Research Summary
2008

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Director’s report

CSAE produces both research and the global public goods that facilitate research.

Our core remit is the quantitative analysis of African economies. This Research Summary describes the research projects underway at the Centre. They cover a very wide array of topics: macroeconomic management, household behaviour, and political economy. Over time we have broadened our geographic coverage to include other low-income economies with similar problems. Many of our projects are collaborative and this reflects our commitment to the global public goods needed for our specialist subject. Collaboration is in part an investment in building networks.

The Journal of African Economies, founded and run from CSAE, is another public good. It is now firmly established, well-regarded, with a high rate of submissions, a large circulation, and a consistent adherence to academic quality.

The Annual Conference held in Oxford each year in mid-March is a further public good. It attracts several hundred submissions for presentation, and has steadily expanded to become the world’s largest regular academic event on the subject. You will find advance details of how to register for 2009 on our website.

Our Seminar Series, held twice each week throughout each term, is also global, with each seminar videoed and downloadable on our website – a site which receives well over a million hits per year.

These public goods reinforce our networks and research programmes. The Journal of African Economies funds three Visiting Fellowships each year for African scholars to come to the Centre and further their research. The Fellows are chosen by the African Economic Research Consortium with which we have had a long and fruitful partnership.

We have aspired to combine rigorous academic research with deep and continuous engagement with the policy world. For example, in June 2008 we are launching a workshop for the governors of African central banks, in collaboration with the African Development Bank and JPMorgan, which we hope will become the equivalent for Africa of Jackson Hole. We have ongoing activities with the African Development Bank, the Economic Commission for Africa, the European Commission, UNESCO, UNDP, UNIDO, the IMF, and the World Bank.

As with all public goods, supply can be reinforced as users themselves contribute. We are an open-access network welcoming visitors and collaborators. Join in.

Paul Collier
Director
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AERC</td>
<td>African Economic Research Consortium</td>
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<tr>
<td>BER</td>
<td>Bureau for Economic Research</td>
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<td>CBOs</td>
<td>Community-Based Organizations</td>
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<td>CEPR</td>
<td>Centre for Economic Policy Research</td>
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<td>CERDI</td>
<td>Centre d'Etude et de Recherche sur le Développement International, Clermont-Ferrand</td>
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<tr>
<td>CPIX</td>
<td>Consumer Price Index Excluding Mortgage Costs</td>
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<td>CPI</td>
<td>Consumer price index</td>
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<td>CPIA</td>
<td>Country Policies and Institutional Assessment</td>
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<td>CPRC</td>
<td>Chronic Poverty Research Centre</td>
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<td>CSAE</td>
<td>Centre for the Study of African Economies</td>
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<td>DFID</td>
<td>Department for International Development</td>
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<td>EPRC</td>
<td>Economic Policy Research Centre, Kampala</td>
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<td>ERHS</td>
<td>Ethiopian Rural Household Survey</td>
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<td>ESRC</td>
<td>Economic and Social Research Council</td>
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<td>ESRF</td>
<td>Economic and Social Research Foundation</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FRAs</td>
<td>Forward Rate Interest Agreements</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GMM</td>
<td>Generalised Method of Moments</td>
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<td>GPRG</td>
<td>Global Poverty Research Group</td>
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<td>GSO</td>
<td>Ghana Statistical Office</td>
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<td>HIPC</td>
<td>Heavily Indebted Poor Countries</td>
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<td>IDPM</td>
<td>Institute for Development Policy and Management</td>
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<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
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<td>IIG</td>
<td>Improving Institutions for Pro-Poor Growth</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>JAE</td>
<td>Journal of African Economies</td>
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<td>LICUS</td>
<td>Low-Income Countries under Stress</td>
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<td>LSE</td>
<td>London School of Economics</td>
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<td>MPC</td>
<td>Monetary Policy Committee</td>
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<td>NGO</td>
<td>non-governmental organisation</td>
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<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>RECOUP</td>
<td>Research Consortium on Educational Outcomes and Poverty</td>
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<td>RIDC</td>
<td>Regional Industrial Development Centre</td>
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<td>RPC</td>
<td>Research Programme Consortium</td>
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<td>RPED</td>
<td>Regional Programme on Enterprise Development</td>
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<td>SARB</td>
<td>South African Reserve Bank</td>
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<td>SSA</td>
<td>sub-Saharan Africa</td>
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<td>TMES</td>
<td>Tanzania Manufacturing Enterprise Survey</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organisation</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WIDER</td>
<td>World Institute for Development Economics Research</td>
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Section 1: CSAE and economic research on Africa

The Centre for the Study of African Economies (CSAE) is part of the Department of Economics at Oxford University and has made a substantial contribution to understanding the problems faced by Africa. The Centre began as a small unit in 1986 and has since grown to become part of a wide range of networks of those interested in contributing to the issues posed by development in Africa and elsewhere. The Centre is distinctive in several respects:

- Its research is based on quantitative analysis;
- Researchers at the Centre engage in the collection of substantial amounts of primary data;
- It has sought to develop expertise in both micro and macro approaches to growth and poverty by an extensive programme of training;
- Its work is collaborative between institutions and across disciplines;
- While Africa remains at the core of its research agenda, work has been undertaken in other low-income countries.

In the last year our most important new research project has been a Research Programme Consortium (RPC) funded by the Department for International Development (DFID). This new project focuses on 'Improving institutions for pro-poor growth in Africa and South Asia' (IIG) and the CSAE is the lead UK institution. We report on the early stages of work in Section Two. Over the five year period ending in August 2007 we received ESRC funding as part of the Global Poverty Research Group (GPRG), a collaboration with the Institute for Development Policy and Management (IDPM) at the University of Manchester. We report on this project in Section Three. In addition to these major sources of funding there are a range of other projects on which we report in Section Four below.

In this first section we report on how work at the CSAE is organised, how we have engaged in the collection of new data and our interaction with users, training and dissemination. The Centre's objective has been, and remains, to make a significant contribution to the transformation of African economic performance. In order to meet this objective the Centre undertakes the following specific activities:

- Publishing significant theoretical and empirical findings;
- Establishing itself as a focus of collaboration between researchers and users;
- Seeking co-sponsorship;
- Engaging with users;
- Engaging in the training of postgraduate students.

Our objective in developing these areas has been to build the research infrastructure that will allow us to pursue our primary research objective – the production of excellent research geared to an improvement in Africa's economic performance. Two of our activities which allow us to extend our work well beyond Africa are
funded by DFID.

Improving institutions for pro-poor growth in Africa and South Asia (IIG)

This DFID-funded Research Programme Consortium represents a major extension of the work of the Centre. South Asia and sub-Saharan Africa represent the two great challenges as regards meeting the Millennium Development Goal of halving global poverty by 2015. There is growing evidence that the impediments to generating pro-poor growth in these two regions are institutional in nature. Social, legal, economic and political institutions powerfully affect the pattern of investment and growth and the extent to which the poor participate in that growth. The objective of the proposed consortium is to produce a new body of policy-relevant research on the institutional reforms needed to promote pro-poor growth in South Asia and sub-Saharan Africa.

This purpose will be achieved through the generation of four research programmes: (1) Institutions and Growth; (2) Institutions for Accountability and Empowerment; (3) Institutions for Property Rights and Contracting; and (4) Institutions for Regulation and Trade.

A network of applied research institutes in Africa, Asia, the USA and Europe is being set up which will address this agenda through an innovative programme of research, capacity building, training and dissemination, bringing together researchers to generate new conceptual, theoretical and empirical insights about institutions for pro-poor growth. Further information can be found in Section 2.

Outcomes of education for pro-poor development (RECOUP)

Work started in October 2005 on this DFID-funded Research Programme Consortium, RECOUP. The work draws on expertise across three UK institutions: the Centre for Commonwealth Education in the Faculty of Education at Cambridge University; the University of Edinburgh; and the CSAE. There are a further four consortium partner institutions in South Asia and Africa: India, Pakistan, Kenya and Ghana.

RECOUP’s research agenda comprises work on the effect of education on three broad sets of outcomes. The first is related to the social consequences of education which includes health, fertility and subjective well-being. The second is economic outcomes which comprise not simply the earnings individuals obtain from education but how it affects their chances of getting a job and the type of job that they can obtain. Finally, RECOUP will be investigating the outcomes of alternative methods of funding education. This last issue is particularly pressing in countries where limited public sector budgets have led to a decline in the quality of publicly provided education and the rise of a private educational sector.

The research agenda is being addressed via both quantitative and qualitative studies. Innovative, comparable household surveys have taken place during 2006–07 in three of the four developing countries where our partners are based. Apart from the usual demographics, the survey includes detailed questions on education and quality of education as well as measuring cognitive skills, ability, health knowledge, health status, labour market outcomes and subjective well-being. Aspects of this project have been co-funded with the Global Poverty Research Group.
Extending the knowledge base for Africa: Micro surveys

Both microeconomic and interdisciplinary research relies on using data from households and firms. The CSAE has been actively involved in a long-running panel data survey in rural Ethiopia and Zimbabwe. The firm studies carried out by Centre staff, or with Centre assistance, now cover Ghana, Ethiopia, Tanzania, Kenya and Nigeria. Comparative data on other countries – Burundi, Côte d’Ivoire, Cameroon, Zimbabwe and Zambia – have also been collated. In the areas of both household and firm data the Centre has developed extensive expertise in the design and implementation of questionnaires, data coding and field work. In recent years the range of surveys undertaken by the Centre has been extended to include survey work on NGOs and coffee farmers in Uganda, panel labour market surveys in both Tanzania and Ghana and surveys of Ghanaian cocoa farmers.

The labour market survey collects information on incomes, education and labour market experience, household characteristics and various other modules for labour force participants (ages 15 to 60) in urban areas. For Ghana these areas span the four largest urban centres in the country: Accra (and neighbouring Tema), Kumasi, Takoradi and Cape Coast. In Tanzania, the sample covers several of the largest urban areas including Arusha, Dar es Salaam, Iringa, Morogoro, Mwanza, and Tanga. There are now three waves of this survey covering the period 2004 to 2006. No survey was conducted in 2007. It is planned to repeat the surveys during the course of 2008.

During 2006, we undertook the third round of the panel survey of cocoa farmers funded by GPRG. This survey covers some 500 farmers and is a follow-up to a survey first conducted in 2002. This survey work is providing the basis for research exploring the role of increased competition in productivity outcomes for cocoa farmers; investigating the role of migration in accessing education; and informing policy as to reasons for the continuing low levels of land productivity achieved by Ghanaian farmers. A report on the work on Ghanaian cocoa farmers, which was presented to the Ghana Cocoa Board, can be found on the GPRG website http://www.gprg.org/. It is hoped this survey will become a long running panel.

Pedro Vicente has continued the work on household surveys in Cap Verde which are a follow-up to his PhD research at the University of Chicago. He has investigated the causes and consequences of corruption, an issue central to the governance agenda of the GPRG. The newly designed survey, which was implemented this year, is designed to establish whether corruption can influence the outcomes of elections. This work and its follow-up is an important input into the research being undertaken as part of the IIG.
Data available on the CSAE website

Seven data sets can be downloaded from the site. For each set there are four components that the user can access: the data set, documentation, programmes and publications.

Ghana and Tanzania Urban Household Panel Surveys 2004-2006

The CSAE in collaboration with the Ghana Statistical Office (GSO) and the Tanzania National Bureau of Statistics (NBS) has been conducting a labour market panel survey of urban sectors in Ghana and Tanzania since 2004. It is planned to re-interview the individuals from the survey during the course of 2008.

Ghana RPED data

This data set contains comprehensive panel data on a sample of firms within the Ghanaian manufacturing sector. The data was collected in a series of three annual surveys undertaken in 1992–94 as part of the Regional Programme on Enterprise Development (RPED) organised by the World Bank. The data was collected by a team from the CSAE, the University of Ghana, Legon, and the Ghana Statistical Office.

Firm-level data was collected for the period 1991–93 and data on a sample of workers and apprentices within each firm for the period 1992–94. The sample of over 200 firms surveyed is broadly representative of the size distribution of firms across the major sectors of Ghana’s manufacturing industry, including food processing, textiles and garments, wood products and furniture, metal products, and machinery.

Ghana macro data

This data set provides trade data for Ghana’s exports over the period from 1990–1999. The export data is divided between non-cocoa and cocoa exports and the data set includes price series for the real prices to producers of the exports. Variable definitions can be found in Francis Teal, ‘Export growth and trade policy in Ghana in the twentieth century’, The World Economy, Vol. 25, No.9, September 2002.

Ethiopia AAIS data

This is the first wave of a panel data set on a sample of firms within the Ethiopian manufacturing sector. The first round of the survey was undertaken in September–December 1993. The questionnaire structure and types of data collected were designed to be consistent with other African manufacturing sector surveys carried out under the RPED. The survey covers 220 firms that were selected on a random basis from manufacturing establishments in the Addis Ababa region, of which 30 are public enterprises.

Ethiopia ERHS data

The Centre is involved in the Ethiopian Rural Household Survey (ERHS), a unique data collection programme, in collaboration with the Economics Department and
the Institute of Development Research, both of Addis Ababa University.

Since 1994 data has been collected on about 1450 households in 15 villages across Ethiopia. The data forms a panel household survey. Two rounds took place in 1994, a third in 1995. A fourth round took place in 1997 in collaboration with the International Food Policy Research Institute. A fifth round was completed in 1999. About 350 households were also interviewed in 1989 by the International Food Policy Research Institute. Most of these households were included in the later surveys. The data for the 1989, 1994 (two rounds) and 1995 surveys is now available.

**Comparative firm-level data (five sub-Saharan countries)**

The data is that which underlies the paper ‘Rates of return on physical and human capital in Africa’s manufacturing sector’, published in *Economic Development and Cultural Change*, July 2000. The paper presents standard earnings and production functions for the manufacturing sector of five African countries: Cameroon, Ghana, Kenya, Zambia and Zimbabwe. The data set is unusual in having measures of both physical and human capital.

**Tanzania RPED data**

This is a comprehensive panel data set on a sample of firms within the Tanzanian manufacturing sector. This data was collected over the period 1993–95 in a series of three annual surveys, referred to here as Waves I–III, as part of the Regional Programme on Enterprise Development (RPED) organised by the World Bank and funded by bilateral donor governments. The data was collected by a team from the Helsinki School of Economics, in collaboration with the Tanzanian Confederation of Industries and the University of Dar es Salaam.

**Tanzania TMES data**

A fourth wave of the Tanzania Manufacturing Enterprise Survey (TMES) was conducted in late 1999, involving a team of researchers from CSAE and the Economic and Social Research Foundation (ESRF) in Dar es Salaam. This succeeded in revisiting 89 of the remaining RPED firms and interviewing an additional 103 replacement firms. Firm-level production and accounts data was obtained for 1996, 1997 and 1998, thus giving a maximum number of six observations per firm over the four waves of the survey. This data set is directly comparable to and can be linked with Waves I–III of the RPED described above.

**Networking**

The Centre seeks to be part of a wide range of networks and to both participate in and facilitate research on Africa. This includes working within Africa, publications, conferences, seminars, training and teaching.

The CSAE has a long-standing collaboration with the African Economic Research Consortium (AERC), based in Nairobi. Centre staff work with the AERC in a wide range of activities to build an international network of research, training and teaching. Particular emphasis has been placed on African academics: they have a crucial role to play in developing an informed constituency within the continent. A number of Centre staff attend the AERC’s meetings and make important contributions to both the design and the evaluation of the research programme. The
AERC and the CSAE have jointly researched trade liberalisation, regional integration and the sources of economic growth in Africa.

