



Economic Research Southern Africa Activity

April 2016 – March 2017

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Director's Statement

ERSA is a nationally funded programme designed to both broaden the scope of economic research in South Africa, and to deepen its quality in order to ensure greater international exposure of economic research conducted in Southern Africa.

Toward this end ERSA has been mandated by its Board to publish a Working and Policy Paper series, provide financial incentives to researchers to publish their papers in peer reviewed scholarly journals, run a Workshop programme across a range of distinct focus areas in economics, and to provide support to graduate students in economics in Southern Africa.

This report provides an overview of our activities, which are detailed in the remainder of the annual report.

The **Working and Policy Paper** series has grown to a total of 675 published papers. Approximately 100 papers are appearing in the series each year, while the peer review process that selects the papers for publication referees considerably more contributions. The volume of publication, the width of coverage of sub-fields of economics, and the range of methodologies represented in the ERSA Working and Policy Paper series is unmatched by any other working paper series in Southern Africa.

The success rate of ERSA Working Papers appearing in scholarly journals also continues to rise steadily. The number of published papers has reached 333 (a 49% publication rate – high for any working paper series), of which 216 have appeared in international journals, and 112 in national journals. The high publication rate of the Working Paper series reflects the quality of referee input in helping to ready papers for peer review in journals, as well as the quality of the papers that are being published under ERSA's auspices.

The success of the Working & Policy Paper series is also evidenced in the number of downloads of papers from our website. The downloads have moved from 58,626 in 2013, to 115067 in 2016. This is well above any other working paper series that is published in Southern Africa.

A consistent objective of ERSA has been to ensure that the research that it publishes has a policy impact. Toward this end, since 2015 ERSA has published a **Research Brief** series, issued once a week (though the series existed in more infrequent issues since 2013). This presents summary results from research, in concise and non-technical form. The series is circulated to the full ERSA database of email contacts, and is published on the website and by social media. Over the period to the close of the financial year, a total of 106 Research Briefs have been circulated.

As for the Working and Policy Paper series, downloads of the Research Briefs from the ERSA website attests to their success. Downloads have risen from 1,105 in 2013, to 4,003 in 2016. Since the Research Briefs are circulated in full to the ERSA mailing list, downloads will reflect a fraction of the total number of reads of the series.

Workshop activity During 2016-2017, 4 workshops were held, and attendance at the workshops continues to represent a diverse representation of national institutions and demographics. A total of more than 30 institutions, of which 12 were South African, have been represented at ERSA workshops during this reporting period.

The **ERSA Policy Associates** have continued to produce a consistent flow of Working Papers and journal publications, as well as conference presentations.

Under the ERSA scholarship scheme, a total of 65 scholarships have been awarded to date, 62 for Masters, and 3 for PhD study. During the course of 2015 – 2016, 30 applicants responded to ERSA’s scholarship funding invitation of R80000 for a one year full time Master’s programme in Economics. Of these applications, 10 successful candidates from a diverse range of institutions throughout South Africa were selected and awarded with an ERSA scholarship for 2017. The demographic breakdown of the 10 awardees is as follows: 3 black females, 1 white female, 5 black males and 1 white male.

The Skills Development Initiative, which is aimed at raising the technical skills of young faculty members for an active research career, continues with the final workshop on Panel Data Analysis for the 3rd cohort scheduled for Nov 2017, and a call sent out for applications for a new cohort (4th) to begin their training at a workshop scheduled for July 2017.

Under the **Measuring Institutions Project**, the West African case studies are near completion, while the Ethiopian and Democratic Republic of Congo case studies are ongoing. A workshop in Cape Town where the results of all five case studies undertaken thus far can be presented is in planning phase.

As always, ERSA has benefited from the time, effort, and contributions of many people, particularly the research group conveners, and those who serve in the editorial process of the Working and Policy Paper series. Members of the Skills Development Committee have continued to work at generating a broader and more inclusive academic community in South Africa. Both ERSA Deputy Directors have been also borne a substantial burden on their time, particularly surrounding the strategic review of ERSA.

Once again, the ERSA Office team of Gloria Halland, Yoemna Mosaval and Megan Gelderbloem have distinguished themselves by their efficiency and dedication without none of our operations would be feasible.

The funding that ERSA has enjoyed from National Treasury continues to deserve the ongoing sincere thanks and recognition of the economics profession in South Africa.

There is no doubt in my mind that the strength of research activity in economics in South Africa would be far weaker at present, without the extensive support that National Treasury has extended to the profession over the past 12 years. We look forward to continuing to work with Treasury in pursuing the strategic objectives set out by the ERSA Board.



Johann Fedderke
Director

Income and Expenditure Statement: 1 April 2016– 31 March 2017

Economic Research Southern Africa (NPC)

(Registration number 2010/002225/08)

Annual Financial Statements for the year ended 31 March 2017

Detailed Income Statement

Figures in Rand	Note(s)	2017	2016
Revenue			
Fund income		11,999,000	11,384,000
Other income			
Uni wider project income		78,128	42,203
Interest received	10	810,750	461,003
		888,878	503,206
Operating expenses			
Accounting fees		172,891	160,035
Advertising		136,018	68,184
Auditors remuneration	12	51,460	-
Bank charges		13,141	20,557
Board and academic committee meetings		46,665	199,523
Cleaning		10,728	12,809
Conference fees		-	23,993
Depreciation, amortisation and impairments		78,850	76,626
Economic prizes		153,696	184,600
Employee costs		2,010,168	2,414,114
Entertainment		6,417	5,164
External review costs		-	445,740
Festschrift		86,282	-
IT - communications		60,467	60,887
IT - monthly contract		104,763	107,892
IT - software		5,694	2,959
Insurance		32,307	31,725
Interns		-	122,435
Lease rentals on operating lease (including municipal expenses)		776,016	726,317
Legal expenses		14,290	-
Office expenses		9,512	8,329
Placement fees		42,962	-
Postage		2,338	10,687
Printing and stationery		6,034	51,897
Protective clothing		-	4,374
Repairs and maintenance		-	1,192
Research fees		2,000,114	2,391,907
Research initiative: Economic Growth - Measuring institutions		100,000	364,368
Scholarships		720,000	660,000
Secretarial fees (CIPC)		2,000	-
Skills development workshop		300,865	305,774
Staff welfare		16,158	25,990
Stipends- boards and conveners		-	172,609
Subscriptions		128,449	79,753
Telephone and fax		25,860	30,240
Travel - local		353,386	265,606
Uni wider project costs		-	60,256
Website management		71,312	68,135
Workshops		232,399	1,688,228
		7,771,242	10,852,905
Profit for the year		5,116,636	1,034,301

1. Policy Research Programme

Report from the Deputy Director Research 2016/2017

The year 2016/2017 has been a transition year for the ERSA research work. The first cohort of research fellows has reached the end of their contract period. We are very grateful to Beniam Bedasso and Nonso Obikili for their outstanding job. Their contributions to the understanding of the political economy of South Africa are highly original and will have a long lasting impact on the South Africa debate.

ERSA also completed their input to the research on Firm level administrative data promoted by the National Treasury and SARS. The result of the research are available in the paper titled "Markups and concentration in South African manufacturing sectors: An analysis with administrative data" which will appear on a special issue of the South African Journal of Economics.

Co-Pierre Georg continues his exceptional work for ERSA and for the development of South Africa skills and knowledge in the field of finance which directly support supervisory capacity for the SARB and improves significantly our understanding of the role and functions of the financial market in the South African economy. The organization is very grateful to Co-Pierre for his continuous effort to raise the research profile of the organization.

Overall the work done demonstrates the positive and direct role that ERSA can play in promoting the development of economic research and contribute positively to the policy process in the country. What is needed now is to start the next research cycle of the organization, its research structure and its objectives, in light of the experience of the last three years and the new strategic direction of the organization.

Nicola Viegi
Deputy Director Research
May 2017

ERSA Policy Associate Report: Co-Pierre Georg

I joined ERSA as a Policy Associate in June 2013 on a part-time basis (equivalent of about one day per week). My primary task is to coordinate the financial economics node. My secondary task is to create contacts with the SARB to enable more researchers from South Africa (but also internationally) to conduct research projects in collaboration with the SARB and using SARB data. Since Q3/2016 I am also the Managing Editor of the working paper series.

