutional Court decisions. We reviewed these provisions to see whether they related to the socioeconomic right to access ART and to evaluate if any obligations were placed on the state to ensure that its ART programme was not negatively affected by stock-outs and other disruptive events.

The most important international instrument relating to socioeconomic rights is the International Covenant on Economic, Social and Cultural Rights (the Covenant). Although South Africa signed the Covenant in 1994, it has not ratified it. Ratification will place two positive duties upon the state, namely to provide a legislative framework that provides for individuals' legal status, rights and privileges that enable them to pursue their rights; and a requirement that the state implements measures and programmes that are designed to assist individuals in realising their rights. A state is, however, granted discretion in terms of the qualification of the rights, namely 'progressive realisation' and 'within its available resources', to choose the methods for achieving socioeconomic rights.

STICKING TOGETHER
How much do South Africans trust each other?

PUBLIC SERVICE WAGE BILL
Linking earnings to productivity

AFRICAN GIANT
Professor Bernard Makhosezwe Magubane turns 80

AFFIRMATIVE ACTION
Who approves and disapproves