While the AERC is the most far-reaching of the institutions with which the CSAE collaborates, the Centre has entered into a number of protocol agreements with institutions in individual countries in order to facilitate its research and enable Africans to participate fully in the work. The CSAE has entered, during its time as an ESRC Research Centre, into the following protocol agreements:

- With the Economics Department at the University of Addis Ababa, covering interaction between members of the Centre and the Department, and providing links with domestic policy makers.
- With the Ministry of Finance of the Government of Zambia to provide advice on macroeconomic policy.
- With the Economic Policy Research Centre, Makerere University, Kampala for collaboration: a staff member of the EPRC is studying for a doctorate at Oxford and CSAE staff regularly visit the EPRC.
- With the Economic and Social Research Foundation (ESRF) in Dar es Salaam to conduct a series of surveys on the Tanzanian manufacturing sector.

**Publications**

The publications of the CSAE seek to disseminate research to the wider community and to stimulate debate on African policy issues. The CSAE undertakes the following four major sets of publications:

- The *Journal of African Economies (JAE)*, was launched jointly with Oxford University Press in 1991. The Journal has established itself as the principal forum for applied economic research on African economies. DFID has given financial support for distributing *JAE* within Africa.
- A twice-yearly supplement to the Journal which brings together the papers presented at plenary sessions of the AERC.
- A Working Paper Series which allows CSAE researchers to present sometimes preliminary versions of their research to a wider readership.
- A series of monographs on African economies published in partnership with Macmillan (now appearing under the Palgrave imprint).

**Conferences**

Since its inception, the Centre has held a regular series of conferences aimed at policy makers, other academics and institutions of civil society. Programme details for all conferences organised by the CSAE are on the website at http://www.csae.ox.ac.uk/conferences/

The GPRG held a conference in March 2007 on ‘Livelihoods and wellbeing in developing countries: A multidisciplinary approach’. The overall objective of GPRG research is to carry out multi-disciplinary work investigating poverty, inequality, and the quality of life and this conference was designed to highlight the links between
these three dimensions of well-being. A wide range of papers was presented, diverse in their approaches, their choice of method and the countries from which their data was drawn.

The 2007 CSAE International Conference ‘Economic Development in Africa’ was held at St Catherine’s College from 18–20 March. A generous grant from DFID enabled us to fund a large number of participants from developing countries. The African Economic Research Consortium sponsored twelve participants from Africa. The conference opened with a panel session ‘Why is Africa getting left behind’, with Adrian Wood, David Hulme and John Knight. Keynote speeches were made by Louis Kasekende and Ian Goklin and the conference closed with a panel on ‘Institutions and growth in Africa’ with Paul Collier and Ted Miguel.

The 2008 CSAE conference on ‘Economic Development in Africa’ will be held at St Catherine’s College 16–18 March 2008.

Seminars and presentations

The CSAE holds two seminars a week in Oxford during term-time, primarily aimed at academics. These seminars, given by Centre researchers and by others drawn from the national and international academic community, provide reports on work in progress as well as presenting material prior to publication. Centre members have also made many presentations during the course of the year to the political, business and academic communities.

Training and teaching at the Centre

Museveni Scholarship

The Centre for the Study of African Economies invites applications for a scholarship of £10,000 to support Africans wishing to pursue economic research at the University for the degree of Doctor of Philosophy (DPhil). Candidates will be drawn from students accepted for DPhil research by the University of Oxford. The thesis topic should be of relevance to African economies. Museveni Scholars will be attached to the CSAE and will usually be supervised by members of the research team. This funding is made available to the Centre as a result of a very generous donation from the Government of Uganda.

Applications must include a copy of your research proposal, your CV, and details of any other funding applied for or obtained for your DPhil studies. They should be sent to the Administrator, CSAE, Department of Economics, Manor Road Building, Oxford, OX1 3UQ.

The doctoral programme

The core funding for long-term research has enabled the CSAE to build up a substantial doctoral programme: there are currently 34 doctoral students from around the world. There follows a brief description of the thesis topics of the DPhil students attached to the Centre.
S. M. Ali Abbas
‘Fiscal sustainability and growth in SSA: The role of domestic debt’
The Heavily Indebted Poor Countries (HIPC) initiative has helped waive much of the poor countries’ external debt burden. But Africa’s new social spending programmes, being financed by concessional external finance, are likely to create a similar burden with the same package of risks (currency depreciation, moral hazard on the part of debtors etc.) as the first tranche of ‘concessional’ loans in the 1960s and 70s. While concessional external finance might be the only feasible option in the short run, it is important for African governments to think about proactively developing their domestic debt markets so that budgetary needs can eventually be financed at home and by issuing local currency debt instruments. In this context, my research focuses on public debt sustainability and growth in post-HIPC Africa, exploring: i) the impact on the macro-economy of a current debt-financed fiscal expansion, given private sector expectations of future external debt forgiveness; ii) the choice between external and domestic borrowing in view of the underlying risks: interest rate risk, refinancing risk and currency depreciation risk; iii) the possible growth pay-off to developing domestic debt markets and the implications of this for domestic debt strategy; and iv) the viability of converting external debt and grant aid into domestic bonds to boost the average citizen’s net asset holding and support domestic financial market development in the region.

Simon Baptist
‘Choosing technology: Theory and evidence from Asian and African manufacturing’
The labour productivity differentials between manufacturing firms in Ghana and South Korea exceed those implied by macro analysis. Median value-added per employee is nearly 40 times higher in South Korea than in Ghana. The most important single factor in explaining this difference is the Mincerian return to skills which differ by a factor of three between Ghana and South Korea. There is no significant difference in total factor productivity across the countries once we allow for human capital. Our results are consistent with those who have argued that rises in the return to education within developed countries can be explained by skill-biased technical progress in those economies. They are also consistent with work in developing countries which finds a convex return to education based on individual labour market data. Allowing for differences in the shape of the relationship between productivity and human capital across countries is crucial for understanding the role of human capital in increasing productivity.

Ingrid Boxall
‘Experimental investigations into income inequality, inequality aversion and criminal behaviour’
This research investigates when and how individual behaviour is affected by income inequality, specifically analysing aversion to such inequality and the consequences to be considered when formulating policy initiatives. I employ an experimental methodology and have designed a sequence of games through which to explore this behaviour. These games are predominantly multiplayer versions of the dictator game and allow analysis into the utility an individual derives from a particularly equal or unequal income distribution.
I have implemented the majority of the games in South Africa, a country with notoriously high income inequality, and the initial results indicate high levels of aversion to income inequality and strong associations between income inequality and decisions to steal and redistribute income. In addition, I explore how individual perceptions about whether income or wealth is deserved affect the way in which income inequality impacts on behaviour.

Through the use of various treatments, I examine the prevalence and effects of both income inequality aversion and procedural fairness. I also analyse the differences in behaviour when the action set moves from being constrained to unconstrained. Findings of significance within this research could lead to increased understanding of many behavioural issues (crime, unemployment, education, etc.), thereby allowing more effective design of policies aimed at improving these concerns.

**Rulof Burger**

‘Changes in the South African wage structure since political transition’
My thesis will investigate labour market trends in South Africa since the political transition in 1994. The South African economy has been characterised by very high unemployment, increasing earnings inequality and labour market outcomes that remain highly correlated with race. Towards this end, this dissertation will use the twenty nationally representative household surveys that were conducted by Statistics South Africa in the post-apartheid period in order to determine the causes of these trends and to identify appropriate policies to address them.

The first chapter explores the increasing convexity in the returns to education that has been observed over the 1994–2007 period, and attempts to identify the role played by three potential causes: skill-biased technical change, the opening up of the economy to international trade and the existence of human capital externalities.

**Daniel Clarke**

‘Essays on ambiguity, risk and poverty’
First, I am working on designing group microinsurance mechanisms suitable in developing country contexts. If the poor could pool their risks cheaply, transitory poverty and fear of transitory poverty could be substantially reduced. Using a mechanism design approach I incorporate ideas from recent positive theories of microcredit, such as Rai and Sjöstrom (2004) and Armendariz de Aghion (1999), and classical actuarial theory.

Second, I am interested in the empirical Bayes approach to the formation of objective ambiguous beliefs about a risk in a collective of similar risks, using a decision-theoretic framework.

**Markus Eberhardt**

‘Sources of growth under structural change: Combining evidence from micro surveys and cross-country macro data’
Structural transformation of an economy based primarily on agriculture to one with a significant share of manufacturing output has long been recognised as an important process in economic growth and development (Jorgensen, 1961; Kuznets, 1961; Lewis, 1954; Robinson, 1971). However, the endogeneity of structural change in the growth process makes it difficult to analyse how structural change is related to
development.

Differences in production technology between sectors, higher technology levels or growth rates in manufacturing, labour market and capital market imperfections in favour of factor accumulation in manufacturing are all possible mechanisms by which a process of structural change will impact on long-run incomes.

The major contribution of this DPhil thesis is the specification and analysis of an empirical version of the dual economy model. We construct a suitably general framework which encompasses the most important models in the empirical growth literature since Mankiw, Romer and Weil (1992). At the heart of the conceptual development is the interplay between variable nonstationarity and heterogeneity of production function parameters. A completed empirical chapter provides production function estimates for macro manufacturing data from a diverse sample of countries. This makes use of the recent literature on nonstationary panel econometrics (Pesaran and Smith, 1995; Phillips and Moon, 1999; Smith and Fuertes, 2004; Pesaran, 2006; Pedroni, 2007) and in addition develops a two-step estimation approach in the spirit of the Pesaran (2006) common correlated effects estimator. Subsequent work will carry out similar analysis for the agricultural sector.

**Ghada Fayad**

‘Foreign aid, remittances and the real exchange rate: Evidence from the Middle East and North Africa region’

The emergence of workers' remittances as a significant source of external finance to developing countries has imposed it as a main component of contemporary research attempting to understand those private flows' potential benefits and risks in both sending and receiving countries. This paper investigates the 'Dutch disease' effect of remittances' inflows, theoretically in a simple set-up, where we argue that the channels through which remittances affect the real exchange rate are more complex than those of foreign aid flows. We examine these effects empirically in the context of the Middle East and North Africa (MENA) Region, which we divide into two sub-samples of remittances' source and recipient countries. We develop a simple short-run dual economy model with two types of international flows: exogenous (public) foreign aid and endogenous (private) remittances' inflows. The model predicts a pure appreciative spending effect shared by those two types of flows, and a depreciative remittances' effect on the real exchange rate. Our empirical results show that remittances do appreciate the real exchange rate and hence risk harming export competitiveness in a panel of MENA net labour exporters. We also show that remittances' outflows exert a depreciative impact that appears to counterbalance Dutch disease appreciative effects of oil revenues in another panel of MENA oil exporters and net labour importers. Our results have addressed remittances' potential endogeneity which differs in nature between inflows and outflows in the two MENA samples, and have tested the validity of the two sets of different instruments we used for each panel.

**Nina Fenton**

‘Education, poverty and inequality in rural China during the marketisation period’

I will examine how educational investment by two disadvantaged groups, the poor and ethnic minority citizens, has been affected by marketisation. Differences in the outcomes of education, however, may be equally important in explaining economic
and social inequalities. I will examine three important outcomes: student achievement; occupational and intergenerational mobility; and individual happiness, or 'subjective well-being' (SWB). I will ask whether disadvantaged groups benefit less, in terms of these outcomes, from education.

I will use data from household surveys carried out in 1988, 1995 and 2002. The 2002 survey, which was designed by an international team, contains particularly detailed information on education, including expenditure by the household and by government, and on SWB and attitudes. As data linking student achievement and education quality was unavailable, I designed and carried out my own survey of students in the final year of compulsory education and their teachers in a poor, multi-ethnic rural area of North West China. The second wave of data collection was carried out in April 2007.

**Alejandro de la Fuente**

‘Vulnerability in rural Mexico: Welfare outcomes and household response to risk’

In Mexico an overwhelming majority of rural households are still poor and they account for about two thirds of the total population share in extreme poverty in the country. This type of poverty not only comes from the structural characteristics embedded in most rural livelihoods and communities, but also from large fluctuations in their incomes due to an ever-present exposure to risks, such as crop failure. The concept of vulnerability to poverty has been proposed to improve our understanding of the interactions between poverty and risk with the explicit aim to quantify the extent to which the possible realisation of shocks, added to other more permanent disadvantages, can translate into declines below a specified benchmark of well-being in the living conditions of families in the future given their present circumstances. I apply such tool to a five-round panel of rural households in Mexico that extends from October 1998 to November 2000, further enhanced by monthly rainfall data for a period of 40 years (from January 1961 to December 2000). In addition, analyse the risk-coping strategies employed by this group of rural families using quantitative techniques. Both sets of findings are then contrasted with contextual and qualitative techniques to investigate further vulnerability and risk coping, based on field work in communities in Puebla originally contained in the household survey.

**Christian Helmers**

‘Innovation, knowledge spillovers, and economic growth’

I empirically analyse the emergence and existence of knowledge spillovers between innovative firms. Moreover, I investigate the role of spillovers in shaping firm performance and firms' innovative behaviour. This potentially has important implications for technological progress and therefore economic growth. In the first stage of my research, I use a large firm-level panel data base for the UK and employ several indicators of economic and technological distance between firms as measures for unobserved knowledge spillovers. Knowledge spillovers are found to have a sizeable effect on firm performance measured as firm survival. In future work I will also analyse the effect of spillovers on firm productivity.
Fadel Jaoui

‘Exchange rate regime choice and financial crises in emerging countries: are floating-exchange-rate regimes less conducive to crises?’

This thesis empirically investigates the relationship between exchange rate regime choice and currency crisis vulnerability in emerging countries. In particular, it addresses the question of whether floating-exchange-rate regimes are less conducive to crises, and if so to what extent? We first present a currency crisis model of a second-generation type within a small open economy framework that builds an analytical structure for the empirical analysis. We then use a panel of annual data covering 30 countries over the recent period 1990–2005 to examine the likelihood of a crisis via a logit econometric model.

We also estimate a tobit model to explain the severity of crisis if it occurs. We obtain new findings which are not present in empirical currency crisis literature. First, countries operating under a floating regime are less likely to experience a currency crisis than those under more rigid regimes. Second, however, when taking into account capital restrictions we find that an intermediate regime combined with tight capital controls can perform better than a floating arrangement in lowering both crisis probability and severity. The main results are robust to sensitivity checks.

Sofya Krutikova

‘Exploring poverty traps: Long-run effects of insurance and credit market failures’

This thesis aims to explore the long-run effects of some of the risk management and risk coping strategies adopted by rural households in the face of imperfect or non-existent credit and insurance markets on a selection of outcomes. It focuses on assessing the extent to which strategies that households may be forced to adopt in the short-term to deal with uninsured risk contribute to persistence of poverty in the long term. The specific risk management strategies analysed include the use of child labour, marriage and migration. The thesis is predominantly empirical, using a 13 year household panel data set from rural Tanzania.