In the reporting period from March 2016 to March 2017 I organized one workshop, at the UCT Graduate School of Business in collaboration with the Imperial College London Business School, the South African Reserve Bank, and AIFMRM in December 2016. Our keynote speaker was Prof. Manju Puri from the Fuqua School of Business at Duke University, who is a world-leading expert on deposit insurance. The workshop consisted of two parts. On the first day we had the traditional ERSA workshop where about 25 ERSA delegates participated and 9 participants presented their work with a number of leading international experts being there to give feedback.

The second part consisted of a two-day conference in collaboration with the Review of Finance, which is the #4 journal in finance. The Review committed to publishing a special issue on the conference theme, which led to a dramatic increase in paper submissions, in particular from top international universities. The program of the conference reflects this increase in paper submissions. Besides Prof Puri, who gave a timely keynote on the importance and pitfalls of deposit insurance - a current point of debate in South Africa, the second keynote was given by Lesetja Kganyago, Governor of the South African Reserve Bank. This high-level conference is unusual for South Africa, where we rarely get such a large group of top international academics together. Many ERSA delegates commented to me afterwards that they were not only impressed, but genuinely surprised by the outstanding level of research presented.

As a follow-up to my project on financial linkages at the SARB, I have been consulting with the SARB to write a report on the Asset Management sector in South Africa. The report included a detailed analysis of the sector and also an analysis of

existing data gaps and recommendations how to close these and how to improve the regulation of asset managers in South Africa.

I am very happy about these developments because not only did they allow me to address one of the key events (the ABIL default) in the financial markets in the past couple of years, but also to have a direct and measurable policy impact. We have created a good dataset about shadow banks in South Africa and the data has been used by Mrs. Esti Kemp, who is a PhD student of mine as basis for her dissertation. I am happy to report that her first paper, measuring the extent of shadow banking in South Africa will be submitted as ERSA working paper this month.

Last year I have been teaching two courses at UCT in an MCom on Risk Management of Financial markets: Econometrics (15 credits) and Financial Regulation (15 credits).

My group at UCT currently consists of three Postdoctoral Researchers and eight PhD students. I received a grant of R2.4 million from the Volkswagen Foundation to study "Spillovers of QE in industrialized countries on emerging markets" together with colleagues from Goethe University Frankfurt and NYU. The two PhD students financed by this grant are doing extremely well: Mrs. Tina Koziol just passed her proposal defense at UCT and has been offered an internship at the Bank of England. Following this, she will be visiting Goethe University Frankfurt for one semester to take part in their structured PhD program. The other student, Mr. Allan Davids joined after Mrs. Jonathan decided to discontinue her thesis since her heart was not in the topic. She since moved to the University of Stellenbosch where she undertook another attempt at a PhD under the supervision of Prof. Johan Fourie. Mr. Davids is working on housing markets in Cape Town and is currently visiting Oxford University for one semester before visiting the Real Estate Research Center at the NYU Stern School of Business.

I am also supervising Michael Rose, who works on collaboration in academia, and co-supervising Gideon du Rand, who works on microeconomics of banking. I am currently busy working on a paper with Gideon and a co-author at the Bank of Canada, which we believe has excellent publication potential. Michael is almost done with his thesis, has already two completed papers and will now visit the Georgia Tech Scheller College of Business where the world's leading working group on his topic is

based. Gideon will conduct an internship at Deutsche Bundesbank under my guidance and will defend his thesis by the end of this year.

In addition, I am supervising Esti Kemp, who works at the Financial Stability Department at the SARB and works on Shadow Banking in South Africa. From the three Postdocs who joined me this year, Suraj Shekhar (PhD Penn State), Daniel Opolot (PhD Maastricht) and Christine Mkanza (PhD UCT), I am particularly excited to have Christine with me. We are working on a book about the future of the SA economy where the unique angle is that we look through the eyes of young South African and develop a vision of what young people can do to improve the state of our economy.

I have just received an acceptance for a paper in the Journal of Financial Stability. In addition, I have completed several projects which are now under review at different journals. Over the last year I have presented at leading international conferences, including the CEPR spring meeting, the EEA, a Riksbank conference, and a conference at the MIT GCFP. I have been invited to seminars at top US and European schools including Columbia GSB, LSE, HEC Paris, Imperial College London, Copenhagen Business School, and the University of Zurich. I have been invited to discuss papers at one of the top conferences in my field (FIRS).

The bigger picture developments are first, that I will go on sabbatical between Q3/2018 and Q2/2019. I have been invited to HEC Paris where I will spend three months working with my co-author on a project that measures the complexity of financial regulation. Afterwards I will be spending about six months at the MIT Sloan School of Management to work with my co-author on a project about term interbank markets. Second, I started the UCT Financial Innovation Lab (<http://finlab.org.za>) which will be a hub for research on fintech and cryptocurrencies. As of next year, we will be convening a new MSc in Data Science with a focus on Financial Technology. I will then be teaching one course on Software Engineering for Finance and, crucially, on Fintech and Cryptocurrencies. The degree is the first of its kind and students will be supervised in collaboration with a fintech startup hub in Cape Town so that we embed their academic training in a highly entrepreneurial environment. To support these activities, I have accepted three more PhD students (Mrs. Chernay Johnson and Mr. Qobolwakhe Dube, which I co-supervise with Jerry Parwada from UNSW, as

well as Mrs. Nolwazi Hlophe, who works as an external PhD student at the Bank of Swaziland) who work on various aspects of fintech.

My group is working very well, with Gideon and Michael finishing late this and early next year, respectively. Allan and Tina will be visiting various exciting places around the world to learn and work, Esti has been making quite a career at the SARB so far (she is now a member of the BIS expert group on shadow banking and is without a doubt the country's leading expert in shadow banking), and my former Postdoc Pawel now works at the European Central Bank in the ESRB. Of the current three Postdocs, I struggle most to find a suitable placement for Christine, which is partially because she is not from South Africa. Daniel will likely remain at UCT, since we plan to make him an offer as Lecturer to develop his academic profile. Suraj will be going on the job market again next year. In addition, I was very happy to help two of my former interns to find academic placements: Dr. Tarik Roukny has joined the MIT Media Lab as Postdoc, and Dr. Christoph Aymanns has accepted a position as Assistant Professor at the University of St. Gallen. The only student where I failed this year, is Jesslyn. But she simply could not keep up with the others and did not have the same determination and interest in the topic as the other students. I am happy that I could help her to find a scholarship at Stellenbosch so that she is at least not completely lost from academia.

Finally, I was able (with a lot of help) to obtain full scholarships for about 25 MCom students we have at AIFMRM this year, and 12 MPhil students. This allowed us to attract many South African students from a previously disadvantaged backgrounds. In the MCom, over 75% of students are in this category.

Co-Pierre Georg
May 2017

ERSA Policy Associate Report: Nonso Obikili

I joined ERSA in July of 2013 tasked with broadening and deepening research on various topics in Economics. I am also tasked with conducting and publishing economic research particularly on topics in economic history, economic development and political economy. Since July 2016 I have become a part-time associate, dedicating 20% of my time to ERSA.

Since the last update in April 2016 I have published one working paper in the ERSA working paper series. The paper is jointly authored with Biniam Bedasso and is titled "Human capital inequality and electoral outcomes in South Africa". The paper is under review at the Oxford Development Studies.

I have two papers which are currently under review. The first is "The Impact of Political Competition on Economic Growth: Evidence from Municipalities in South Africa" is under review at Economics and Politics. The second is titled "Markups and Concentration in South African Manufacturing Sectors: An Analysis with Administrative Data" with Johannes Fedderke and Nicola Viegi, is under review at the South African Journal of Economics.

I also have papers which are in various stages of progress. "Climate, Yams and pre-colonial social organization in Africa" is currently a work in progress, and "Emigration and education: the schooling of the left behind in Nigeria" with Biniam Bedasso is also currently a work in progress.

Since April 2016 I have made presentations at the University of Cape Town Department of Economics seminar, and at the Laboratory of the Economies of Africa's Past at Stellenbosch University. I also presented a poster session at the UNU-WIDER / National Treasury workshop in December.

Nonso Obikili
ERSA Policy Associate
May 2017

2. The Workshop Programme

Workshop activity. During 2016-2017, 4 workshops were held, and attendance at the workshops continues to represent a diverse representation of national institutions and demographics. A total of more than 30 institutions, of which 12 were South African, have been represented at ERSA workshops during this reporting period.