Neha Kumra

‘Essays in development economics’

My thesis will consist of applied theory papers on investment in education and health in the context of developing countries. In the first chapter, I analyse the effect of uninsured risk on investment in health and education. I develop a two period model of investment in education and health when future labour earnings are stochastically dependent on current investments in education and health. It is found that when there is uninsured risk, then parental investment in a child's education will be inefficient even in the presence of perfect capital markets. Under certain assumptions, there will be a positive correlation between childhood health and educational investment. In the second chapter, I will develop an overlapping generations model of investment in health and education when time preferences are endogenous. In the third chapter, I will apply insights from the industrial organisation literature to analyse the effect of market structures of education supply on investment in education by poor households in developing countries.
Florencio Lopez Boo
This thesis comprises four empirical papers that examine changes in the distribution of income (including in particular the increasing skill premium) in a context of increasing supply of skills, decreasing wages and aggregate changes in the economy. Argentina will serve as a relevant application for this study as the period being analysed (1992–2003) is one characterised by volatility, macroeconomic shocks and economic reforms. The first paper focuses on the measurement of poverty, incomes and inequality changes and their determinants and interactions. It examines the link from inequality to income levels. Taking on the findings of the first paper that postulate that education and the number of college graduates in a household were the single most important factor raising incomes, the second and third paper look at the increasing skill premium. The second paper uses the full labour force data set, while the third uses the manufacturing sector sample in order to properly test for the effects of industry-level variables on wage levels and differentials across and within sectors. The primary focus of the fourth paper is on schooling/employment decisions in times of high unemployment. This paper addresses the importance of macroeconomic shocks and labour markets in determining schooling vs. employment decisions.

Maria Ana Lugo
‘On multidimensional distributions of well-being’
The thesis deals with multidimensional analysis of well-being and the effect of inequality on school achievement. The first three articles present new indices of inequality and poverty to meaningfully compare populations which differ in, for example, income, health and education. These measures have two important properties: they are sensitive to the dependence between different dimensions of well-being, and they make explicit the various normative judgments underlying the choice of how to aggregate indicators of well-being within and between individuals. Each paper adopts a different in order to show the usefulness of each of them while highlighting the grounds where agreement is found.

Paper four – mainly empirical – addresses the instrumental importance of inequality by analysing its impact on educational achievements in Argentina. Socioeconomic inequality among students at the levels of the classroom and the neighbourhood are found to impact pupils’ achievements through the allocation of children across schools. Given the specific form of peer-group effects, increase economic segregation unambiguously lowers the academic achievement of poor students, and increases the disparity in performance between poor and non-poor pupils.

Cynthia Mbaru
‘Essays on monetary policy in Kenya’
My research focuses on monetary economics with an emphasis on Africa. I shall be investigating the monetary policy transmission mechanism in Kenya. While research has demonstrated the importance of the exchange rate in the transmission mechanism, I shall be examining the role of the exchange rate and financial sector in more detail. My other focus will be on the political economy of central banks. In particular I shall be examining the issues of central bank independence, transparency
and accountability and whether these influence the effectiveness of the conduct of monetary policy on the continent.

**Courtney Monk**

'Health and education in developing countries'

My DPhil research consists of three distinct, but related, papers on health and education in developing countries. The first paper explores the relationship between employment status and health outcomes for the urban self-employed in Africa, using new panel data from Ghana to investigate job quality and health for these individuals. The second paper uses the same data set to measure the returns to traditional apprenticeship, a common form of private training in Ghana. The third paper focuses on primary education in rural India. The survey on which this paper will be based is still in progress and will be completed in March 2008. Currently, I am planning to examine the effect of health and nutrition, in particular a mid-day meal scheme, on student achievement, while controlling for family background and teacher competency.

**Priscilla Muthoora**

'Public spending in developing countries'

My thesis examines the determinants and effects of government spending in developing countries. In my first paper, I investigated, in the context of debt relief, the effects of alternative public spending choices on macroeconomic variables and welfare in Madagascar using a dynamic Computable General Equilibrium (CGE) model. The rest of my thesis considers a broader sample of countries, and uses econometric methodology to ask further questions relating to public spending. In particular, I look at the determinants of the level, composition and cyclical properties of public spending, focusing mainly on political economy explanations and intertemporal models of the current account.

**Gaurav Nayyar**

'The role of services in development: The Indian experience'

India has become one of the fastest growing economies in the world over the last two decades. Importantly, a striking aspect of the country’s recent growth has been the dynamism of its services sector. At present, the services sector in India accounts for around 51 per cent of GDP. And over the last decade the growth rate of services has been much faster than that of either industry or agriculture. These facts, which suggest that the services sector can dominate economic activity and lead economic growth in an important developing country, are striking. The object of this thesis is to analyse the role of the services sector in economic development, focussing on issues relating to employment, output and welfare. First, the thesis looks inside the black box of the services sector by developing a taxonomy that disaggregates the services sector in India with reference to a set of eleven attributes that are important indicators of development. Second, it seeks to analyse movements of labour across sectors and to compare productivity growth between the agricultural sector and informal services sector in order to determine the dominant residual sector of the economy, in terms of labour absorption. Third, the thesis uses data from household surveys to (a) estimate the relationship between income growth and the demand for different consumer services, (b) identify barriers to entry in different sub-sectors of
services, and (c) estimate and analyse the earnings function of those employed in
different sub-sectors of services, relative to agriculture and industry. Fourth, the
thesis attempts to analyse the existence of synergies between the manufacturing
sector and services sector. In particular, using data from firm surveys, it seeks to
analyse the nature of these synergies by examining the relationship between firm size
and the use of different intermediate services in the manufacturing sector.

Sean O’Leary
‘Reform to the ACP-EU sugar protocol: The impact upon poverty’
The ACP-EU Sugar Protocol was established in 1975 under the Lomé Convention
to grant preferential access to 46 countries from Africa, the Caribbean and the
Pacific. The agreement provided for imports of specified quantities of cane sugar,
raw or white, which originated in the ACP states at guaranteed prices. In the face of
WTO pressure from a panel case that the EU lost, this guaranteed price is being
reduced by 36 per cent in a four year period that began in 2006/07. This study seeks
to analyse the impact that this Terms of Trade shock will have upon poverty at the
household level in ACP countries.

Catherine Porter
‘The impact of risk and shocks on Ethiopian household and individual welfare
outcomes’
The thesis examines the impact of risk and shocks on welfare outcomes for a sample
of Ethiopian rural households. The Ethiopian climate is characterised by low and
erratic rainfall, and the country has experienced some severe famines. Most
households cultivate rain-fed agricultural crops, and are vulnerable to fluctuations in
rainfall outcomes. In addition, households and individuals experience further shocks
to livelihoods and assets, such as illness, animal sickness, crop failure, and deaths.
The empirical work uses up to six rounds (ten years) of the Ethiopian Rural
Household Survey data set. The first paper examines the impact of various shocks
outlined above on household welfare levels, defined as real consumption per adult
equivalent, and analyses contemporaneous and past shocks and the impact of past
consumption on current levels of consumption. The second paper examines the long
term impact of a catastrophic shock – the 1984 famine – on individual
anthropometric outcomes, for a sample of young adults who were at a vulnerable age
(18–36 months) during the crisis. Further work will investigate trajectories of
destitution that can arise when households with low assets experience multiple
shocks over time.

Patrick Premand
‘On risk, poverty and economic mobility’
Risk has been identified as both a dimension of poverty and a cause of poverty
 persistence. My dissertation analyses the instrumental and normative links between
risk, poverty and economic mobility at three complementary levels. First, I exploit
experimental design of Nicaraguan data to contrast the short-term idiosyncratic and
medium-term common impact of hurricane Mitch on agricultural households’
consumption growth. Direct welfare effects are limited at most to idiosyncratic
channels such as floods and households' displacement in the short-term. Overall,
Mitch’s direct welfare impact exhibits little persistence. Second, I disentangle the
effects of a set of shocks on specific welfare trajectories within the welfare
distribution across three rounds of Nicaraguan panel data. Findings suggest that
shocks (particularly those related to agriculture) have a strong impact on poverty
persistence (hurting upward mobility), but a more limited role in triggering
downward trajectories. Finally, discussions on the instrumental role of risk on
economic mobility are complemented by considering the poverty–risk nexus from a
normative perspective. A consistent framework to build a risk-extended poverty line
is suggested, and the resulting view of ‘vulnerability as poverty’ applied to the case of
drought risk in Nicaragua.

Simon Quinn
‘Credit and investment in Moroccan manufacturing’
This thesis uses the FACS/ICA panel survey to explore access to credit in the
Moroccan manufacturing sector. The first chapter – on which I am currently
working – explores the effects of a new company law regime upon firms’ choice of
legal obligations and banks’ consequent lending decisions. The chapter is particularly
concerned with the role of information asymmetries in the credit market; I hope to
use a structuralist methodology to achieve the separate identification of information
and incentive effects. In the second chapter I hope to extend the analysis to consider
collateral requirements; Moroccan manufacturing firms make very substantial
collateral pledges when borrowing, and I hope to understand the extent to which
this operates to constrain credit provision. Finally I intend to consider the
relationship between bank lending and firm export behaviour. The Moroccan
manufacturing sector faces significant new export challenges – particularly following
the conclusion of a Free Trade Agreement with the European Union – and I hope
to explore the effect of credit market outcomes on firms’ export capacity.

Natalie Quinn
‘Networks, externalities and social capital’
The concept of social capital is the subject of considerable interdisciplinary debate in
the social sciences. Informal institutions that are embedded in networks of relations
between social actors and have some economic function form a subject of study
which, for economists, is congruent with that concept. Attempts to carry out
empirical work in this context encounter challenges as the independence
assumptions traditionally made in cross-sectional analysis break down. However, all is
not lost when there is information available on the structure of the network of
interactions: there is a growing literature on the analysis of economic data with cross-
sectional dependence of various kinds. My thesis attempts to contribute to this
literature and apply these methods to improve our understanding of the structure
and function of informal institutions (including factor-sharing and risk-sharing
networks) in agrarian economies. The Ethiopian Rural Household Survey is a rich
source of data on such institutions in a number of Ethiopian villages, and provides a
starting point for the empirical investigation. Separately, I have been working on
concepts of poverty measurement and the construction of intertemporal poverty
measures.
Bob Rijkers
‘Small enterprise performance and labour market outcomes in Ethiopia’
This thesis analyses the links between small enterprise performance and labour market outcomes in Ethiopia by means of four thematically separate but related papers. The first paper analyses the determinants of the participation in and performance of non-farm enterprises in rural Ethiopia. The second paper examines the functioning of rural labour markets, focusing in particular on the role of self-employment in non-farm enterprises as a possible pathway out of poverty. In the third paper the sources of productivity differentials between rural and urban areas are investigated. The final paper assesses the case for SME promotion programmes by assessing the Addis Ababa Integrated Housing Program, an Active Labour Market Programme aimed at reducing unemployment by deploying and supporting labour-intensive SMEs to construct low-cost housing technologies novel for Ethiopia.

Justin Sandefur
‘Essays on labour and credit markets in Africa’
The first chapter investigates the long-run impact of structural reforms undertaken in Ghana in the 1980s on industrial development. By linking two rounds of an industrial census to detailed panel data on firms, the paper documents the rapid decline of average firm size in Ghana and investigates the causes and possible implications of this trend.

The second chapter analyses the randomised evaluation of a microfinance programme in Ghana. I find large impacts on business income and household food security. However, two important caveats apply: (i) programme participation is concentrated in more affluent households within the village; and (ii) the impacts appear to be one-off, with no sustained growth effect. The third paper investigates the return to human capital in a segmented labour market. The paper presents a new panel data set tracking incomes of both formal wage workers and the informal self-employed in urban Ghana and Tanzania. Results show that the return to education in Tanzania is driven primarily by public sector wage premiums, while in Ghana it is undermined by skilled unemployment.

Danila Serra
‘The microeconomics of corruption: An experimental investigation’
My thesis investigates the causes of corruption at the individual decision-making level both theoretically and empirically. I ask whether, besides economic incentives, sociocultural factors such as intrinsic motivations and beliefs about others' corruption play a determining role in one’s decision to act corruptly. In one study I combined data from a specifically designed economic experiment which simulates a bribery situation with survey data. Working with a sample of 195 Oxford university students, I found that intrinsic motivations do matter in the corruption decision-making process. Moreover, beliefs about other agents' willingness to engage in corruption positively affect one's decision to act corruptly. Finally, younger subjects who grew up in more corrupt societies were more likely to engage in bribery, providing evidence that socialisation has a significant impact on individuals’ decision to act corruptly. In a more recent study I investigate the effectiveness of different anti-corruption interventions. I explore the efficacy of a specific bottom-up anti-corruption measure
as opposed to top-down auditing, using data from a specifically designed economic experiment. In particular, I explore whether public servants' tendency to ask for bribes is more affected by the presence of external controls or by the possibility for the ‘victims’ of bribery to formally report the corrupt agents, knowing that formal reports are associated with a fixed probability of punishment. I find that bottom-up anti-corruption measures can be highly effective in curbing corruption, even when citizens' ‘voice’ leads to formal punishment with a relatively low probability. On the contrary, conventional top-down interventions may prove ineffective and, in addition, have adverse effects on corruption by inducing corrupt officials to demand higher bribes. This result suggests that non-monetary costs generated by the possibility of being ‘reported’ by the citizens may play a relevant role in the public servants’ decision to engage in or abstain from corruption.

**Bilal Siddiqi**

‘Colonised villages: Institutions, path dependence, and public good provision’

Are feudal village-level institutions, set up during the colonial era, inimical to long-run socio-economic development? Does this continue to be the case after decolonisation and the introduction of electoral democracy and mass politics? We address these questions by exploiting variation in the type of village-level local governance institutions set up by the British in Sargodha district in West Punjab (in present-day Pakistan) between the nineteenth and twentieth centuries, and by analysing the difference in public good provision between these distinct types of village institutions over the post-independence period (1951–2003). Using a unique database of village level provision of twelve public goods, we find that villages endowed with feudal institutions do significantly worse at the provision of essential state services such as electricity, roads, street paving, sanitation and girls middle and primary schooling after controlling for many obvious variables. Furthermore, we find that effects persist to the current day in spite of the informalisation of these institutions post-independence. Our findings suggest that ‘entrenched’ feudal institutions that escape land reforms, as they have in Pakistan, have adverse long term political economy and developmental effects that are distinct from their effect on agricultural production and productivity.

**Nicolas van de Sijpe**

‘Essays on foreign aid’

I start by reassessing the empirical evidence on foreign aid fungibility. Unlike the bulk of previous studies, I construct panel data that contains information on the specific purpose for which aid is given. This allows me to link aid given for education and health to recipient spending in these sectors. In addition, I attempt to distinguish between aid flows that are recorded on the recipient's budget and those that are off-budget. Preliminary results suggest recipient sectoral spending increases almost one for one with sector programme aid, which should be entirely on-budget. On the other hand, technical assistance has no effect on recipient sectoral spending, which is in line with expectations that the majority of technical assistance is off-budget. Hence, our results indicate foreign aid is much less fungible than previously thought. I further intend to examine the nexus between various aid modalities and aspects of recipient countries' governance.
Bruno Versailles
'Aid and regional integration in low-income countries'
My research focuses on integrating the literatures on regional trade integration and Dutch Disease caused by capital inflows. As my interest primarily lies with Low-Income countries (mainly sub-Saharan Africa), the capital inflow takes the form of an aid flow. The backdrop for this analysis is the ongoing Economic Partnership Agreement (EPA) negotiations between different ACP groupings and the EU. In the EPA proposals as they currently stand, the EU typically offers aid to cushion EPA members’ trade tax losses when reducing their tariffs (which in turn leads to trade blocs made up of the EU and groups of Low-Income ACP countries). A first strand of analysis develops a pure trade theoretical model that is able to analyse the joint effects of regional integration in an aid dependent environment. A second strand then will apply these insights to one (most likely Eastern Africa) or more of the EPAs currently being analysed for which a Computable General Equilibrium (CGE) model will be developed.

Gaston Yalonetzky
‘Essays on economic mobility in Peru’
In this research I seek to uncover previously unexplored traits in the mobility regimes determining welfare outcomes both inter-generationally and intra-generationally in Peru, a country which underwent major structural changes during the last century, including rapid urbanisation and expansion of schooling. In a chapter on mobility of education outcomes, I show that previous inequalities in the prospects of long-term educational attainment across gender and ethnicity are absent among the youngest cohorts. In a second chapter I explore the importance of ethnicity as a determinant of short-term immobility and show that most of its importance, if anything, works indirectly through education, occupation and location effects. In a third chapter I explore the plausibility that full risk insurance may not be observed in the actual data of Peruvian household consumption due purely to measurement error shocks. I find that there are ranges for values of the covariance matrix of measurement error for which the null hypothesis of full-risk-insurance-cum-measurement-error can not be rejected.

Andrew Zeitlin
‘Essays on rural development in Ghana’
Recent growth of cocoa production in Ghana suggests that, contrary to characterisations of the structural rigidity of this sector, dynamic rural development is possible. This thesis examines three aspects of the institutional determinants of this growth using a recently gathered panel data survey of cocoa farmers. First, the thesis examines the reduced-form relationship between the degree of competition introduced among locally segmented domestic purchasing companies and agricultural productivity. Second, the relationship between systems of property rights and migration decisions is investigated, and it is argued that security of property rights increases the returns to investing in the migration of children. Third, the thesis tests for learning and other forms of social influence in technology adoption among cocoa farmers, arguing that rural producer organisations provide a forum for policies intended to improve agricultural productivity.
Degrees completed

Tessa Bold
‘Economics of informal insurance arrangements’
My thesis explores the implications of endogenous group formation on informal risk-sharing arrangements, both when groups have access to mutual savings and can make ex-ante transfers, and when risk-sharing is efficient and therefore history-dependent. The findings are that access to savings and the possibility to make ex-ante transfers significantly improves the performance of risk-sharing arrangements. This prediction is tested using a unique survey of 78 funeral insurance arrangements in rural Ethiopia. Secondly, I extend the dynamic limited commitment model, which predicts that efficient risk-sharing will show history dependence, to a model of risk-sharing arrangements with endogenous group formation. I show that the predictions of the dynamic limited commitment model are substantially altered in this context, and from this derive testable predictions for the presence of endogenous group formation.

Victor Davies
‘Essays on conflict economies’
My thesis comprises four stand-alone chapters. In the first chapter I use a panel of 65 countries to provide empirical evidence on government recourse to seigniorage during and after civil war, and the macroeconomic consequences. I estimate seigniorage revenue and money demand functions to test the hypothesis that post-war seigniorage is lower than peacetime. The idea underlying the hypothesis is that governments might end up killing the seigniorage goose during civil war. The results indicate that seigniorage revenue rises during wartime, due to taxation of the banking system. Money demand falls during wartime and further post-war. However, post-war seigniorage is not significantly different to peacetime.

The second chapter investigates the effect of inflation on post-war capital flight flows using a new panel data set of 77 countries. I test the hypothesis that inflation has a positive additional impact on capital flight post-war. The results provide consistent support for the hypothesis. The implication is that low inflation helps to curb capital flight after war. In the third chapter I analyse Sierra Leone’s 1961–2000 growth performance. I start with growth accounting and then undertake a growth prediction exercise to assess the extent to which standard growth regression models explain Sierra Leone’s growth performance. I then analyse Sierra Leone-specific factors: markets; private agents; and the political economy, focusing on the process of state collapse and civil war. The fourth chapter uses evidence from Sierra Leone to develop a new natural resource curse theory. The theory holds that under conditions of low income, dispersed alluvial diamond mining is likely to attract excessive labour, dissipating the rents. The theory helps account for the tendency for large-scale enlistment in rebellion in alluvial diamond-rich countries.
Section 2: Improving institutions for pro-poor growth (IIG)

The DFID-funded Research Programme Consortium on Improving Institutions for Pro-Poor Growth (IIG) is a collaborative partnership of eleven institutions: the CSAE and Department of International Development at Oxford; STICERD at LSE; the Institute of Social and Economic Change (ISEC) in India; BRAC in Bangladesh; the Economic and Policy Research Centre (EPRC) in Uganda; the Institute for Policy Analysis Research (IPAR) in Kenya; the African Centre for Economic and Historical Studies (ACEHS) in Ethiopia; and the Department of Political Science at the University of Ibadan, Nigeria. All our research will be reported on the IIG website at www.iig.ox.ac.uk.

Over the next five years, we are developing a programme of research addressing the institutional constraints on achieving pro-poor growth in Africa and South Asia. The IIG strives for evidence-based policy change, based on economic and political analysis, using statistical techniques applied to macro-level and micro-level data and contextual qualitative analysis. Its selection of themes and projects is driven by a dual objective: creating high quality academic research but with a direct relevance for policy. The particular process for implementing the research is built around direct capacity building and policy influence.

South Asia and sub-Saharan Africa represent the two great challenges to meeting the MDG of halving global poverty by 2015. There is growing evidence that the impediments to generating pro-poor growth in these regions are institutional in nature. The programme will investigate how governance impacts upon growth and poverty reduction and in particular how variations in the design and functioning of institutions affect economic performance.

We distinguish between three geographic groups of countries. Low-income countries that are coastal and resource-scarce can potentially follow the classic model of growth through labour-intensive manufactured exports. Globally, this has been the fast track for poverty reduction. Low-income countries that are resource-rich are most likely to develop through having good publicly provided services financed by taxation of the resource rents, a model successfully followed by Botswana. Low-income countries that are landlocked and resource-scarce have neither of these options and so lack any fast-track to development. As a result they have little option but to make the rural economy as successful as possible. They may, however, have scope for innovative strategies such as e-services, and becoming a service centre for their neighbourhood.

We hypothesise that each of these strategies and their contribution to poverty reduction may be facilitated or impeded by particular institutional choices. How institutions affect them will be studied both through macro-statistical, using data on countries, states or regions, and micro-statistical approaches, using data on firms and households, mainly from panel data sets and including new data collected during the project. The macro-statistical approach will first be applied to each of the growth strategies individually, as discussed below. The three component analyses can then be combined to test the overarching hypothesis that institutional priorities for growth and poverty reduction differ according to geographic opportunities.
By using geography to structure economic opportunities, we may risk oversimplification, suggesting predestination. This is not the case. As the economics of geography has shown, geography introduces costly constraints, seriously limiting opportunities. Second order effects such as agglomeration effects and externalities from interactions of geography with other initial conditions reinforce these geographic constraints on opportunities further. A second concern may relate to use of ‘countries’ to structure opportunities. Nevertheless, without full integration, borders matter. Still, the size of countries, and the nature of internal economic integration, matters for the way in which this framework can be applied productively. While smaller countries more easily fit into the three-way grouping, larger countries may lack the domestic integration to uniformly fit into this structure. Some countries, such as India, can effectively be treated as containing States that each can be allocated to one of the three groups. Even coastal African countries such as Kenya, Mozambique or Tanzania may have areas that to all intents and purposes are landlocked in terms of the grouping of economies applied in this project overview. This particular issue will be picked up again when discussing the challenges of landlocked economies.

Our choice of countries reflects this variety of geographical contexts. Nigeria is resource-rich and so the first-order aspects of governance and institutions revolve around how public money is spent. It is evidently the single most important of the resource-rich countries in Africa. Uganda and Ethiopia are landlocked, resource-scarce countries that have adopted very different growth strategies supported by very different institutional designs. Ethiopia is hugely important: it is the largest and poorest landlocked, resource-scarce country in the world. Kenya is a coastal, resource-scarce country which has so far largely failed to break into global markets for a diversified range of exports. Bangladesh, as we have noted, is a coastal, resource-scarce economy, like Kenya, but despite worse overall governance it has succeed where Kenya has so far failed. Finally, India is sufficiently large, decentralised and diverse to be best seen as a range of institutional designs, some in the context of coastal export success and others that are landlocked, in which issues of rural development still dominate the policy agency. The choice of countries thus enables us to make useful comparisons, while focusing on particular aspects of governance and institutions that are likely to be critical for growth in their particular context.

The overarching research hypothesis is that differences in economic opportunities determine which institutions are likely to be important in the growth process, and in the way growth can benefit the poor. Our work can be grouped around three themes under which the consortium has earmarked a number of core projects that are being implemented across the partner countries.
Theme 1: Institutions to promote manufactured exports

Growth in manufactured exports across African states

- Research question: What are the institutional and policy reforms needed to enable Africa to compete in manufacturing exports?
- Researchers: Paul Collier (CSAE, Oxford), Francis Teal (CSAE, Oxford) and Justin Sandefur (CSAE, Oxford)

The first part of this work has recently been completed by Paul Collier and Tony Venables in ‘Rethinking trade preferences: How Africa can diversify its exports’ (forthcoming, World Economy). They suggest that European and American trade policy reform may be a good place to start. They argue that developed-country trade preferences for Africa could act as a catalyst for manufacturing exports, leading to rapid growth in exports and employment. To do so, preferences need to be designed to be consistent with international trade in fragmented ‘tasks’ (as opposed to complete products) and need to be open to countries with sufficient levels of complementary inputs such as skills and infrastructure.

In a next phase, this work will be taken forward by exploring the correlates of export success, beyond the impact of European and US trade policy. We are currently compiling trade and industrial production data on a few key sectors, such as garments, to see how the location of exporting has shifted over the past two decades, and in particular, how particular sub-categories have become clustered in a few locations. We are attempting to get evidence on the more recent phenomenon of clustering according to ‘tasks’ rather than products.

Export Processing Zones in Ghana and Kenya

- Research question: What determines the success or failure of EPZs?
- Researchers: John Akoten and Thomas Kibua (IPAR, Kenya) and Justin Sandefur (CSAE, Oxford)

This project will analyse in detail the design of Export Processing Zones (EPZs) – a particular institution that appears to have facilitated an AGOA export boom in some countries but not in others. The first stage of this micro-level work on EPZs will focus on the political economy of industrial policy. How did domestic political considerations shape the particular policy mix of the Ghanaian and Kenyan EPZs and determine which firms were admitted? For example, how was the decision made to place the main Kenyan EPZ on the outskirts of (land-locked) Nairobi, rather than at the port in Mombasa. This political economy project will draw on qualitative interviews with government officials involved in EPZ management, combined with quantitative analysis of a database of successful and unsuccessful applications by firms seeking entry to the EPZ. The ultimate goal is to better understand the potential for African states with weak governance structures to successfully engage in active industrial policy.

The second stage of the EPZ work will focus on their impact on exports and employment through microeconometric analysis of firm level production and trade data. At a theoretical level, EPZs may serve two broad functions: (i) lowering costs by providing financial incentives like tariff waivers and tax holidays to exporting firms, and (ii) raising productivity by exploiting agglomeration externalities and
spillover effects through the formation of industrial clusters. These two functions have been, somewhat paradoxically, divorced from each other in both Ghana and Kenya’s EPZs. Individual, geographically dispersed firms can apply for EPZ status, while others are clustered in public industrial estates – the upshot being an ideal opportunity to empirically disentangle the effects of clustering and financial incentives.

**Theme 2: Institutions for accountability**

**Accountability and economic performance**

- Research question: What is the link between institutional structure, resource rents and economic performance?
- Researchers: Paul Collier (CSAE), in collaboration with Benedikt Goderis (CSAE, Oxford) and Lisa Chauvet (DIAL, Paris)

Until recently it has not been regarded as feasible to investigate the relationship between public expenditure and its consequences through macro-statistical techniques. However, both improvements in data and in econometric technology are changing this assessment. The aim of this project is to tease out how those institutions that are measurable with macro data affect economic performance (in various dimensions), and how this relationship is in turn affected by resource rents. Some aspects of institutions are readily measurable with long time series, such as the extent of press freedom and aspects of constitutional design such as decentralisation and checks and balances. Others, which have more direct pertinence to service delivery, are only measured in recent years but may permit some backward estimations. Resource rents can be estimated over a long time period, through new data that combines costs and revenues.

The results have already attracted significant attention, and two technical papers summarising the current evidence and the arguments are being published (Prospects for Commodity Exporters: Hunky Dory or Humpty Dumpy?, Paul Collier and Benedikt Goderis, *World Economics*, August 2007; and The Survival of the Fattest, Paul Collier, *The American Interest*, June 2007).

**The election process in Nigeria: Candidate selection, finance and electoral outcomes**

- Research question: How do candidate selection practice and campaign finance impact on electoral outcomes?
- Researchers: John Ayoade (Ibadan), Bayo Okunade (Ibadan), Pedro Vicente (CSAE, Oxford), with the collaboration of Michael Bratton (Afrobarometer and Michigan State), Paul Collier (CSAE, Oxford) and Jennifer Widner (Princeton)

This project aims to understand both quantitatively and qualitatively how candidate characteristics/selection and campaign finance determine electoral outcomes in Nigeria. The research will encompass the gathering of reliable data sets on political candidates and campaign finance categories both at the primary and state/federal elections, for all main parties.
In the quantitative part of the study we ultimately aim to combine these voting data sets from 2007 with 2004 household survey data. Corresponding analysis will gain an understanding of the socio-economic determinants of the election results by examining how the process of selecting political office holders and the nature of campaign finance/spending in Nigeria affect the quality of governance and accountability, and the electoral behaviour of voters. On the candidate selection side, a pilot study is underway to gather a complete list of successful and unsuccessful candidates for governorship elections for both primary and actual elections.

**Managing irrigation tanks: How do institutions matter?**

- **Research question:** Do institutions for the management of irrigation tanks matter for efficiency and equity?
- **Researchers:** Durgam Rajasekhar (ISEC), R. Manjula (ISEC), J. Y. Suchitra (ISEC), Tim Besley (LSE), Maitreesh Ghatak (LSE) and Erlend Berg (LSE)

We propose to examine the role of institutions in a setting of great importance in many developing countries, namely the management and allocation of irrigation water. Specifically, we are asking whether local governments or user associations are better at managing irrigation tanks in Karnataka, India.

Small irrigation tanks are prevalent in Karnataka. They are primarily filled by rainfall during the monsoon. The tanks have historically played an important role in providing irrigation to village communities, but fell into disrepair due to years of neglect. A World Bank-funded project is underway to restore tanks and decentralise their management. We will randomly determine how a subset of the tanks will be managed (local governments or user associations), and compare outcomes in terms of both efficiency and equity.

**Randomised evaluation of policies to create local accountability under free primary education in Kenya**

- **Research question:** How can we best resolve the tension between the need for external funds in the Kenyan education system, and the potential for outside funding to undermine local ownership of schools?
- **Researchers:** Germaino Mwabu (University of Nairobi), Mwangi Kimenyi (University of Connecticut), Tessa Bold (CSAE, Oxford), Justin Sandefur (CSAE, Oxford), David Johnson (Dept. Educational Studies, Oxford), Geeta Kingdon (CSAE, Oxford) and Stefan Dercon (DID, Oxford).

The introduction of free primary education in Kenya in 2003 has led to a 30 per cent increase in enrolment over the past four years. This unprecedented and rapid expansion of the education sector has sparked concerns that the quality of education provision may be declining. In response to this CSAE together with Germano Mwabu and Mwangi Kimenyi have launched a research project in collaboration with the Kenyan Ministry of Education to assess the current level of educational achievement, and design and evaluate policy interventions to improve educational outcomes.

We are currently finalising the interventions and baseline data collation with the Ministry of Education and the implementation will begin in May 2008.
Theme 3: Institutions for rural development and empowerment

Land demarcation in Uganda

- Research question: Do current land policy changes provide stronger land rights and affect investment?
- Researchers: Lawrence Bategeka (EPRC), Kasirye Ibrahim (EPRC), Andrew Zeitlin (CSAE, Oxford), and Stefan Dercon (DID, Oxford).