See below a list of international visitors to ERSA workshops in the 2016/2017 period.

1. Wanda Mimra, ETH Zurich – Presented at the Theory workshop, titled “Asymmetric Information in Markets and Organizations” held at the University of Pretoria from 14-15 March 2016.
2. Pierre Fleckinger, MINES ParisTech – Presented at the Theory workshop, titled “Asymmetric Information in Markets and Organizations” held at the University of Pretoria from 14-15 March 2016.
3. Panicos Demetriades, Leicester University – Presented at the “Politics, Finance and Growth Conference” held at the South African Reserve Bank from 30 to 31 March 2016.
4. Svetlana Andrianova, Leicester University – Presented at the “Politics, Finance and Growth Conference” held at the South African Reserve Bank from 30 to 31 March 2016.
5. Johan Rewilak, Leicester University – Presented at the “Politics, Finance and Growth Conference” held at the South African Reserve Bank from 30 to 31 March 2016.
6. Robert Lensink, Groningen University – Presented at the “Politics, Finance and Growth Conference” held at the South African Reserve Bank from 30 to 31 March 2016.
7. Loeten Cate, Groningen University – Presented at the “Politics, Finance and Growth Conference” held at the South African Reserve Bank from 30 to 31 March 2016.
8. Lorian Pelizzon, Goethe University Frankfurt – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.

9. Balint Horvath, University of Bristol – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
10. Ricardo Correa, Federal Reserve Board – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
11. Ralph de Haas, EBRD – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
12. Matthias Busch, IWH Halle – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
13. Pedro Gete, Georgetown University – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
14. Valeri Sokolovski, Stockholm School of Economics – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
15. Sergio Schmukler, Worldbank – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
16. Shusen Qi, Maastricht University – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
17. Leandro Sanz, Federal Reserve Bank of Richmond – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
18. G. Nathan Dong, Columbia University – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
19. Thorsten Beck, Cass Business School – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.

20. Franklin Allen, Wharton School of the University of Pennsylvania – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
21. Manju Puri, Duke Fuqua Business School – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
22. Ronnie Alinda, Bank of Uganda – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
23. Frank Ming Song, Hong Kong University – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
24. Larissa Schaefer, Frankfurt School of Finance and Management – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
25. Neeltje van Horen, Bank of England – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.
26. Max Bruche, Cass Business School – Presented at the “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016.

Table 1 : Demographics of Workshop Attendance: April 2016 - March 2017

Workgroup	Name of Workshop	Convenor	Date	Institution/Place	WM	BM	WF	BF	Total
Skills Development	Panel Data Analysis: Cohort 2	SD Committee R. Van Eyden R. Naraidoo	May 16	UP, Pretoria	0	4	2	4	10
Skills Development	Time Series Techniques: Cohort 3	SD Committee R. Van Eyden	Oct 16	UP, Pretoria	0	9	1	5	15
Financial	3 rd Annual Financial Economics Workshop	C. Georg	Nov 15	Farm Inn, Pretoria	28	14	8	7	57
	Total				28	27	11	16	82

Table 2: Institutions represented at ERSA Workshops

ABSA

Accounting, University of Stellenbosch

Actuaries Without Frontiers

African Bank

African Institute for Mathematical Science

Airports Company SA

Alexander Forbes

American Cancer Association

Applied Fiscal Research Centre (AFReC)

Association for Savings & Investment South Africa (ASISA)

Aston Business School

Aurecon

Australian National University

Bank of England

Bank of Namibia

Bank of Uganda

BANKSETA

BA Isago University, Botswana

Benguela Health Group

Black Sash

British Museum

Bureau for Economic Research (BER)

Cadiz Securities

California Polytechnic State University

Cape Peninsula University of Technology

Cass Business School

Central European University

Centre for Affordable Housing Finance

Centre for Competition, Regulation and Economic Development

Centre for European Economic Research (ZEW)

CEPR

Cellule d'Analyse des Politiques Economiques du CIRES

Central bank of Congo

City of Cape Town

City of Johannesburg

Clinton Foundation

Columbia University

Community of Mandela Rhodes Scholars
Competition Commission South Africa
Conningarth Economists
Consultative Group on International Agricultural Research (CGIAR)
Council for Health Service Accreditation of Southern Africa
Council for Scientific & Industrial Research (CSIR)
Creamer Media
Dartmouth
De Nederlandsche Bank
Denmark
Departamento de Historia Economica e Instituciones Universidad Carlos III
Department of Agriculture, Fishing and Foresteries
Department of Basic Education
Department of Economic Development, Environment & Tourism, Eastern Cape
Department of Economic Development, Environment & Tourism, Limpopo
Department of Economic Development, Environment & Tourism, Mpumalanga
Department of Economic Development, Gauteng
Department of Health
Department of Health: Western Cape
Department of Labour
Department of Mineral Resources
Department of Trade and Industry
Department of Transport
Development Bank of South Africa
Development Policy Research Unit (DPRU)
Discovery
Discovery Financial Consultants
DNA Economics
Duke the Fuqua School of Business
Durban University of Technology
Düsseldorf Institute for Competition
East London Industrial Development Zone
Eastern Cape Department of Health
Econex
Edward Nathan Sonnenbergs Inc
Ekonomisk-historiska Institutionen
Elsenburg
ENS Cachan

Eskom
ERSA
Erasmus University, The Netherlands
European School of Management and Technology
European Bank for Reconstruction and Development (EBRD)
ETH Zurich
Federal Reserve Bank of Richmond
Federal Reserve Board
Feasibility Pty Ltd
Ferere Hospital East London
Financial & Fiscal Commission
Financial Planning Institute
Financial Services Board
Frankfurt School of Finance and Development
Frankfurt School of Finance and Management
Free State Treasury
Free University of Brussels
Friedrich Schiller Universitat Jena
Frost & Sullivan
Gauteng City-Region Observatory
Gauteng Provincial Government
Gauteng Provincial Treasury
Genesis Analytics
George Mason University
Georgetown University
Georgia State University
Ghana Statistical Services
Glen Steyn Consultants
Goethe University Frankfurt
Government Technical Advisory Centre
Graduate Institute
Great Zimbabwe University
Gulu University
Harvard University
Health Systems Trust
Helen Suzman Foundation
Hollard Insurance
Human Sciences Research Council (HSRC)

Imperial Business School
Imperial College Business School & Centre for Health Policy
Independent
Industrial Development Corporation
INSTAT – Madagascar
International Development Research Centre, Canada
International Labour Organisation
International Monetary Fund
IZA Institute for Labor Economics
Kenya Bankers Association, Nairobi, Kenya
KZN Treasury
Jack Hammer Executive Headhunters
Justus Liebig University Giessen
J-PAL
KPMG
KZN Treasury
Leicester University
Liberty Life
Leibniz-Institut für Wirtschaftsforschung Halle (IWH)
London Business School
London School of Economics
Lund University
Maastricht University
Malawi Government – Ministry of Health – Mangochi District
Mapungubwe Institute for Strategic Reflection
MediClinic Southern Africa
Medical Research Council
Mercantile Law, University of Stellenbosch
Metropolitan Human Resources Management
MINES ParisTech
Mistra
Mosswick Investments
Moulay Ismail University
Multichoice
Mpumalanga Department of Finance
Mpumalanga Provincial Government
MSG Afrika Investment Holdings
National Agricultural Marketing Council

National Energy Regulators of South Africa
National Film and Video Foundation
National Treasury
National University of Lesotho
National Youth Development Agency
Nedbank
Nelson Mandela Metropolitan University
New York University
NKC Independent Economists
Nomura International
North West University
North West University – Mafikeng Campus
Northern cape Provincial Government
Norwegian University of Science & Technology
Office of the Premier: Limpopo
Ogilvy & Mather
Old Mutual
Organização Nacional Acreditação (ONA, Brazil)
Owen Graduate School of Management, Vanderbilt University
Oxford Policy Management
Oxford University
Oxford University Press
P&DM Wits
Pan-African Investment & Research Services
Paris School of Economics
Parliament
Penn State University
Petronas
Ports Regulator of South Africa
Princeton
Presidency Office
Provincial government of the Western Cape
Public Investment Corporation
Quantec
Queen Mary University London
Rand Merchant Bank
RBB Economics
Regenesys School of Public Management