Property rights are central to supporting trade and exchange in markets. They also govern incentives for long-term investment. We will investigate how institutional design in this area can affect poverty and growth via effects on rural investment, diversification and land markets.

In conjunction with the Development Economics Research Group of the World Bank, this project will attempt to address that void by studying the impacts of a government programme to map and certify customary ownership rights on informally held parcels in two randomly selected parishes in each of five districts in Uganda. By focusing on policy-induced changes in rights across diverse geographic and economic contexts, including rural areas as well as urban and peri-urban Kampala, this study will shed light on the costs, benefits, and optimal targeting of property-rights interventions. To do so we will investigate policy impacts not only on investment productivity, but also on the inter-household distribution of resources – through the operation of sales and rental markets – and the intra-household distribution of resources – through the effects of joint ownership on household bargaining power.

Aspiration failure and rural development in Ethiopia

- Research questions: What are the determinants of the ‘capacity to aspire’? What is the link between aspirations and individual economic behaviour?
- Researchers: Alemayehu Seyoum Taffesse (ACEHS), Stefan Dercon (DID, Oxford) and Tessa Bold (CSAE, Oxford)

This project explores the extent and significance of aspirations’ failures in Ethiopia. More specifically, the aim is to develop and implement an empirical approach to the following questions proposed in Ray (2002, 2006): What are the determinants of the ‘capacity to aspire’? What is the link between aspirations and individual economic behaviour? How might aspirations be affected by economic and social change? How can aspirations be affected by deliberate group action?

Broadly, the proposed experiment consists of broadcasting a series of short documentaries on case studies relevant to households’ economic and social conditions. In particular, the documentaries transmitted will trace the experience of successful local entrepreneurs which households can reasonably identify with. A differentiated series of documentaries will be used to highlight particular features which may be relevant for the appropriate aspiration window (such as gender and age group). The individual episodes in the series will be randomly assigned to different villages. A randomly selected group of villages where ‘placebos’ will be broadcast will serve as a control group. The effects of the broadcasts will be captured through a baseline survey and a comparison resurvey of the same sites.
Section 3: Global Poverty Research Group (GPRG)

The Global Poverty Research Group (GPRG) was set up in August 2002 with an explicit objective of adopting a multi-disciplinary approach to the problems faced by developing countries and has been funded by the ESRC for five years. The overall objective of the research programme has been both substantive and methodological: to carry out a multidisciplinary programme of work which will investigate poverty, inequality, and the quality of life.

The substantive part of the agenda has been to answer questions focused on the factors that determine poverty and the quality of life both in Africa and other parts of the poor world. At this broad level two questions have provided the framework for much of the research. The first has been: what factors determine poverty? The second has been: what policies can most effectively reduce poverty?

In the light of the objectives set for us by the ESRC, we have sought to address the issue as to the value added from an explicitly multi-disciplinary approach to studying development. Flowing from this has been a second question as to how different disciplines can best combine to address development questions. The original research design envisaged a wide range of projects organised within certain broad themes. During the course of the project, the focus changed in part of the research to work cutting across these themes.

Theme 1: Poverty, intra-household allocation and well-being
Theme 2: Income opportunities, inequality and the poor
Theme 3: Human capital, institutions and well-being
Theme 4: Social capital, the provision of public services, and social safety nets
Theme 5: Governance, social norms and social outcomes

Background to the GPRG: The context of the research

During the course of the research programme the political profile of development issues generally and the problem of poverty specifically has risen dramatically. Prior to the formation of the Group, a series of ambitious goals was set by the UN. The first of these Millennium Development Goals (MDG) was to halve extreme poverty by 2015. Two major reports were published during the life of the Group, both focused on the problems posed by continuing poverty in Africa. The first was the Report of the Millennium Project: ‘Investing in Development: A practical plan to achieve the Millennium Development Goals’. The second was the Report of the Commission for Africa: ‘Our Common Interest’, which, as its title implies, argues that ensuring economic success in Africa is of interest to all – not simply to those living in Africa. Both argued that on present trends, Africa was not going to meet the goal to halving extreme poverty by 2015.

The outcome of the debates which have surrounded these Reports is now a consensus across the main political parties: that policies towards poverty should be a central part of their policy agendas. Two elements that are central parts of this policy agenda have been the role of aid in promoting growth and reducing poverty; and the role of trade or more generally the process commonly referred to as globalisation.
While these have been one element of the work of the Group, much has been focused on micro work looking at households, firms and labour markets. As will be documented in more detail below, one outcome of the GPRG has been a greater clarity and understanding as to why different disciplines disagree on how to approach the problems posed by development. However, one area where agreement has proved possible is that viewing policy problems from a macro approach, i.e. in terms of policy that can be operated at the level of governments – as is done in policies toward trade and aid – must be complemented by the micro approach based on analysis of firms, households and labour markets.

One key objective set by the ESRC is for its research to impact on policy. In this Report we focus on how the impact of GPRG research can be identified in the areas of policy towards poverty; policy toward NGOs; policies to enhance the impact of human capital on development; and policies towards job creation. We will show that a common element across the themes is that jobs and their creation are a key element in ensuring that both poverty and inequality can be reduced.

A second key objective set by the ESRC is that its investments demonstrate that the research it funds impacts on practice. We have sought to meet such an objective by three main routes. First by leveraging additional funds that have enabled us to extend the research agenda set by the ESRC; second by developing a wide range of networks both at Oxford and Manchester which have ensured a wide outreach for the programme; and third by an extensive programme of training which has seen work towards graduate degrees, field work and training programmes in a wide range of applications.

**Theme 1: Poverty, intra-household allocation and well-being**

We noted above that the substantive part of the GPRG research agenda has been to answer questions focused on the factors that determine poverty and the quality of life both in Africa and other parts of the poor world. The context for those studies has been the transformation of the international profile of poverty caused by the rise of China and to a lesser extent India. Work within the Group has shown that the explosive economic growth in China has been associated with rises in inequality, (Knight and Song, 2005). While China’s growth has captured the headlines the achievement of other regions, specifically South Asia, has been impressive. Its incomes doubled over the two decades, taking it from much poorer than Africa to much richer. Work within the GPRG on India has focused on the issues that lie behind this story of macro success.

One major project has been addressing the issue of gender bias in India. The gender gap in educational expenditure in Indian households was measured using the 1994 NCAER rural survey data from 33,000 households across 16 major states. Kingdon (2005) examines gender bias in educational expenditures both directly by inspecting individual level expenditures and also indirectly, using the household consumption based (Engel curve) methodology. The paper investigates whether the indirect method confirms gender-differences in educational expenditure in states where the direct method using individual-level data shows significant gender differences in educational expenditure. It does not. The research concludes that to reliably measure the gender gap in education expenditure, there is no substitute for individual-level data on expenditures. The study confirms that lower educational expenditures on girls are a within-household phenomenon.
Work across disciplines within the Group under this theme has focused on the integration of quantitative and qualitative approaches to the measurement of welfare and anthropological approaches to understanding poverty. During the last two years of the programme, the case for cross-disciplinary research in social science (espoused by Hulme and Toye, 2005), has been taken up by Clark (Adaptation, poverty and well-being, under contract) who focuses on the relative merits of different forms and mixes of cross-disciplinary work and considers some of the other challenges facing development studies in the twenty-first century.

**Theme 2: Income opportunities, inequality and the poor**

The work under Theme 2 can be seen as providing evidence on the determinants of income and thus complementing poverty work which focuses on consumption and other outcomes measures. Two major research projects over the lifetime of the programme have been work on South Africa and work on labour markets in Ghana and Tanzania. Work on South Africa is of importance for several reasons. It is by far the most important economy in sub-Saharan Africa and its success would transform the opportunities available to many other African countries. Further success within the country requires addressing issues that are of growing importance in the policy agenda towards development. The most important and general of these is the increasing importance of inequality and the implications for inequality of the processes of globalisation. Kingdon and Knight (2005) advance the view that developments in the labour market hold the key to South African prosperity or penury. It is from the labour market that the income benefits from growing labour scarcity, or the threat to social and political stability from growing unemployment and underemployment, could emerge.

The central policy problem is that the economy is unable to absorb productively all the current labour force or all the increment to the labour force. In the near-decade after the advent of democracy (1995–2003), the (narrow) labour force grew by 4.6 million and the broad labour force by 6.3 million (both by over 5 per cent per annum). By contrast, over the same period wage employment rose by only 1.3 million (1.8 per cent per annum), self-employment grew by 0.7 million (5.1 per cent per annum), and narrow and broad unemployment grew by 2.6 and 4.3 million respectively (both above 9 per cent per annum). Over that period the unemployment rate rose from 17 to 28 per cent on the narrow definition and from 29 to 42 per cent on the broad definition. South Africa now has one of the highest rates of unemployment in the world even on the official narrow (but potentially misleading) definition. Informal sector employment also grew to absorb some of the increased labour force.

While the policy problem in South Africa is the extent of unemployment, the problem which GPRG research has focused on in other parts of Africa is the rise of the informal sector, particularly in urban areas. ‘African poverty through the lens of labour economics’ is a recent policy paper by GPRG authors which attempts to put this data from Ghana in a comparative perspective, combining it with survey data from Ethiopia and Tanzania. Labour market incomes that underlie poverty and welfare outcomes in these three countries are examined. Comparing earnings across sectors (self-employment vs. wage employment, public vs. private employment, etc.) shows a consistent pattern across countries. Earnings from self-employment, which accounts for a plurality of the urban labour force in all three countries, are very
similar to wage earnings in small firms, suggesting the existence of a competitive, free-entry labour market in the informal sector. However, large differences emerge when comparing wage earnings in small versus large firms (a standard proxy for ‘formality’) or the public and private sector. The key to increased earnings in these economies is making the transition into the formal sector. The second part of the paper analyses the potential for such transitions. The preliminary evidence presented suggests that the labour market in Ethiopia is significantly more rigid than in Ghana or Tanzania.

Theme 3: Human capital, institutions and well-being
The role of human capital is as central to well-being as consumption and income outcomes. Human capital and its formation is clearly central to understanding differences in outcomes across regions and countries. There is currently a rapid increase in applied work on the economics of education. This reflects in part the increased analysis of the education sector and its problems in various developing countries, sponsored by country governments and donor agencies. It also reflects the progressively greater availability of data over time to analyse education issues. Within the GPRG we have been working on data that allows comparison across relatively long periods of time for the return to education in both Kenya and Tanzania.

There is now evidence that the wage return to primary schooling has fallen and is now lower than that to secondary education and higher education in many developing countries. Our work at the GPRG has confirmed this for Kenya and Tanzania (Kahyarara, Söderbom, Teal and Wambugu, 2006). Policies for poverty reduction have generally emphasised the attainment of primary schooling. For instance, the Millennium Development Goals adopt universal primary school completion as the major educational goal in support of the broader aim to halve world poverty by 2015. However, if the pattern of returns to schooling has changed over time so that economic returns to primary education are now the lowest and to higher education the greatest, this has profound implications for poverty reduction policies. In particular, it means that the poor need to go well beyond primary schooling if they are to obtain high labour-market returns.

A paper which has now appeared as a chapter in a World Bank publication (Sandelfor, Serneels and Teal, 2007) examines the link from education to earnings and unemployment in urban Ethiopia, Ghana and Tanzania. The focus of the chapter is the steep increase in earnings observed over the life-cycle. Standard explanations build on human capital theory, which interprets the return to education as a market return to the skills acquired in school and the age-earnings profile as the diminishing marginal return to work experience. The comparison across these three countries shows the importance for earnings of the sector in which the worker is employed. Much of the investment in human capital works through this occupational sorting.

Theme 4: Social capital, the provision of public services, and social safety nets
Both the meaning of the term social capital and its usefulness to social science research have been hotly disputed subjects and have led to important debates at GPRG research meetings. This is in part due to the fact that different disciplines have adopted the term, and while in principle it might be thought that it would provide a bridge across disciplines, in practice that has not proved to be the case. The work within the GPRG on this topic reflects the diversity of approach that can
be taken. Some of the work approaches the topic from a perspective in which the use of the term social capital is discussed within the context of how the concept was used as part of the research or policy agenda of actors in the development process. Such an approach stands in marked contrast to how economists have sought to make use of the concept. In their approach, the term is identified with some dimension of the process by which outputs are obtained and an attempt is made to ascertain how much this measure affects output. Work within the Group has identified areas where this approach has been more or less successful.

The paper by Ayalew, Dercon and Gautam ('Property rights in a very poor country: Tenure insecurity and investment in Ethiopia,' GPRG-WPS-021) provides evidence from one of the poorest countries of the world that the institutions of property rights matter for efficiency, investment and growth. With all land state-owned, the threat of land redistribution never appears far off the agenda. Land rental and leasing have been made legal, but transfer rights remain restricted and the perception of continuing tenure insecurity remains quite strong. Using a unique panel data set, this study investigates whether transfer rights and tenure insecurity affect household investment decisions, focusing on trees and shrubs. The panel data estimates suggest that limited perceived transfer rights, and the threat of expropriation, negatively affect the long-term investment in Ethiopian agriculture, contributing to the low returns from land and perpetuating low growth and poverty.

Abigail Barr, Magnus Lindelow, Jose Garcia-Montalvo and Pieter Serneels have been investigating a range of issues relating to the role of social norms in development. GPRG working paper 18 asks a number of important questions: Are new recruits to the development frontline intrinsically motivated in a way that may prevent them from becoming unproductive or corrupt? Are they likely to remain thus motivated as their careers progress? The authors seek answers to these questions using both survey and experimental data relating to a sample of Ethiopian nursing and medical students. They find that according to four, arguably salient measures, the majority of the students are intrinsically motivated. They also find evidence that intrinsic motivations are socially rather than individually determined, may change as individuals' social contexts change, and may be eroded by exposure to an environment in which unproductive behaviour is endemic.

The work of Marcel Fafchamps has focused on social networks, mutual assistance, and the development process. An important example is the work of Fafchamps and Minten, who have shown that social networks play a crucial role in the way agricultural markets perform in Africa. Using data from surveys of agricultural traders in Benin, Malawi and Madagascar, they have demonstrated that traders with more business acquaintances have a larger volume of activity and enjoy higher profits. They have shown that business networks serve to channel information that is relevant for business, such as information on prices, business opportunities, and unreliable suppliers and clients. Business networks result from a process of accumulation where parental background and experience play a role. Contrary to common perception, ethnicity did not seem to play a role in the formation of business networks among agricultural traders in the three countries studied. But female traders are at a disadvantage in their capacity to accumulate social links as well as working capital – perhaps because they are less mobile than men. 

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Theme 5: Governance, social norms and social outcomes
The final theme for the research Group is another aspect of well-being which has been the subject of much recent research, that of governance.

The use of micro data to inform a more macro focus of the role of institutions is to be found in the work of Pedro Vicente on corruption in politics and the natural resource curse. The natural resource curse has been established in the development literature as one of the main growth-related problems associated with resource-rich developing countries. It is also the case that increasingly corruption has become viewed as a major direct impediment to growth. But are these two growth-destroyers related? May the first be a cause for the second?

This research began (Vicente, 2006) by analysing this natural experiment through the design of tailored household surveys on perceived corruption in both São Tomé and Príncipe (STP) and a control West African country, Cap Verde (CV). One of the central results has been that the oil discovery led to a generalised increase in perceived corruption (ranging from 21 per cent to 38 per cent of the subjective scale used). Highest and most significant were effects on vote buying, scholarships for higher education, and allocation of state jobs (all with clear implication in the future holding of state power).