Reserve Bank of Zimbabwe
Redeemer University
Renaissance Capital
Resolve
Rijksuniversiteit Groningen
Rhodes University
Royal Netherlands Institute of Southeast Asian and Caribbean Studies
SA Savings Institute
Sanlam
Sapienza
Sorbonne
South African Bureau of Standards
South African Government
South African Institute of International Affairs
South African National Treasury
South African Reserve Bank
South African Revenue Services
Southern African Labour & Development Research Unit (SALDRU)
Standard Bank
Stanford University
Stanlib
State University of New York
Stats SA
Stellenbosch Business School
Stockholm University
Stockholm School of Economics
Sudan International University
Swiss Federal Institute of Technology
Swiss Finance Institute
Tariff and Trade Intelligence
Thebe Employee Benefits
The Presidency
Timnet Management Consulting
Tinbergen Institute
Trade and Industrial Policy Strategies
Transunion
Transnet
Treatment Action Campaign

Tshwane University of Technology
T-Systems International
Tyson Properties
United Nations Economic Commission for Africa, Ethiopia
United States Census Bureau
Universitat de Barcelona
Universitat Hamburg
Universidad de los Andes
Universidad de la Republica
Universitat Pompeu Fabra
Universite de Montreal
Universite Cheikh Anta Diop
University Kyoto
University of Alberta
University of Arizona
University of Bielefeld
University of Bologna
University of Botswana
University of Bristol
University of California, Berkley
University of Cambridge
University of Cape Coast
University of Cape Town
University of Cape Town (Historical Studies)
University of Cape Town: Graduate School of Business
University of Constantine
University of Dar es Salaam
University of Fort Hare
University of Frankfurt
University of Ghana
University of Glasgow
University of Gothenburg
University of Groningen
University of Guelph
University of Guanajuato – Mexico
University of Helsinki
University of Hong Kong
University of Johannesburg

University of KwaZulu Natal
University of Lagos
University of Limpopo
University of London
University of Mannheim
University of Namibia
University of National and World Economy, Bulgaria
University of Nigeria
University of Pretoria
University of South Africa
University of Southern Denmark
University of Stellenbosch
University of Swaziland
University of Sussex
University of the Free State
University of the Western Cape
University of Western Ontario
University of the Witwatersrand
University of the Witwatersrand: Graduate School of Business
University of Venda
University of Tilburg
University of Toulouse 1
University of Tuebingen
University of Venda
University of Zululand
UNU-Merit
US Embassy - Pretoria
Utah Valley University
Utrecht University
Vaal University of Technology
Vanderbilt University
Vryburg
Wageningen University
Wang Yanan Institute for Studies in Economics (WISE)
Walter Sisulu University
Western Cape Department of Health
Wesbank
Wheaton College

Wharton, University of Pennsylvania, Philadelphia

World Bank

WHU Otto Beisheim School of Management

ZEW Centre for European Economic Research

3. Working, Policy Paper and Research Brief Series

The ERSA Working and Policy Paper series remain very active, and constitutes a core element of the ERSA initiative to stimulate the range and depth of research in economics in Southern Africa.

Evaluation is completed by the ERSA editorial team, consisting of the Director and Deputy Directors of ERSA for assignment to referees. In addition, two or three affiliates from each research group have recently been appointed as associate editors in order to assist with this process. Referee's reports require author responses, and determine acceptance into the ERSA paper series.

Submissions are subject to standard academic peer review, and acceptance into the series results in a R5000 financial pay-off conditional on subsequent publication in a peer reviewed journal which also attracts an additional financial reward, on a nonlinear scale depending on the professional status of the journal accepting the paper. Journal rankings are provided by the ISI Thomson Web of Science impact factor adjusted ranking according to the total citations criterion, which is an international standard for journal rankings in economics.

The core objective of the mechanism is the provision of a clear incentive mechanism to researchers to both increase output, and to attempt to place their work in as highly placed a journal internationally as is feasible.

The rate of publication of working papers still remains at a satisfactory level. In the last annual report, ERSA was able to report the publication of 591 Working Papers and 21 Policy Papers. Since April 2016 to March 2017, this has increased to 675 Working Papers, 22 Policy Papers and 106 Research Briefs.

The distribution of the topics of papers is wide ranging, and represents the general coverage of the ERSA mechanism.

What is especially pleasing about the papers appearing in the ERSA series is that they are meeting a high success rate in terms of publication in peer reviewed journals. To date, 333 out of the 675 Working Papers have been published, with a

number of additional papers forthcoming. Thus, the publications rate currently stands at 49%. Also noteworthy is that of the published papers, 216 have appeared in internationally ranked journals, and 112 in unranked journals, giving a 65% proportion for internationally ranked as opposed to unranked.

The evidence is thus consistent with stated objective of ERSA to increase the publications profile of South African economists, and in particular to raise the international profile of Southern African based publications in economics. Given the structure of the financial incentive mechanisms surrounding the Working and Policy Paper series, this is not altogether surprising.

Research Briefs

Research Brief 62

Title: Sometimes you don't make enough money to buy food: An analysis of South African street waste pickers income

JMM Viljoen, PF Blaauw and CJ Schenck

Abstract: One of the aims of the National Development Plan (NDP) is the eradication of poverty and the reduction of inequality (NPC, 2011, p. 354). To ensure that "individuals are engaged in meaningful activity, and vulnerable groups and citizens are protected from the worst effects of poverty", effective policies are needed (National Planning Commission, 2011, p. 409). Policies should further be based on informed decisions. Policies based on uninformed decisions, might harm the intended beneficiaries.

Research Brief 63

Title: Global commodities and African stocks: insights for hedging and diversification strategies

Gideon Boako and Paul Alagidede

Abstract: Most African countries are still poor, and financing domestic expenditures is often constrained by inefficient and narrow tax bases. Consequently, financing development has often concentrated on domestic and/or foreign borrowing. While the former has severe implications of crowding out investments among other distortions, the latter is either subject to sudden reversals or comes with strings attached, and at times does not find most African countries as a conducive environment to thrive. At the same time, evidence suggests that well-functioning stock markets can help mobilise capital for domestic firms. They can also help inject more liquidity into national economies to enhance growth and development. Research on the role of Africa's domestic stock markets in contributing to the continent's growth spurt is, however, very harrowing. This deficiency may be due to the relatively small size of some of the markets and lack of information on the relative potentials of African stock markets in general. This article is a contribution to the role of African stock markets as hubs for portfolio diversification, both in tranquil and turbulent times. To the extent that the study reveals the strength of African stocks in cushioning international portfolio investors in a mean-variance standpoint during market crashes, the paper helps to decay all doubts in the minds of investors on the perceived lack of capacity of the continent's stocks to yield higher expected risk-return trade-offs during global market crashes. In all, 11 of the largest

stock markets in Africa (South Africa, Egypt, Ghana, Botswana, Tunisia, Mauritius, Morocco, Namibia, Kenya, Cote D'Ivoire and Nigeria) and spot prices of five (5) important global commodities (gold, oil, silver, platinum, and cocoa) are covered in this study.

Research Brief 64

Title: Alternative Strategies for Public Debt Issuance in Zimbabwe: Is there a Trade off?

Nebson Mupunga and Pierre Le Roux

Abstract: Introduction As part of managing a debt portfolio, debt managers face the complex task of choosing a debt strategy that minimises the cost of debt, subject to a prudent degree of risk. This is particularly so because public debt management decisions depend on numerous random factors, which are not under the control of the debt manager. These factors include the future behaviour of interest rates, exchange rates, commodity prices and other macroeconomic aggregates. However, choosing the optimal composition of public debt in terms of maturity, instruments and currency remain the main challenge confronting policymakers faced with high public debt. Against this backdrop, this paper simulates the optimal composition of debt using Zimbabwe as a case study.

Research Brief 65

Title: Inflation in South Africa: An Assessment of Alternative Inflation Models

Johannes W. Fedderke and Yang Liu

Abstract: In this paper we examine potential drivers of inflation in South Africa over the 1970Q1 to 5015Q1 period.

Research Brief 66

Title: Estimating South Africa's output gap and potential growth rate

Johannes W. Fedderke and Daniel K. Mengisteab

Abstract: The potential output of an economy is an unobservable variable which represents the level of output that an economy can sustain without affecting inflation. The associated output gap is the difference between actual and potential output. The potential growth rate is the growth rate associated with potential output.