Recent publications

Section 4: CSAE research projects

In this section we provide a summary of some of the research undertaken at the CSAE over the past year. The summary is selective and is designed to illustrate the range of problems that have been addressed. The common factor across them is the approach, which is quantitative, and their relevance for policies to advance Africa’s development. The first focuses on what many would regard as the central problem posed for Africa’s poorest countries, how the costs of conflict can be limited. We then present work on policies towards education, training and investment, all of which have in common the use of micro data and a focus on policy issues which have application to countries outside of Africa as well as within. The final two projects present some of the macro work. The first looks at trade openness and inflation with a particular focus on South Africa. The second is concerned with managing macroeconomic risks in developing countries. The policy issues in this project are how institutions and policy instruments can be designed to limit the vulnerability of developing countries to external shocks, particularly those caused by volatility in world prices for oil and other primary commodities, in climatic conditions, in aid flows and, increasingly, in private capital flows.

Post-conflict societies: Economic recovery and risk reduction

Paul Collier, Anke Hoeffler and Máns Söderbom

For several decades civil war has been the dominant form of armed conflict worldwide. Many of these conflicts have been long lasting and have had devastating consequences, for example the civil war in Angola lasted for 28 years (1975–2002) and caused about 1.5 million deaths. Only a minority of these deaths were caused through combat (about 11 per cent), but many deaths are due to an increase in criminal and non-organised violence and an increase in communicable diseases. Many of these diseases can either be prevented or effectively treated in countries with functioning health care systems. Civil war and post-war economies are manifestly not able to address these health care demands. Thus even after the fighting stops civil wars continue to kill.

In our ongoing research programme we study the causes, duration and consequences of civil war. We focus on major civil wars, defined as conflicts that cause a minimum of 1000 battle related deaths per year. Figure 1 is based on this definition and shows the global prevalence of civil war. The number of wars reached a peak just at the end of the Cold War, in 1991/92 there were 17 civil wars worldwide. Since then the number of violent internal conflicts has decreased to five in 2006.
This declining trend in the number of major armed conflicts is of course very welcome news. Many countries, for example Sierra Leone, Liberia and Rwanda, are now at peace. However, these post-conflict countries face two distinctive challenges: economic recovery and risk reduction. Post-conflict peace is typically fragile: about 40 per cent of all civil wars are due to post-conflict relapses within a decade. We hypothesised that the two objectives of economic recovery and risk reduction are likely to be complementary: economic recovery may reduce risks, and risk reduction may speed recovery. However, this complementary between objectives does not imply coincidence of instruments: the instruments that are effective for risk reduction may be quite distinct from those for economic recovery.

We first addressed the post-conflict challenge of economic recovery. Typically post-conflict societies experience a peace dividend in terms of increased economic growth after the end of the conflict. Our research question was whether this economic recovery process can be supported by aid and policy reform. In our empirical study we found aid and policy reforms to be highly effective in the economic recovery process. In particular we investigated whether the absorptive capacity for aid is systematically different in post-conflict countries. We found that during the first three post-conflict years absorptive capacity is no greater than normal but that in the rest of the first decade it is approximately double its normal level. Thus, the pattern of aid disbursements should probably gradually rise during the first four years, and gradually taper back to normal levels by the end of the first post-conflict decade. Actual aid practice has not, historically, followed this pattern. It has tapered out just when it should have been tapering in. We then investigated whether the contribution of policy to growth is systematically different in post-conflict countries and, in particular, whether particular components of policy are differentially important. Growth seems more sensitive to policy in post-conflict societies. Comparing the efficacy of different policies, we found that social policies are differentially important relative to macroeconomic policies. However, historically this does not appear to have been how policy reform has been prioritised in post-conflict societies.
We then turned to the challenge of reducing the risks of a recurrence of civil war. This risk is substantial: 40 per cent of all post-conflict societies revert to conflict within the decade. This is far higher than the risk faced by the typical low-income country, and so the international community is correct to focus explicitly on post-conflict situations as warranting distinctive engagement. Our statistical results suggest that economic development does substantially reduce risks. If a post-conflict country achieves a growth rate of 10 per cent the decade risk falls to 27 per cent. This risk reduction is due to higher growth as well as the cumulatively higher income. One implication of this result is that the international community should be concentrating the post-conflict assistance disproportionately in the poorest countries and that there should be a heavy focus on economic recovery.

We know from previous studies that domestic military expenditure does not deter renewed conflict, but examined the question whether UN peacekeeping operations do stabilise fragile post-conflict situations. Our empirical examination suggests that UN peacekeeping expenditures significantly reduce the risk of renewed war. The effect is large: doubling expenditure reduces the risk from the benchmark 40 per cent to 31 per cent. Interestingly this effect is strongest when we measure peacekeeping expenditure in absolute terms and not relative to the country’s population or the size of the economy. This suggests that peacekeeping operations act as a deterrent. Since all rebel armies have to go through a phase of being small, even if they subsequently grow to a very different size, they can perhaps be effectively deterred in the inception phase by a peacekeeping force of a given size.

In contrast to these results we cannot find any systematic influence of elections on the reduction of war risk. Elections shift the risk between years rather than either raising or lowering it. Specifically, an election reduces risk in the year of the election, but increases it in the year following the election. Presumably, in the election year antagonists divert their efforts from violence to political contest, whereas once the election is concluded the losers have a stronger incentive to return to violence. Therefore post-conflict elections should be promoted as intrinsically desirable rather than as mechanisms for increasing the durability of the post-conflict peace.

Based on these results we suggest that peace appears to depend upon an external military presence sustaining a gradual economic recovery, with political design playing a somewhat subsidiary role. There is strong evidence that the poorer the country is and the longer economic recovery takes the higher is the risk to revert to civil war. Since there is this simple and statistically strong relationship between the severity of post-conflict risks and the level of income at the end of the conflict this provides a clear and uncontroversial principle for resource allocation: resources per capita should be approximately inversely proportional to the level of income in the post-conflict country. To date, economic and military resources have not been allocated to this simple principle.

Recent publications:


• Collier, Paul and Anke Hoeffler, ‘Military expenditure in post-conflict societies’, *Economics of Governance*, 7, 89–107, 2006

Public Private Partnerships in education: Some policy questions

Geeta Gandhi Kingdon

Private schooling is growing in many developing countries, including among the poor. Part of the reason for this seems to be that public schools are performing poorly, with high teacher absence rates, lack of teaching activity and low pupil achievement levels (Chaudhury et al., 2006; PROBE, 1999; ASER, 2007). Yet the spread of private schooling exacerbates social inequality since the poor are necessarily excluded when private schools are not publicly funded. If fee charging private schools increasingly attract households, it suggests that parents perceive them to be operating with some competitive advantages relative to public schools. The nature of these advantages suggests how the private sector can be utilised to improve educational outcomes of children. The main avowed advantage of publicly funded but privately operated education is that it harnesses the expertise, energy and financial and management skills of the private sector to give better value for taxpayers’ money. Proponents argue that Public Private Partnerships (PPPs) provide a more flexible way of producing education, since they allow governments to overcome inflexible salary scales and other civil service restrictions and increase transparency of government education spending by making the cost of education services more visible (LaRocque, 2005). Decentralised decision making at the level of the school is thought to be more responsive to parents’ needs and to foster local level accountability.

In recent years there has been increased discussion of the role of PPPs in education, as focus shifts from mere inputs-based to more incentives-based educational reforms. Figure 1 shows the different combinations of private and public operation and funding of education. The shaded cells are PPPs: cell D in the bottom right corner is public operation with private funding, e.g. fee charging public schools. The EFA Global Monitoring Report (UNESCO, 2004) finds that more than 100 countries have public primary schools that charge some form of fees. Cell A in the top left corner combines public funding with private operation. Examples of type ‘A’ PPPs are voluntary aided schools in the UK, grant-in-aid schools in India, Charter schools in the US and voucher schools in Colombia. Using PISA data from 35 countries, Woessmann (2005) studies the distribution of countries into these four quadrants and investigates the relative effectiveness of the four school-types. His statistical analysis shows that – after controlling extensively for student background factors – public funding with private operation brings large gains in terms of maths achievement of students, while private funding with public operation leads to large losses in achievement. The pure private and pure public cases do not differ much from each other in terms of their effects on student learning. These findings are
summarised in Figure 2.

Woessmann’s evidence is based only on a sample of 35 countries for which data were available at the level of the school on both who operates the school and who funds the school. Clearly this analysis needs to be broadened to include a much wider range of countries in order to be confident about the generalisability of his findings. Nevertheless the results are interesting. If Woessmann’s conclusion is generalisable, i.e. if private operation with public funding (type ‘A’ in Figure 1) brings efficiency benefits, then at least three policy questions arise.

First, how best to give public funds for privately produced education? There are two major ways: (a) supply-side financing, i.e. public money given directly to private schools, as a block or per-student grant; and (b) demand-side financing, i.e. public money given directly to families, as a voucher for each child.¹ These two ways of giving public funds for private operation imply fundamentally different incentives for private schools (see Table 1). The question for policy is: which of these two ways of setting up the PPP gives the best incentives to schools and teachers. There is not much research on this issue. However evidence for India suggests that supply-side funding has not produced good results – block grants to private schools with no incentives built into the grant structure led to poor student learning outcomes (Kingdon, 1996 and 2007). Also, teachers of aided schools lobbied hard to be paid directly from the state government treasury (as public school teachers are paid), rather than continue to be paid locally by their private school managements, who received the government grant. Centralising education Acts in the early 1970s in response to this teacher pressure led to a massive loss of local level accountability of aided school teachers toward their private managers (Kingdon and Muzammil, 2003). Other forms of supply-side-funding of PPPs exist with arguably superior incentives for schools and teachers, for instance, Concession schools in Colombia which receive per-student public funding (Barrera-Orioso, 2007).

Evidence on the impact of demand-side funding for PPPs (i.e. for school vouchers to parents) comes mainly from Chile, Colombia, New Zealand and the US. While the evidence is somewhat mixed, the weight of this evidence suggests that voucher funding for private schooling is generally associated with improved student outcomes. The most reliable evidence, based on state-of-the-art impact evaluation methodology, comes from Colombia. The Colombian government issued school vouchers on the basis of a lottery (due to insufficient funds for a voucher to all applicants). This provided ideal conditions for impact evaluation since lottery winners and losers were from similar home backgrounds, and the voucher was allocated randomly. Angrist et al. (2002 and 2006) find that vouchers – which increased parental choice and fostered competition between schools to attract vouchers – had beneficial effects on a range of student educational outcomes both in the short term (three years) and the longer term (seven years).

A second policy question is: what are the equity effects of demand-side public

¹ Another form of demand-side financing is cash subsidies to parents conditional on school attendance of their children. These are often given to help poor parents to overcome non-fee costs of schooling, and are sometimes targeted at girls’ enrolment. In principle, the effects can be similar to those of vouchers. Examples of conditional cash transfers are PROGRESA in Mexico and the Bolsa Escola in Brazil. While these schemes are intended to address demand deficiency, they could in principle impact school quality via inducing competition between schools in the same way as vouchers.
funding for private education? There is concern in the literature that vouchers may enable better off families to supplement the value of the voucher and thus send their children to the better private schools, but that poorer families may remain within public schools, some of which may be left with the poorest and least well performing students, i.e. vouchers may be detrimental to disadvantaged students (Ladd, 2002). Nechyba (2005) suggests that such equity concerns can be addressed by careful design of the voucher, e.g. by making the voucher amount inverse to family income, whereby the poorest families would receive the highest value vouchers. Even so, it remains a real possibility that private schools could practise selection on the basis of pupils’ home backgrounds, in order to cream-skim the best students and maintain high quality peer groups. Some people argue that such inequality can never be totally eliminated. In poor countries with ill-functioning public schools, better-off parents already ensure better teaching for their children anyway via private schooling or via private home tutoring, i.e. it is suggested that mainly public school systems do not eliminate equity problems either, while at the same time often being less efficient.

The third question for policy concerns the feasibility of voucher PPP schemes in low income countries. There are concerns about implementation of school choice schemes in the developing country context, such as (i) in rural areas of low income countries where supply of places is the major constraint, school choice schemes may be judged irrelevant since the possibility of there being a choice of schools for children to attend is remote; (ii) weak regulatory systems to ensure schools’ compliance with standards; (iii) difficulty of uneducated parents being able to make informed school choice; and (iv) the scope for corruption in the presence of weak monitoring and high costs of verification. However, this discussion also draws attention to the potential for similar corruption and monitoring problems in supply-side-funded PPPs as well as public school systems, and highlights the need to strengthen administrative capacities of poor countries to introduce more efficient ways of producing publicly-funded education.

Given the lack of firm evidence, and given country specificities, the most apt policy prescription seems to be that governments considering PPPs should try out both supply-side per-student funding and demand-side voucher funding PPPs on a trial basis for a few years and rigorously evaluate the achievement and equity impacts of these before scaling-up the more effective and equitable policy interventions.
Figure 1
Typology of school types

<table>
<thead>
<tr>
<th>Funding</th>
<th>Private</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>Voucher / aided schools (A)</td>
<td>Pure public (B)</td>
</tr>
<tr>
<td>Private</td>
<td>Pure private (C)</td>
<td>Govt. schools with fees (D)</td>
</tr>
</tbody>
</table>

Note: Grey shaded cells are Public Private Partnerships (PPPs). Cell ‘A’ divides into two types, depending on the way in which public funds are given for private operation of schools. Private schools receiving block or per-student public aid (variously known as Aided/Charter/Concession schools) are an example of ‘supply side funding’, while private schools funded by school vouchers given to families are an example of ‘demand side funding’.

Figure 2
Student achievement in the four quadrants of public-private involvement

Source: Woessmann, 2005
Table 1

<table>
<thead>
<tr>
<th>Two ways of giving public funds for private operation</th>
<th>Supply side financing</th>
<th>Demand side financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
<td>Aided schools, India</td>
<td>Voucher schools, Colombia</td>
</tr>
<tr>
<td></td>
<td>Concession schools,</td>
<td>Voucher schools, USA</td>
</tr>
<tr>
<td></td>
<td>Colombia</td>
<td>Voucher schools, Chile</td>
</tr>
<tr>
<td></td>
<td>Charter Schools, US</td>
<td>Voucher schools, New Zealand</td>
</tr>
<tr>
<td></td>
<td>Voluntary Aided schools, UK</td>
<td></td>
</tr>
<tr>
<td>Funding of school</td>
<td>By public sector</td>
<td>By public sector</td>
</tr>
<tr>
<td>Operation</td>
<td>By private sector</td>
<td>By private sector</td>
</tr>
<tr>
<td>Who receives the resource</td>
<td>The schools directly</td>
<td>Families, as a voucher</td>
</tr>
<tr>
<td>Is funding provided on a per pupil basis?</td>
<td>Not necessarily: Block grants in India</td>
<td>Necessarily per student</td>
</tr>
<tr>
<td></td>
<td>Per student grant in UK, USA</td>
<td></td>
</tr>
<tr>
<td>Competition</td>
<td>Yes, if grant is per student</td>
<td>Yes, since students/families have complete school choice</td>
</tr>
<tr>
<td></td>
<td>Yes, if students have a choice of schools</td>
<td></td>
</tr>
</tbody>
</table>

References

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Who benefits from training in Ghana?

Courtney Monk, Justin Sandefur and Francis Teal

Skills training in Ghana occurs in both the private and public sectors. By far the most important institution which provides such training in the private sector is the apprenticeship system. Apprentices are young men and women who undertake highly sector specific training. Some of these apprentices then go on to form their own businesses, others go on to work in the firm in which they were apprentices as masters, some move to other firms or occupations. It matters where apprentices go as incomes differ substantially across these different outcomes (Sandefur, Serneels and Teal, 2007). While much is known about the institution in terms of its structures and forms, we know much less about how well apprenticeship pays relative to other forms of training and relative to more academic education. To establish the effect of apprenticeship it is essential to be able to observe individuals in both the wage and self-employment sectors.