Research Brief 67

Title: Climate, Technological Change and Economic Growth

Alain Kabundi, Eric Schaling and Modeste Some

Abstract: Introduction The Phillips curve depicts the relationship between current inflation and past inflation, expected inflation, and economic activity. This relationship is essential particularly for central banks with a dual mandate of stabilising inflation and maintaining the economy at full employment. Many attempts at both estimating the Phillips curve assume a constant relationship between inflation and unemployment over time.

Research Brief 68

Title: Comovement between Africa and advanced economies, 1980-2011

Carike Claassen, Elsabe Loots and Alain Kabundi

Abstract: There is a saying which holds that, when America sneezes, the rest of the world catches a cold. This concept interests economists particularly with regard to

business cycle comovement between countries – do individual country business cycles follow those of the US and other leading economies? With the Great Recession of 2008 this question regained new prominence as it originally seemed that emerging market economies were not catching the cold that had originated in the US. This phenomenon, known as decoupling, soon received significant research attention. With the focus on emerging markets, however, the impact on African countries received very little attention in the more recent literature and debates. This is true in general, where a general lack of research into business cycle comovement between Africa and advanced economies is evident. Since 2000 only six research papers have been published on the topic, with only three covering the Great Recession years including more narrow sets of countries. None of these studies have used dynamic factor analysis or looked at SSA countries on the basis of income groups rather than regions.

Research Brief 69

Title: Climate change and Agriculture: What is the Role of Wildlife in adaptation in South Africa?

Jackson Otieno and Edwin Muchapondwa

Abstract: Climate change poses a serious problem to agriculture sector especially livestock farming in South Africa. There is evidence based on climate models' predictions that a +2.50 C to + 50 C temperature increase over the current level is likely to wipe out cattle or beef farms and shrink drastically sheep farms in the Southern Africa region. Beyond livestock, very few but expensive adaptation options exist in the arid and semi-arid areas. This is however changing as more farmers embrace wildlife ranching as an alternative adaptation option.

Research Brief 70

Title: Can currency in circulation predict South African economic activity?

Cobus Vermeulen, Adél Bosch, Fanie Joubert, and Jannie Rossouw

Abstract: The forecasting of economic activity is of interest to governments, policymakers, researchers, investors and indeed all participants in the economy. While the South African Reserve Bank (SARB) publishes a number of formal indicators of economic activity, and researchers have managed to create substantial macroeconomic forecasting models, these indicators and models are usually quite complex and not always readily accessible. There is therefore ample scope for simplicity in the forecasting of economic activity. Indeed, a few well-chosen variables can perhaps be suitable indicators of future economic activity, without the need for complicated analyses or modelling of which to draw conclusions.

Research Brief 71

Title: Output Decomposition in the Presence of Input Quality Effects: A Stochastic Frontier Approach

Yasmina Rim Limam, Stephen M. Miller, and Giampaolo Garzarelli

Abstract: Several contributions explain countries' rates of real output growth. However, there is no unanimous answer about the most significant determinants of such growth. The answer from growth accounting sees the separation of growth into two components: one component related to factor accumulation, most often accounted for by physical and human capital, and the other accounted for by Total Factor Productivity (TFP). The relative contribution of factor accumulations and TFP to total growth has animated the growth literature for more than two decades and there is no consensus about the most important factor of growth. This paper approaches the question about the determinants

of output growth by focusing on input quality, namely the level of education of the population (human capital) for labor and the age of the capital stock for physical capital.

Research Brief 72

Title: Emerging multinational corporations: a prominent player in the global economy
Mustafa Sakr

Abstract: A process of going multinational could tangibly improve competences of corporations and governments of emerging markets, particularly those based in Africa. As such, they are expected to be in favour of initiating and boosting the global orientation of domestic firms. This is to be done through adopting what is labeled as outward foreign direct (OFDI) promotion policies. Drafting the right combination of such policies is likely to be informed by not only the key attributes of homeland based multinational corporations (MNCs), but also aspects of similarity and difference between them and their potential foreign rivals, coming from both emerging and developed economies. As such, it is expected to be of the utmost importance, for the policy maker, to unveil the key salient attributes of emerging markets based multinational corporations (EMNCs) and how they are really different from those based in developed markets (DMNCs).

Research Brief 73

Title: On the causal links between the stock market and the economy of Hong Kong
Sin-Yu Ho and Bernard Njindan Iyke

Abstract: Starting from Adam Smith, economists have generally asserted that financial development is an important ingredient for general economic performance. To this end, various empirical papers have examined the causal influence of financial development on economic performance. Hong Kong is one of the economies that have experienced tremendous development in the past three decades. To provide concrete sources of this economic miracle, economists have identified variety of factors. Overall, the role of financial development has been overlooked in most of the studies. However, the stylized fact in support of the positive association between financial development and economic growth remains strong for Hong Kong, especially during the period of substantial economic expansion.

Research Brief 74

Title: Taxes Rates, Economic Crisis and Tax Evasion: Evidence using Zimbabwe and South Africa Bilateral Trade Flows
Marko Kwaramba and Calvin Mudzingiri

Abstract: Tax evasion involves taxpayers purposefully distorting the true value or quantity of goods traded to the tax authorities in order to reduce their tax liability. In trade, tax evasion includes misstatement of imports or exports in a bid to avoid tax liability by traders. The acts closely linked to tax evasion is trade mis-invoicing and mislabelling. Tax evasion is illegal and punishable by law. The fear of the punitive effect of the law forces traders to be involved in tax evasion secretly and makes it difficult to detect. The decision to evade tax is affected by the probability of being detected by the authorities, the magnitude of the penalty imposed on the offender as well as the wealth effect. If there is a low probability of detection that is compounded by a higher income return from evading tax, importers and exporters put a huge effort into evading tax. Consumers evade tax as a way of reducing the cost of importing commodities.

Research Brief 75

Title: Bilateral Investment Treaties: An unfair proposition for developing countries
Umakrishnan Kollamparambil

Abstract: After the explosive expansion of Bilateral Investment Treaties (BITS) in the 90s, recent times have seen a reduction in the number of new annual BITS (UNCTAD 2012). With rising number, prominence and success of BIT claims, there is an increasing realization that traditional BITS put undue risk on the host nations without obligating the investors to follow the measures necessary for ensuring the development requirements of the host state (Friedman and Verhoosel 2003). Known investor state dispute settlement cases have increased dramatically in the last 15 years to reach 608 cases in 2014 from a level of around 50 cases in 2000 (UNCTAD 2015). The gravity of the situation is conveyed by the huge amount of claims made by the investor litigants that put host states in serious fiscal strain.

Research Brief 76

Title: The political and economic dynamics of foreign aid: A case study of United States and Chinese aid to Sub-Sahara Africa
Kafayat Amusa, Nara Monkam and Nicola Viegi

Abstract: The study revisits the issue of the determinants of (development) aid allocation by analyzing the motives of two key traditional and non-traditional foreign aid donors - the United States of America (US) and China, in providing aid to a sample of 31 Sub-Saharan Africa (SSA) countries. The results from the econometric analysis indicate that (i) US and China's motivation for the provision of foreign aid to the SSA countries does not differ substantially, (ii) while donor and altruistic motives and recipient need were drivers of US aid pre-China's entry into the aid field in SSA, recipient need has dominated US aid allocation post-China's entry. China's increasing importance in the region as an economic and strategic partner seems to have reduced the space within which US can exert its economic and political dominance in SSA, and resulted in a pronounced shift in US foreign aid focus towards the "needs" aspects of foreign aid, (iii) lastly, resource motive is only conspicuous in Chinese aid allocation.

Research Brief 77

Title: The effects of terrorism, crime and corruption on tourist arrivals
Maria Santa-Gallego, Jaume Rosello-Nadal and Johan Fourie

Abstract: There are many reasons why visitors travel to different countries, but what is less well understood is why they do not travel. In this study, we investigate the performance of the tourism industry in terms of tourist arrivals in the presence of three factors that is likely to discourage tourism activity: terrorism, crime and corruption. We do this for 171 countries for the period 1995–2013. We use two types of analysis: two-dimensional and three-dimensional. The two-dimensional analysis use total tourist arrivals per destination. This analysis suggests that terrorism and crime have a negative effect on tourist arrivals but corruption has no significant effect. We also consider whether the effect of instability on tourist arrivals might differ according to the purpose of the trip. Our results suggest that the effects of terrorism and crime are larger for tourism for personal reasons than for business trips, but corruption only affects business tourism. This is the expected result since tourist destinations are easier to substitute when the purpose of the trip is for leisure or other personal reasons than for business. After a terrorist attack or an increase in crime, tourists might choose a safer destination with characteristics similar to their first choice or they might just stop travelling if the purpose of the trip is for personal reasons. However, when the main purpose of the trip is

business between countries with a strong economic relationship, the destination cannot be easily substituted.

Research Brief 78

Title: Confronting South Africa's Water Challenge: A Decomposition Analysis of Water Intensity

Marcel Kohler

Abstract: In the face of South Africa's growing water scarcity, water conservation and the effective management of water use should be priority focus areas of water policy in the country. There exists an urgent need to introduce market based incentives to optimize the allocation of scarce water resources between competing uses. These economic incentives should target water- stressed areas with the objective of encouraging a shift of water use from economic activities with low water efficiency values to activities with high water efficiency values.

Research Brief 79

Title: The impact of monetary policy on household consumption in South Africa

Emmanuel Owusu-Sekyere

Abstract: The monetary policy committee of South Africa's Reserve Bank (SARB) has had to increase the repurchase rate on three consecutive occasions within a short period of time. The repo rate was increased by 25 basis points in July 2015 and again by 50 basis points in January 2016. The third increase was by another 25 basis points in March 2016. The aim is to reign in inflationary pressures generated by 13% depreciation of the South African rand since January 2015. Core inflation is forecasted to hit 5.5% in 2016 and 5.4% in 2017 if the current prevailing macroeconomic circumstances pertain (SARB, 2015). Interest rates hikes by the Federal Reserve of the U.S.A. have resulted in capital outflows out of emerging markets leading to the depreciation of emerging market currencies. In the case of South Africa in particular, a severe drought fuelled by the El Nino heat wave has resulted in severe damages to food and livestock production. South Africa therefore has to import tons of maize and other staple food produce to subsidise the shortages in domestic food production. Coupled with the weak rand this makes imports much more expensive than it should have been, fuelling import induced inflation and worsening the trade deficit. Additional risks to the inflationary outlook are inconsistent electricity supply and tariff increases which have impacted adversely on domestic output and household disposable income leading to demands for above inflation wage increases in the absence of a corresponding productivity growth (SARB, 2015).

Research Brief 80

Title: An Application of Panzar-Rosse Approach in Assessing Banking Sector Competition in Zimbabwe

Sanderson Abel and Pierre Le Roux

Abstract: An assessment of bank competition is important for a number of reasons. Banking competition helps to foster economic growth. It enhances efficiency as it forces managers to cut down on costs to maintain profitability, improves the corporate sector's access to finance, and reducing the chances of financial crises. Banking competition facilitates provision of financial services at a lower cost. A decline in banking competition makes provision of financial services costly which negatively impacts economic growth.

Research Brief 81

Title: The Determinants of Exchange Rate Volatility in South Africa
Trust R. Mpfu

Abstract: Increasing financial liberalisation since the collapse of the Bretton Woods system in the 1970s has rendered exchange rates volatile in both developed and developing countries. As for South Africa, it liberalised its capital account in March 1995 following the abolishment of the dual exchange rate system which had been in place since the mid-1980s. Currently, the South African rand is an important emerging market currency and the most significantly traded African currency. Understanding the causes of exchange rate volatility is important to policymakers. This follows the argument that the exchange rate movements play an important role in economic development in most developing countries. In South Africa, there is evidence which suggests that exchange rate volatility has significant effect on macroeconomic factors such as employment growth and trade.

Research Brief 82

Title: Peer Networks and Tobacco Consumption in South Africa
Alfred Kechia Mukong

Abstract: Tobacco consumption is hazardous at all levels. In South Africa, cigarette smoking is a major health problem accounting for thousands of premature deaths each year, including those that are exposed to second hand smoke. In recognition of these consequences, tobacco consumption, particularly cigarette smoking has received a significant amount of attention since the democratic transition in 1994. With the policy change, there has been a significant decline in tobacco consumption in the last two decades. A policy that targets increases the minimum age below which individuals cannot purchase cigarettes, since majority of smokers initiates smoking at a very young age (below 24 years), an age group characterised by high degree of peer influence. Empirically motivated research on tobacco consumption in South Africa have shown a close adherence to determining the effect of tobacco excise taxes on individual smoking behaviour, ignoring the effects of peer network (indirect effects of the policies).

Research Brief 83

Title: Stock return predictability in South Africa: An Alternative Approach
Alilie Charteris and Barry Strydom

Abstract: The financial and real sectors of the economy are inextricably linked; with strong evidence to suggest that there are spillover effects from the stock market to the real economy, with the stock market usually leading the real sector. As such, substantial stock market downturns can negatively impact output. This is of particular concern in an emerging country such as South Africa where maintaining and supporting growth in gross domestic product is critical for the continued development of the country and the allied lowering of poverty levels. Accordingly, for policy makers the ability to forecast market downturns accurately enables them to implement appropriate policies to limit the effects of these stock market downturns on the real economy. Current measures used to forecast share returns such as the Treasury bill yield and dividend-price ratio have limited success in this regard.

Research Brief 84

Title: Confronting South Africa's Water Challenge: A Decomposition Analysis of Water Intensity
Marcel Kohler

Abstract: In the face of South Africa's growing water scarcity, water conservation and the effective management of water use should be priority focus areas of water policy in the country. There exists an urgent need to introduce market based incentives to optimise the allocation of scarce water resources between competing uses. These economic incentives should target water- stressed areas with the objective of encouraging a shift of water use from economic activities with low water efficiency values to activities with high water efficiency values.

Research Brief 85

Title: Inflation dynamics in a dollarized economy: the case for Zimbabwe
William Kavila and Pierre Le Roux

Abstract: The rapid and sustained loss in value of the Zimbabwean dollar, which began in the last quarter of 1997, led to its rejection as a medium of exchange during the second half of 2008, as inflation soared. Zimbabwe slid into hyperinflation in March 2007, with the annual inflation rate reaching a record 200 million per cent in July 2008.

Research Brief 86

Title: What Price Level Data Tells Us About Consumer Price Rigidity in Zimbabwe. Evidence from New Data
Mike Nyawo & Neil Rankin

Abstract: Sometimes countries adopt new currencies which are not their own as a medium of exchange. The reasons for this vary but often this is as a response to a macroeconomic crisis. In January 2009, Zimbabwe adopted a new currency after experiencing a decade of hyperinflation and economic crisis. The change in currency had positive effects for inflation – Zimbabwean inflation dropped to -3.4 percent two months after the change, but came with other challenges. The most obvious is a loss of monetary policy control. A less obvious one has to do with the stickiness of prices. In most cases the adopted currency is 'strong' in value but less fine in terms of denominations (the face value of the currency). The 'coarseness' of the new currency denominations means that prices are likely to be more sticky as retailers have limited scope to change prices as a response to smallish economic shocks, especially for lower priced products. This matters because it introduces another source of rigidity into the economy and may have distributional effects if it impacts certain groups of consumers more than others (for example the poor who may disproportionately buy goods with low face-values). This type of challenge has been overlooked in the literature.

Research Brief 87

Title: Foreign aid and foreign direct investment in Sub-Saharan Africa: A panel data analysis
Kafayat Amusa, Nara Monkam and Nicola Viegi

Abstract: This study examines the relationship between foreign aid and foreign direct investment (FDI) in 31 sub-Saharan African (SSA) countries between 1995 and 2012. Significant resource constraints have meant increased reliance on external sources of funding such as foreign direct investment and foreign aid (ODA) for many sub-Saharan African countries. FDI is considered to be a more stable financial flow compared to foreign aid, and the means of attracting increased FDI flows to the region remain a topical issue in development studies.