Over the period 2004 to 2006 the CSAE in conjunction with the Ghana Statistical Office has carried out an urban based labour market survey which in its most recent round had very detailed questions concerning the skills and training that the individuals had received. The survey also sought to measure the incomes of the self-employed with as much accuracy as possible in a manner that would allow incomes to be compared across the formal and informal sectors. This survey is a follow-up to two earlier surveys carried out in 2004 and 2005. In this report the data on apprentices from the 2006 round of this survey is used to address a range of questions about the background of apprentices and the outcomes of their training. Two questions we address are:

1. How important is apprenticeship as a form of training?
2. Does being an apprentice pay?

How important is apprenticeship as a form of training?

We begin by asking how important is any form of training among the urban population based on our new data. As Table 1 shows, within our sample of people
aged from 15 to 65, including those both in and outside the labour force, 33 per cent have done some form of training either as an apprentice or attending some vocational or technical school.

**Table 1: Training in Ghana in 2006**

<table>
<thead>
<tr>
<th>Training Type</th>
<th>Number of observations</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal training</td>
<td>1099</td>
<td>67</td>
</tr>
<tr>
<td>Any apprentice/vocational/technical training, past or current</td>
<td>544</td>
<td>33</td>
</tr>
<tr>
<td>Total individuals, excluding children and the elderly</td>
<td>1643</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ghana Urban Panel Household Survey, CSAE/GSO, 2006

In the analysis we identify four kinds of training which occur outside the main academic educational stream. These are firstly attending a vocational or technical school, secondly undertaking an apprenticeship, thirdly being trained on-the-job and finally being trained as a teacher or nurse. The reason for separately identifying training as a teacher or nurse will be apparent from the results that we present below. Many individuals do more than one form of training, so in Table 2 we present the number of training events in the data, i.e. one of the training activities identified in the survey.

In Table 2 we identify both current and past training. It is clear that apprenticeship is by far the most common form of training; 16 per cent of the training events in the survey are current apprenticeships while 41 per cent are past apprenticeships. The second most important form of training is that classified as on-the-job, followed by vocation training, excluding that for teachers and nurses, who constitute 3 per cent of the training events.

**Table 2: Types of training**

<table>
<thead>
<tr>
<th>Type of Training</th>
<th>Number</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current apprentice</td>
<td>122</td>
<td>15</td>
</tr>
<tr>
<td>Past apprentice</td>
<td>317</td>
<td>40</td>
</tr>
<tr>
<td>Current vocational trainee</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Past vocational trainee</td>
<td>112</td>
<td>14</td>
</tr>
<tr>
<td>Current on-the-job trainee</td>
<td>40</td>
<td>5</td>
</tr>
<tr>
<td>Past on-the-job trainee</td>
<td>158</td>
<td>20</td>
</tr>
<tr>
<td>Trained teacher/nurse</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>Total number of training events</td>
<td>790</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Ghana Urban Panel Household Survey, CSAE/GSO, 2006

**Does being an apprentice pay?**

In order to answer the question does apprenticeship pay it is clearly crucial to be able to measure self-employment income. Our data is taken from a longitudinal labour market survey conducted by the Centre for the Study of African Economies (CSAE) at Oxford University, under the direction of the authors and in collaboration with the Ghana Statistical Office (GSO). The urban panel survey (UPS) collects information on incomes, education and labour market experience, household
characteristics and various other modules for labour force participants (ages 15 to 60) in urban areas. For Ghana these areas span the four largest urban centres in the country: Accra (and neighbouring Tema), Kumasi, Takoradi and Cape Coast. The samples were based on a stratified random sample of urban households from the 2000 census in Ghana. While the initial sample was household based, interviews were conducted on an individual basis, and the unit of analysis in what follows will be at the individual level. A total of 830 were interviewed in the first round of the survey in Ghana, which was conducted between October 2003 and June 2004.

Using the data summarised, we carry out a series of tests to ask of the data the following question: which of the four forms of training we have identified – vocational, apprenticeship, on-the-job and teaching and nurse training – pays the most? The answer to that question will clearly depend on how much we control for in any equation. In Table 3 we control for gender, age as a measure of general work experience, education measured in year and a raven’s test which is intended as an indicator of reasoning ability similar to that originally used in Knight and Sabot (1990). We will also investigate how controls for occupation influence our measures of the returns to training. We identify four occupation classes – the self-employed, those working in a small firm, defined as one with less than ten employees, those working in large firms, defined as those with more than ten employees and those working in the public sector. Workers employed in public sector firms are not separately identified; they will be included in the large firm category so in our analysis the public sector is essentially civil servants.

We begin by asking the simplest descriptive question: how do the earnings of those who received at least one of these four forms of training compare with those who received none? This question is answered in Table 3 column [1]. Our data imply that the returns from different forms of training differ radically. Those who undertake training to be either a nurse or teacher receive incomes some three times higher than those with no training. In contrast, those with some on-the-job training receive only 27 per cent more income those with no training. In even greater contrast those who have undertaken an apprenticeship receive incomes 17 per cent lower than those with no training. It is important to recognise that his does not imply that undertaking an apprenticeship lowers earnings. It implies that simply as a descriptive fact, apprenticeship is associated with a range of circumstances which lead to lower levels of income on average than those with no training. What those circumstances might be we now investigate by including controls in the equation.

In Table 3 columns [2] and [3] we present two basic earning functions to establish a basis for how the effects of training and occupation may impact on earnings. In column [2] we only control for gender, age and education; in column [3] we include our control for reasoning ability, the Raven score. While this measure of ability decreases the return to education a little, the impact is not large. Our first test as to whether training is linked to increases in income, once we control for human capital, is in Table 3 column [4], where we include the training measures as well as our controls for gender and human capital. The effect of these controls is to remove any significant effect of training on earnings for all except those going to teacher or nursing school. It remains true that, accepting the point estimates in the equation, this last form of training is by far the highest, doubling incomes. It is also true that the point estimate on apprenticeship remains negative but, as already noted, it is no longer significantly different from zero. In the final column of Table 3 we include in
addition controls for occupational outcomes. The effect here is to roughly halve the point estimate on the teacher and nursing parameter, suggesting that about half of the return to this type of training occurs through access to the public sector. The occupational dummies suggest a hierarchy of earnings by which those in the public sector earn about 80 per cent more than those in the small firm sector, with those in self-employment earning 17 per cent more than those in small firms and those in large firms earning 37 per cent more than those in self-employment.

There is, however, a common finding across all the regressions: that apprenticeship never has a positive effect on earnings. Which raises an obvious question: why do so many do it? As we have already shown it is by far the most common form of training in Ghana. This question has been tackled in a recently completed working paper ‘Does doing an apprenticeship pay off? Evidence from Ghana’, by Courtney Monk, Justin Sandefur and Francis Teal. The data used in that paper, a STATA do file to recreate the main results and a Word document summarising the variable names, can be found at: http://www.csae.ox.ac.uk/datasets/main.html.

References

| Table 3  
Earnings Equations with Years of Schooling |
<table>
<thead>
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<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Male</td>
<td>.435</td>
<td>.392</td>
<td>.404</td>
<td>.341</td>
</tr>
<tr>
<td></td>
<td>(.057)***</td>
<td>(.058)***</td>
<td>(.058)***</td>
<td>(.059)***</td>
</tr>
<tr>
<td>Age</td>
<td>.063</td>
<td>.064</td>
<td>.064</td>
<td>.064</td>
</tr>
<tr>
<td></td>
<td>(.019)***</td>
<td>(.019)***</td>
<td>(.019)***</td>
<td>(.019)***</td>
</tr>
<tr>
<td>Age²</td>
<td>-.064</td>
<td>-.064</td>
<td>-.065</td>
<td>-.065</td>
</tr>
<tr>
<td></td>
<td>(.025)**</td>
<td>(.025)**</td>
<td>(.025)**</td>
<td>(.025)**</td>
</tr>
<tr>
<td>Education (years)</td>
<td>-.078</td>
<td>-.084</td>
<td>-.078</td>
<td>-.065</td>
</tr>
<tr>
<td></td>
<td>(.022)***</td>
<td>(.022)***</td>
<td>(.024)***</td>
<td>(.024)***</td>
</tr>
<tr>
<td>Education² (years²/100)</td>
<td>.913</td>
<td>.863</td>
<td>.785</td>
<td>.621</td>
</tr>
<tr>
<td></td>
<td>(.152)***</td>
<td>(.153)***</td>
<td>(.167)***</td>
<td>(.169)***</td>
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<tr>
<td>Raven score</td>
<td>.028</td>
<td>.026</td>
<td>.023</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.006)***</td>
<td>(.006)***</td>
<td>(.006)***</td>
<td></td>
</tr>
<tr>
<td>Past vocational/technical school</td>
<td>.069</td>
<td>.104</td>
<td>.085</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.186)</td>
<td>(.092)</td>
<td>(.088)</td>
<td></td>
</tr>
<tr>
<td>Past apprentice</td>
<td>-.159</td>
<td>-.061</td>
<td>-.024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.672)**</td>
<td>(.060)</td>
<td>(.068)</td>
<td></td>
</tr>
<tr>
<td>Past on-the-job training</td>
<td>.240</td>
<td>.094</td>
<td>.108</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.003)**</td>
<td>(.081)</td>
<td>(.078)</td>
<td></td>
</tr>
<tr>
<td>Teacher/nursing school</td>
<td>1.069</td>
<td>.719</td>
<td>.458</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.172)***</td>
<td>(.241)***</td>
<td>(.321)**</td>
<td></td>
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<td>empl. small firm</td>
<td></td>
<td></td>
<td>-.161</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.070)**</td>
<td></td>
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<td>empl. big firm</td>
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<td></td>
<td>3.14</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(.075)***</td>
<td></td>
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<tr>
<td>empl. public</td>
<td></td>
<td></td>
<td>.420</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.119)***</td>
<td></td>
</tr>
<tr>
<td>Obs.</td>
<td>932</td>
<td>932</td>
<td>932</td>
<td>932</td>
</tr>
<tr>
<td>R²</td>
<td>.032</td>
<td>.167</td>
<td>.184</td>
<td>.194</td>
</tr>
</tbody>
</table>

All standard errors are robust. Regressions include controls for city of residence.
What limits investment in developing countries?

Måns Söderbom

The overall objective of this research (which was funded by the Leverhulme Trust) has been to investigate why firms in poor countries do not invest more to upgrade their technology, expand their business, and ensure the prospects for long-term survival are as good as possible. To accomplish this goal, recently collected firm-level data from Africa and Asia has been analysed.

The economic uncertainty faced by the firms under study is high, and this has important implications for investment decisions both in the short run and the long run. The research indicates that halving the level of uncertainty will increase the average firm size by up to 100 per cent in the long run. A reduction of uncertainty may also speed up the rate at which firms adjust to new information about current and future profitability. Interestingly, this effect is relatively strong amongst the smallest firms in the least developed economies in our data.

One possible reason firms in developing countries are small and have low investments is that the financial markets are poorly developed. The conventional way of empirically analysing if financial imperfections hamper investment is to investigate how investment correlates with the amount of internal funds available within the firm. This approach has been strongly criticised in recent years and is now thought unreliable by many economists. The research on investment, cash-flow and financial imperfections (Bond and Söderbom, 2006) indicates that, contrary to this new view, the nature of the statistical relationship between investment and cash-flow may well be informative of the severity of financial imperfections. In our data sets we find investment to be positively correlated with cash-flow, suggesting that financial imperfections may indeed hamper investment in poor countries.

Many of the firms that undertake complete disinvestment (i.e. close down) in Africa are actually economically viable. Among small firms in particular there is a class of productive firms that have high exit rates (Söderbom, Teal and Harding, 2006). This may be an important source of welfare loss for the economies under study. Improving the ability of small firms to deal with temporary problems, perhaps through improved access to credit and insurance, may therefore have important effects on the economic performance of the private sector in Africa. Investment may be hampered by problems to do with internal organisation and labour management. Research (Fafchamps and Söderbom, 2006) shows that African firms use very high ratios of managers and supervisors to production workers, compared to similar enterprises in other regions. Labour costs increase rapidly as African firms grow, due to management problems. An African firm will tend to invest much less in fixed capital and new technology than a similar firm located elsewhere, in response to rising demand by consumers for the firm’s products.
Recent publications:


Trade openness and inflation

Janine Aron and John Muellbauer

Changes in openness to trade can disrupt the inflation forecasting on which many nations’ monetary policies depend. New research suggests an innovative time-series openness measure that addresses some of the shortcomings of existing measures.

As the popularity of inflation targeting has spread, inflation forecasting has come to play a central element in many nations’ economic policy making. Numerous emerging market and developing economies have undergone trade liberalisation. Since lowering import barriers typically exerts a downward pressure on prices, evolving trade liberalisation represents a structural break from the inflation forecasting perspective. Omitting this factor can confuse modellers studying the determinants of inflation and output. For instance, a greater degree of openness due to trade liberalisation is likely to lower the rate of inflation and may alter the influence of the real exchange rate on growth, via the impact on the demand for exports and leakage of demand into imports. Long time series of better measures of openness should improve the modelling and forecasting of output and inflation.

Unfortunately, attempts to measure trade policy are fraught with measurement problems for observable components (such as tariffs), and by the presence of difficult-to-quantify components of policy (such as quotas and other non-tariff barriers). Several authors suggest that the sheer complexity of factors influencing trade – including tariffs and surcharges, drawbacks, quotas and licences, other non-tariff barriers such as differing international standards, exchange controls, and occasionally trade and foreign exchange sanctions – argues against any single measure adequately proxying for trade policy. From several critical surveys of empirical measures of trade policy, the consensus appears to be that no measure of trade policy is free of methodological problems. Moreover, the measures often correlate poorly with trade volumes.
We draw on this literature to evaluate existing trade policy measures, focusing on viable indicators for use in time series macro-modelling, particularly of inflation. The most commonly used measures of trade policy outcomes, such as trade flows to GDP (in real or nominal terms), are amenable to time series application. However, they are also influenced by a range of factors including country size and location, the tradable natural resource base and the extent and ease of capital inflows. In a cross-country context, there have been attempts to remove these other factors to give ‘purged’ measures of trade-openness. However this is not a useful methodology for time series work, as the essentially static ingredients in these regressions allow insufficient time variation within countries.

A second set of indicators, administrative or incidence-based indicators such as nominal average tariffs and effective protection, and coverage of non-tariff barriers (NTB), can be used in time series studies. However they suffer from measurement problems, especially severe for non-tariff barriers. Rodriguez and Rodrik argue these measures can effectively rank-order countries according to the restrictiveness of their trade regimes, but they and others emphasise several measurement biases. The use of unweighted average tariffs will weight too heavily those commodities that are only a small fraction of imports. On the other hand, trade-weighted average tariffs (e.g. aggregate import duties or trade taxes divided by the volume of imports) give negligible weight to prohibitive tariffs since the corresponding imports are typically low. If statutory measures are used, these may not necessarily be binding due to poor enforcement or even corruption. Tariff averages will be poor proxies for overall restrictions where NTBs are important.

The coverage of NTBs relative to total imports is widely used, but various authors note this proxy of trade policy is also measured with error. Available data tends to report the number of tariff lines on which one of a small number of easily identifiable NTBs applies, or the percentage of product categories subject to import licences. This is uninformative on the severity of the NTBs and tends to exclude less easily quantifiable barriers to trade, such as local procurement requirements, or health and safety standards.