Research Brief 88

Title: Financial Reforms and the Finance-Growth Relationship in the Southern African Development Community (SADC) Region

Alex Bara, Gift Mugano & Pierre Le Roux

Abstract: The role of finance in economic growth in SADC has been downplayed in most literature and policy initiatives given that financial sectors of SADC countries are regarded as less developed with the exception of South Africa. This notwithstanding, the role of finance in development of the region is gradually regaining importance amid a gradual shift from wholesale to retail finance in support of development of SMEs. Furthermore, there has been substantial progress over the past two decades in terms of financial inclusion, financial innovation, and cross-border banking in Africa's banking systems. In SADC, innovation in financial services has driven efficient financial transfers and increases the volume of trade. Most SADC countries introduced financial reforms in the 80s and 90s to facilitate development of the financial sectors, and studies acknowledge the role of financial reforms in enhancing financial development and growth in SADC countries. Southern Africa region has been registering significant growth rates in the last decade with growth being more widespread across countries, including non-resource-rich countries. The increasing role of finance in economic activity in the region justifies the need to look on the finance –growth nexus in SADC.

Research Brief 89

Title: Intergenerational mobility during industrial take-off

Jeanne Cilliers and Johan Fourie

Abstract: Industrialization is expected to maximize the efficiency of human capital by putting the 'right man' in the 'right place'. We test this assertion by measuring white social mobility during South Africa's industrial take-off. For much of the nineteenth century, the territories that made up South Africa were largely agricultural. Cape Town and to a lesser extent Port Elizabeth were the only manufacturing centers. This changed with the discovery of diamonds in 1867 and twenty years later with the discovery of gold in the South African interior, shifting the locale of economic power from the south-eastern coast to the northern interior. We want to know more about who benefited from the shift in economic prosperity. We know that the mineral revolution resulted in ethnic inequalities – we can see this for example in the improvement and then spectacular decline of the Basotho economy. Whites, who held the political power in the four states that would in 1910 become the Union of South Africa, clearly benefited most from the diamond and gold boom. We know about the opulence of the Randlords and we have rich social histories of individuals and cultural groups, but we do not really know who the main economic beneficiaries of South Africa's mineral revolution and consequent industrial take-off were.

Research Brief 90

Title: The Fertility Transition: Panel Evidence from sub-Saharan Africa

Carolyn Chisadza and Manoel Bittencourt

Abstract: In this paper, we investigate the theoretical linkage between various socioeconomic indicators and fertility declines in 48 sub-Saharan African countries between 1970 and 2012. We test the various theories put forward in literature as contributing to fertility declines in industrialised economies in order to identify the determinants which have contributed to the fertility transition in sub-Saharan Africa. We complement this empirical exercise by also investigating the effective channel through which technology has contributed to declining fertility rates. For example, literature cites that one of the main catalysts for raising demand in education or sustaining rising

incomes per capita is industrialisation which comes with technological progress, and this increased development in education and income induces declines in fertility rates (Galor 2005, Galor & Weil 2000). By conducting this empirical analysis we are able to place sub-Saharan Africa within a particular theoretical framework and developmental stage.

Research Brief 91

Title: Birth Order Effects on Education Attainment and Child Labour: Evidence from Lesotho

Ramaele Moshoeshoe

Abstract: Education (both school enrolment and achievement) is low in much of the developing world. Hence, over the past two decades, increasing education levels in these countries, particularly sub-Saharan Africa countries, has been of paramount importance. In order to achieve this goal, effective policy will depend on a better understanding of the nature of schooling decisions in these countries.

Research Brief 92

Title: Are South African consumers arm-chair environmentalists? Implications for renewable energy

Nomsa Phindile Nkosi and Johane Dikgang

Abstract: In terms of global warming, coal is the worst offender, as it is a dirty energy source. There are various damaging environmental impacts associated with coal during its mining, transportation, combustion and disposal. Our focus is on the impact that is associated with combustion. Air pollution from coal-fired power stations includes carbon dioxide emissions, which are cited as the primary cause of global warming.

Research Brief 93

Title: The Influence of Financial Market Development on Economic Growth in BRICS Countries

Charles Wait and Tafadzwa Ruzive

Abstract: The debate about the influence of financial market development on economic growth has been ongoing for more than a century. Since Schumpeter (1912) wrote about the happenings on Lombard Street, right up to the economists of today, there is growing interest into how financial market development affects economic activity and hence economic growth. Financial market development is always expected after financial sector reforms. In their study, King and Levine (1993a; 1993b) demonstrated that financial-sector reforms in five developing countries that had experienced financial-sector reforms were widely associated with increases in their measures of financial development. Lynch (1996) noted that "As initial liberalisation leads to positive real interest rates, only projects with positive real returns are undertaken. Positive real interest rates stimulate greater financial saving, significantly increasing monetisation of the economy, and financial intermediation." Financial sector reforms will result in positive movements in the measures of financial development.

Research Brief 94

Title: Construction, institutions and economic growth in sub-Saharan Africa

Paul Alagidede and Jones Odei Mensah

Abstract: The construction industry is one of the major drivers of economic development globally; it is a key barometer of the health of an economy because of its strong linkage

to output fluctuations. A well-functioning construction sector results in good infrastructure, upon which many business activities in an economy hinges. It is obvious that the sector has been at the epicenter of growth in most modern nation states over the last few decades. Evidence from most advanced economies suggest that the industry's contribution to growth becomes trivial, particularly at the point where the infrastructure space becomes saturated. Evidence also suggests that the industry's success and its eventual contribution to economic growth could be occluded by several critical factors, such as the presence of good institutions. While this may hold for both advanced and emerging market economies, the industry's role, particularly in Sub-Saharan Africa, has been more anecdotal rather than based on empirical evidence; the extant literature is almost entirely bereft of evidence from the sub-region. Among the known factors that stymie the effectiveness of the industry's contribution to the growth spurt of developing nations is poor cost and sub-standard work quality, lack of access to credit facilities, availability of required skills, and bureaucratic as well as institutional deficit. This background naturally leads to the following questions: to what extent does the industry contribute to economic growth in the sub-region? what fundamental roles do the existing institutional frameworks play in enhancing the industry's impact on economic growth? is the industry's impact on growth homogenous across the sub region and has it become trivial? This study sets out to find answers to these fundamental questions. It provides a comparative analysis of the relationship between the construction sector and aggregate output for a panel of 26 sub-Saharan African countries.

Research Brief 95

Title: Financial Development and Economic Growth in SADC: Cross Country Spatial Spill-Over Effects

Alex Bara, Gift Mugano and Pierre Le Roux

Abstract: The study bridges a knowledge gap regarding the relationship between financial innovation and economic growth in SADC. The study also carries out panel Granger causality tests to evaluate empirically the direction of causality between financial innovation and economic growth in SADC. Financial innovation has, generated increased economic activity in the SADC region over the years, mainly faster and more efficient financial transfers, increasing the volume of trade and remittances, and increases access to finance for the unbanked populace. SADC countries such as Lesotho, Swaziland and Tanzania have higher mobile phone usage for payments and transactions than the financially developed countries in the region, despite the underdeveloped financial sectors.

Research Brief 96

Title: Financial Reforms and the Finance – Growth Relationship in the Southern African Development Community (SADC) Region

Alex Bara, Gift Mugano and Pierre Le Roux

Abstract: The role of finance in economic growth in SADC has been downplayed in most literature and policy initiatives given that financial sectors of SADC countries are regarded as less developed with the exception of South Africa. This notwithstanding, the role of finance in development of the region is gradually regaining importance amid a gradual shift from wholesale to retail finance in support of development of SMEs. Furthermore, there has been substantial progress over the past two decades in terms of financial inclusion, financial innovation, and cross-border banking in Africa's banking systems. In SADC, innovation in financial services has driven efficient financial transfers and increases the volume of trade. Most SADC countries introduced financial reforms in the 80s and 90s to facilitate development of the financial sectors, and studies acknowledge the role of financial reforms in enhancing financial development and growth in SADC

countries. Southern Africa region has been registering significant growth rates in the last decade with growth being more widespread across countries, including non-resource-rich countries. The increasing role of finance in economic activity in the region justifies the need to look on the finance –growth nexus in SADC.

Research Brief 97

Title: Globalisation and Conflict: Evidence from sub Saharan Africa

Carolyn Chisadza & Manoel Bittencourt

Abstract: This study contributes to the conflict literature by investigating Stephen Pinker's (2011) theory on the evolving factors that have contributed to less violence in humanity. He advances that various forms of violence such as homicide, rape, torture and conflict have decreased over time because of the following historical shifts in society: i) pacification process which has seen societies transition from hunter-gatherer to state-run societies based on agriculture, ii) civilising process which has seen an increase in urbanisation and industrialisation, iii) humanitarian and rights revolutions which have seen a reduction in violent practices against humans, and iv) extended periods of peace after World War II and the Cold War which have seen decreases in both interstate and intrastate wars.