A third set of indicators combines quantitative and qualitative trade measures for an overall index capturing different aspects of trade policy, or uses institutional information to generate a subjective judgement of ‘openness’. Though data intensive, such measures could be constructed for time series studies, but their value as trade policy measures is in doubt. An example is the widely-cited composite trade policy indicator of Sachs and Warner, where a dichotomous variable measures zero (closed) or one (open) – depending on thresholds for incidence-based trade policy indicators, the size of the black market premium, whether the economy is socialist and whether there is a state monopoly on major exports. In a far-reaching review of growth and trade openness studies, Rodriguez and Rodrik (op. cit.) find this indicator explains growth due to two of its components being correlated with other determinants of growth, the black-market premium and state monopoly variables, with little contribution from its tariff and NTB components. The same authors are critical of subjective indices which they judge as ‘highly contaminated by judgement biases or lack(ing) robustness’.
Finally, a fourth set of indicators involves international price comparisons, often suitable for time series analysis. This idea lies behind Dollar’s well-known ‘price distortion’ index. Dollar uses international data on the relative price of consumption goods and tries to ‘purge’ it of its non-traded component by taking the residual from a regression on urbanisation, land and population. Rodriguez and Rodrik (op. cit.) demonstrate, even assuming that this method is successful, that the purged variable is theoretically inappropriate as a measure of trade restrictions when Purchasing Power Parity is violated over the sample, and/or when there are export taxes or subsidies in use. It is a well-established empirical fact that absolute and relative PPP do not hold over the medium-term, but the deviations even from relative PPP are very long-lived. Moreover export taxes and subsidies are commonly applied, especially in developing countries.

Our own time series measure of trade openness overcomes many of the shortcomings of existing measures, and encompasses both observable and unobservable trade policy. It is based on modelling the ratio of manufacturing imports to home demand for manufactures, a variable likely to be strongly influenced by trade openness. This is purged of other determinants by including in the model: GDP growth, the terms of trade and the real exchange rate or relative import prices. We measure observable trade policy in the model with trade-weighted tariffs. The unobservable trade policy component (NTBs and mismeasurement of tariffs) is captured in the model by a smooth, non-linear stochastic trend. Our openness measure is constructed as a weighted combination of known trade policy and the stochastic trend, with weights from the regression coefficients in the model. In application to South Africa, the shape of the trend is likely also to reflect such factors as the lifting of capital controls and unification of dual exchange rates in the 1990s (as often used in the composite measures above), and the lifting of externally imposed trade sanctions. Our measure thus captures a broader sense of ‘openness’ than is only due to trade policy. It is shown in Figure 1 and corresponds well with the known phases of liberalisation.

Our weighted openness measure and also its separate components are included in quarterly models of wholesale price inflation in South Africa. The evidence in our recent research suggests that increased openness has significantly reduced the mean inflation rate and has also reduced the exchange rate pass-through into wholesale prices. The fit of the model is best when the stochastic trend and tariff measures are included separately. The evidence from price setting suggests a larger weight on the more permanent part of tariffs than the temporary import surcharges employed mainly in the 1980s, and different weights for observed and unobserved components than in the import demand equation. The rise in trade openness in the 1990s coincides with rising labour productivity in manufacturing in South Africa, influencing unit labour costs.

Our preferred equations have several advantages compared to the equation for WPI inflation in the South African Reserve Bank’s published core model (details in Aron and Muellbauer, 2008). The first is that while their equation estimated over a
sample from 1986 breaks down over longer samples, our equations do not. The second advantage is that our equations have a strongly significant output gap effect, while in the SARB’s equation there is only a weak effect from the change in the output gap. This difference has policy significance. A potential criticism of inflation targeting regimes, especially in emerging market economies, is that the achievement of the inflation objective may entail a considerable output sacrifice. However, if the inflation model contains an important output gap term, then model-based interest rate policy will automatically stabilise output.

The technique we have used to capture increased openness is potentially of use to other emerging market countries. Many analysts believe that the use of inflation targeting will spread. This makes it even more important for economists to develop a better understanding of the reform-linked determinants of inflation in the short and medium run. Failing to do so may lead central bank modellers to forecast from misspecified models that omit the structural breaks of past trade liberalisation, and may lead to the choice of inappropriate monetary policy.

End notes
2 Aron, Janine and John Muellbauer, ‘Interest rate effects on output: Evidence from a GDP
forecasting model for South Africa’, *IMF Staff Papers* 49, 185–213, 2002
4 Frankel, Jeffrey A. and Eduardo A. Cabrallo, ‘Does openness to trade make countries more vulnerable to sudden stops, or less? Using gravity to establish causality’, NBER Working Paper No. 10957, December, 2004
5 Rodrik and Rodriguez, 2001 (op. cit.).
6 Anderson, Jim and Peter Neary (Measuring the Restrictiveness of International Trade Policy, Cambridge, MA: MIT Press, 2005) introduce an index of trade policy restrictiveness defined as the uniform tariff which maintains the same trade volume as a given tariff/quota structure. Their index overcomes the problems of the trade-weighted average tariff. However, the data requirements for its construction are rather onerous.
10 In a model that captures known influences on the import ratio, any unexplained variance (apart from white noise error) is then represented by the stochastic trend (estimated using Koopman, Siem J., Andrew C. Harvey, Jurgen A. Doornik and Neil Shephard, *STAMP: Structural Time Series Analyser, Modeller and Predictor*, London: Timberlake Consultants Press, 2000)

**Managing macroeconomic risks in developing countries**

**Policies and institutions**

*Paul Collier, David Vines and Christopher Adam*

**Aims and methods**

This project is concerned with the design of institutions, instruments and policies to limiting the vulnerability of developing countries to external shocks, particularly those caused by volatility in world prices for oil and other primary commodities, in climatic conditions, in aid flows, and increasingly in private capital flows. The
benefits from efficient policy responses to such shocks are substantial, but in many developing countries the authorities are still struggling to define coherent macroeconomic strategies to support the efficient management of risk and volatility.

Our research uses analytical economic techniques and applied econometrics to focus on three themes. First we examine the properties of alternative monetary, fiscal and exchange rate policy choices in delivering efficient macroeconomic outcomes in the face of aid, commodity price and climate shocks in low-income countries. Second we examine how macroeconomic policy can be conducted, and how the supporting global financial architecture can be modified, to minimise the risks of financial crises as capital market access improves and private capital flows dominate official aid flows. Third we investigate strategies for improving the insurance role of aid so that efficient donor aid allocations respond efficiently to oil and commodity price shocks.

Monetary, fiscal and exchange rate policies for low-income countries
During 2007 we started to develop this work programme in a number of directions. First, building on our work for the IMF’s 2006 Africa Regional Outlook, we have extended the core DSGE model to examine a wider range of discretionary fiscal policy rules under conditions of policy credibility in circumstances where political economy considerations playing on both aid donors and recipients limit the flexibility of fiscal behaviour. Second we have started to study the implications of greater capital account openness in the particular form which has emerged in sub-Saharan Africa in the last five years. While governments have refrained from issuing foreign currency denominated debt, they have been able to sell domestic currency debt to foreign portfolio investors. Foreign investors now play an important role in domestic public debt markets, accounting for up to 50 per cent of the domestic debt stock. A paper investigating how the properties of conventional monetary rules are affected in these circumstances was presented at the Bank of England CCBS conference in July 2007.

We have also begun to apply this core analytical structure to specific country settings. Christopher Adam and Benedikt Goderes have developed a version of this model to examine the characteristics of alternative monetary policy rules under consideration in Nigeria, where the monetary authorities are currently engaged with managing the domestic macroeconomic consequences of high and volatile oil prices against a background of fragile fiscal institutions. Similar work is anticipated on Uganda and Zambia in the course of 2008. In parallel, Christopher Adam and Kang Yong Tan have recently started to consider the empirical validity of this class of model a step further, by using Bayesian methods to estimate a version of the O’Connell et al. (2006) model for Kenya, Uganda and Tanzania over the period since the early 1990s.

David Vines and Kang Yong Tan have been working on how to synthesise the insights of the O’Connell et al. model with those emerging from the general class of New Keynesian micro founded DSGE models, popularised, for example, by Woodford, and designed principally to analyse the conduct of macroeconomic policy within advanced countries. The two key differences, on which Vines and Tan
focused, concerning the role of imperfect international capital mobility and the nature of the rules adopted for both monetary policy and fiscal policy, are likely to be very different because of underdeveloped financial markets and a restricted ability to change taxes if fiscal needs become greater (meaning that there is likely to be some reliance on an inflation tax, and seigniorage, in such circumstances). The purpose of this study is to show just how these two features change the behaviour of the models studied in the face of shocks, particularly shocks to aid.

Policy making in emerging market economies
We have been developing our work on the theory of macroeconomic policy making in emerging market economies in a number of ways. One aspect of our work has been on the ‘Dutch disease’ problem. Much of the analytical and empirical work on the Dutch-disease effects of resource discoveries, trade shocks and aid surges in developing countries has tended to assume that countries are only weakly integrated with global private capital markets, if at all. Increased access to global capital markets changes the positive and normative analysis of adjustment to shocks, in that the stocks of capital are adjusted in response to the shocks. David Vines and Karlygash Kuralbayeva distributed a CEPR discussion paper on this subject which is to appear in Open Economies Review. Further work on this subject, on the role of the financial accelerator in an economy undergoing a mineral boom, has been completed by Kuralbayeva and Vines.

David Vines has continued to work on understanding the macroeconomics of the Asian financial crisis of 1997. Two papers have been completed. The first, on ‘The transfer problem and real exchange rate overshooting in financial crises: The role of the debt servicing multiplier’, written jointly with Gordon Menzies, has been accepted for publication in the Review of International Economics. The second, with Tanya Kirsanova, uses a two-sector inter-temporal optimising model to extend this analysis, so as to analyse adjustment dynamics in response to a negative terms of trade in circumstances where the economy is extremely highly geared, because much of its accumulation of capital is funded by borrowing from abroad.

Kang Yong Tan and David Vines apply some of the insights of this modelling work to an understanding of what really caused the financial crisis in Indonesia ten years ago. Using the McKibbin and Wilcoxen Asia Pacific G-Cubed model, they define the crisis of late 1997 in terms of two fundamental shocks: first an increase in the risk premium attached to the holding of Indonesian assets in the aftermath of the Thai crisis in July, which caused the currency to fall; and second an inability to continue with disciplined monetary restraint in the face of this collapse of the currency.

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Recent publications

Section 5: People

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Dr J. Aron, Research Officer: international economics, monetary economics, applied macroeconometrics on the South African economy

Dr M. Aslam, Research Officer: economics of education and microeconomics

Dr A. Barr, Research Officer: behavioural and experimental economics applied to development issues

Dr A. Behar, Research Officer: labour demand, cross-country growth spillovers, skill-biased technical change

Mr D. L. Bevan, Fellow of St John’s College: public economics and macroeconomics

Dr T. Bold, Research Officer: development economics, applied microeconomic theory

Professor P. Collier, Director, CSAE and Fellow of St Antony’s College: governance in low-income countries, especially the political economy of democracy, economic growth in Africa, economics of civil war, aid, globalisation and poverty

Professor S. Dercon, Professor of Development Economics and Fellow of Wolfson College: microeconomics, poverty and welfare analysis

Dr M. Fafchamps, Deputy Director, CSAE, Professor in the Department of Economics and Professorial Fellow at Mansfield College: applied microeconomics

Dr B. Goderis, Research Officer: commodity prices and growth, financial crises, foreign aid, applied econometrics

Dr A. Hoeffer, Research Officer: macroeconomics, growth and economics of conflict

Dr G. Kingdon, Research Officer: applied microeconomics of education, labour and gender

Professor J. B. Knight, Professor of Economics and Fellow of St Edmund Hall: labour and human resource economics

Dr A. Moradi, Postdoctoral Research Fellow: economics of undernutrition, biological standard of living in LDCs, nutrition and violent conflicts

Mr J. Sandefur, Research Officer: labour economics, programme evaluation

Dr M. Söderbom, Leverhulme Early Career Research Fellow: microeconomics, labour markets, productivity, investment, firm performance

Dr K. Tan, Research Officer: international macroeconomics, adaptive learning, applied econometrics

Dr F. Teal, Deputy Director CSAE and Oxford Director GPRG: microeconomics of firms and labour markets

Dr P. Vicente, Research Officer: corruption, microeconomics of institutional/political issues in development

Mr A. Zeitlin, Research Officer: development economics, applied microeconomics

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Professor J.-P. Azam, University of Toulouse, Senior Associate Member of St Antony’s College: francophone and lusophone Africa
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Dr B. Kinsey, Free University of Amsterdam: economic anthropology
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Dr C. Rogg, DFID Ghana: asset portfolios, precautionary savings and risk management
Dr P. Sermeels, UEA
Dr C. Soludo, Governor, Central Bank of Nigeria
Dr D. Stasavage, LSE: politics of macroeconomic policy, political economy of emerging markets, monetary integration, corruption and development
Professor J. Toye, Queen Elizabeth House: development economics and the political economy of development
Visitors

Nzinga Broussard, University of Michigan, January to March 2007

Rose Ngugi, Dept. Economics, University of Nairobi, January to March 2007

Paulo Santos, Cornell University, March to May 2007

Lanre Olaniyan, Dept. Economics, University of Ibadan, April to June 2007

Dean Karlan, Yale University, July to August 2007

Ana Maria Pereda, University of Victoria, July 2007 to March 2008

Murdith McLean, University of Victoria, July 2007 to March 2008

Hanne Fjelde, Uppsala University, September 2007 to January 2008

Marguerite Duponchel, Sorbonne, October 2007 to January 2008

Sarmistha Pal, Brunel University, January to March 2008

Joshua Olusegun Ajetomobi, Ladoke Akintola University of Technology, Nigeria, January to March 2008

Brian Kahn, South African Reserve Bank, February 2008

Seidu Al-Hassan, Dept. of Economics and Entrepreneurship Development, University for Development Studies, Ghana, April to June 2008

Samuel Fambon, Faculty of Economic and Management, University of Yaoundé II, Cameroon, April to June 2008
Section 6: Journal of African Economies

Before the advent of the Journal of African Economies (JAE) in 1992, high-quality economic research on Africa was scattered over many diverse publications. In the JAE, this important area of research now has its own vehicle to carry rigorous economic analysis, focused entirely on Africa, for Africans and anyone interested in the continent – be they consultants, policy makers, academics, traders, financiers, development agents or aid workers.

Administered at the CSAE, the Journal of African Economies is published by Oxford University Press (OUP) and has an international network of Managing and Associate Editors and referees. The electronic version of the JAE is available free of charge to registered academic and research institutions in least developed countries. The JAE website is http://www.bepress.com/jae/.

A free sample copy can be read online at the OUP website: http://jae.oupjournals.org/, or a printed copy can be ordered by emailing jnls.cust.serv@oupjournals.org.

AERC/Journal of African Economics Visiting Scholars Programme

Since 2005, part of the Journal proceeds have been used to fund an African Visiting Scholar Programme. This programme is administered in collaboration with the African Economic Research Consortium and enables up to three African academics per year to each spend a term at the CSAE. The programme is intended to enable AERC network members who have recently completed an AERC supported research project to visit Oxford and distil a publishable journal article from their research reports. Visiting Scholars interact with CSAE staff and graduate students and participate in the intellectual life of the Centre and the Department of Economics.

The Visiting Scholars for 2007-2008 are:

Joshua Olusegun Ajetomobi, Ladoke Akintola University of Technology, Nigeria

Seidu Al-Hassan, University for Development Studies, Ghana

Samuel Fambon, University of Yaoundé II, Cameroon.
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