Research Brief 98

Title: Effects of South African Monetary Policy Implementation on the CMA A PVAR Approach

Monaheng Seleteng

Abstract: South Africa (SA) through its central bank, the South African Reserve Bank (SARB), adopted the IT monetary policy framework in February 2000. The IT framework in SA is based on inflation expectations and hence it is forward looking in the sense that a specific target for inflation has to be met within a predetermined time. Over the past decades, the other countries in the Common Monetary Area (CMA) have harmonised their monetary and exchange rate policies. Lesotho, Namibia and Swaziland (LNS) countries have pegged their respective national currencies to the South African rand, and as long as SA pursues a price stability objective, the impact will be transmitted to these countries and their economies will be affected. The CMA arrangement has therefore prevented the LNS countries from exercising discretionary monetary policies. This framework is in practice a de facto monetary policy framework for the CMA as a whole. Needless to say, the CMA arrangement resembles an asymmetric monetary union, with bigger country, SA, responsible for monetary policy formulation and implementation.

Research Brief 99

Title: South Africa's real business cycles: The cycle is the trend

Hilary Patroba and Leroi Raputsoane

Abstract: It has been argued that business cycles in emerging economies are subject to substantial volatility in trend growth, while the volatility of developed economies' cycles has moderated in recent decades, and further, that the high volatility in trend growth observed in emerging economies is the result of large and frequent changes in fiscal, monetary and trade policies. Emerging economies are characterised by countercyclical current accounts and a high volatility of aggregates such as consumption and investment compared to the volatility of output. Emerging economies' further exhibit substantial reversals in fiscal, monetary and trade policies particularly during the economic crises periods. The excess volatility in trend growth observed in emerging economies business cycles is termed the cycle is the trend hypothesis. The cycle is the trend hypothesis

predicts that the shocks to trend growth are the primary source of business cycle fluctuations in emerging economies while transitory shocks are important in developed economies.

Research Brief 100

Title: An Economic Assessment of Bioethanol Production from Sugar Cane: The Case of South Africa

Marcel Kohler

Abstract: South Africa's high level of dependence on imported crude oil exposes the economy to global events that impact on crude oil supply and prices. Given the country's vulnerability to global crude oil price shocks these events have the potential to undermine South Africa's economic growth and development. The renewed efforts to develop a biofuel industry in South Africa are undoubtedly motivated by such concerns. The development of a national policy that promotes commercial biofuels production has however been countered by concerns relating to food security issues within South Africa. This concern has seen the prohibition of maize and the favouring of sugar cane as a feedstock in South Africa's Biofuels Industrial Strategy. The paper set out to analyse the economic feasibility of producing bioethanol from sugar based on the industry's efforts to diversify its product market base. The promotion of commercial bioethanol production in South Africa is seen not only as an opportunity to support the long-term financial survival of the country's sugar industry but also as an opportunity to promote social development within the country.

Research Brief 101

Title: Demand-side determinants of access to healthcare services: Empirical evidence from Africa

Serge Wa Ntita Kabongo and Josue Mbonigaba

Abstract: Improved health status in Africa is one of the most important items on the international development agenda. The significance of better health status in development-related policy making stems mainly from the linkages between better health status and increased productivity as well as enhanced well-being.

Research Brief 102

Title: How are Africa's emerging stock markets related to advanced markets? Evidence from copulas

Jones Odei Mensah and Paul Alagidede

Abstract: This paper focuses on two key questions: How are Africa's emerging stock markets related to advanced stock markets? Do extreme price movement in advanced stock markets have an impact on African stock markets? The importance of this work stems from the fact that the nature of dependence across stock returns plays a crucial role in asset pricing, portfolio allocation and policy formulation. Investment practitioners pay close attention to the co-movement between equity markets, as a proper grasp of its nature and measurement affects the risk-return trade-off from international diversification; typically, international portfolio diversification becomes less effective when markets are in turmoil. Policy makers, on the other hand, are more interested in how strong linkage across stock markets influences the transmission of shocks, its consequences as well as implications for risk management.

Research Brief 103

Title: Why local context matters: de jure and de facto property rights in colonial South Africa

Christie Swanepoel and Johan Fourie

Abstract: Property rights remain important for economic growth and development, but more recent research have started to show that it is more complex – the local conditions also matter. We gave another example, here, of how local conditions and how these rights are perceived matters as well. Besley (1995) said "...formal (de jure) rights might have very little to do with the ability to exercise these rights (de facto)." If the answer of institutional economics is to give de jure property rights in land to individuals, without taking into account the local de facto conditions, property rights might not lead to the expected gains in economic growth. Schlager and Ostrom (1992) already called for investigation into "how various types of institutional arrangements perform comparatively when confronted with similarly difficult environments". In line with the literature, we attempt to show the perception of property rights at the Cape, or the de facto mattered more than de jure property rights delineated by laws.

Research Brief 104

Title: Can social grants promote small-scale farming to improve food security?

Dieter von Fintel and Louw Pienaar

Abstract: Public expenditure on South Africa's cash transfer (or social grants) programme is one of the most extensive (as a proportion of GDP) among developing countries. Most evaluations of this large-scale policy focus on how grants change individuals' incentives to enter or exit the labour market (with conflicting results), while others focus on the benefits for childrens' health and educational outcomes. No studies have considered the role that grants play in promoting informal economic activity, especially in contexts of high unemployment and poverty. New research that focuses specifically on their role in small-holder farming fills this gap.

Research Brief 105

Title: Financial sector development, economic volatility and shocks in sub-Saharan Africa

Muazu Ibrahim and Paul Alagidede

Abstract: Evidence abounds of the positive relationship between financial development and economic growth. While the empirical and theoretical literature has established a positive impact of financial sector development on economic growth, the potential links between financial development and volatility in developing countries and sub-Saharan African (SSA) in particular have been understudied despite the apparent rampant shocks. Specifically, the channels through which financial development potentially affects growth volatility remain unknown. More so, the extent of the volatility–financial development nexus is very mute in the literature. Meanwhile volatility, regardless of its source, is a natural source of worry in a world of market imperfections. This holds with particular force in developed economies where the financial sectors are relatively well developed. Some studies have long revealed greater forms of volatilities in high income countries on account of greater economic concentration. Legitimate as it is, if volatility matters in developed economies, then it must pose an even greater source of concern for developing countries that are still struggling to meet basic needs. Empirically, what we know so far on the financial development–volatility nexus is inconclusive and none of earlier studies on finance–volatility nexus have investigated the channels through which finance impacts on volatility in SSA. Even the few existing studies have failed to decompose volatility into its various components thereby obscuring how finance uniquely

interacts with each component, and leaving out much of the richness of the volatility–finance–shocks relationships as much of the real world interactions can best be explained by disaggregated models of economic fluctuations. By disaggregating volatility, this study examines the effect of financial development on volatility as well as channels through which finance affects volatility components in 23 SSA countries over the period 1980–2014 using the newly developed panel cointegration estimation strategy.

Table 3 : ERSA Working Paper – Publication Breakdown

Number	Author/s	Title	Journal	Ranking
01	J Fedderke, C Kularatne & M Mariotti	Mark-up Pricing in SA Industry	2007, Journal of African Economies	International
02	M Demertzis & N Viegj	Inflation Targets as Focal Points	2008, International Journal of Central Banking	International
03	S Hassan	Optimal timing of defections from price-setting cartels in volatile markets	2006, Economic Modelling,	International
05	J Fedderke, J Luiz & R de Kadt	Using Fractionalization Indexes: deriving methodological principles for growth studies from time series evidence	2008, Social Indicators Research,	International
06	L Edwards & A Behar	Trade liberalisation and labour demand within SA manufacturing firms	2006, Studies in Economics and Econometrics,	National
12	J Fedderke & A Romm	Growth Impact and Determinants of Foreign Direct Investment into SA, 1956-2003	2006, Economic Modelling,	International
15	J Fedderke & J Luiz	The Political economy of institutions, stability and investment: a simultaneous equation approach in an emerging economy – the case of SA	2008, Journal of Development Studies,	National
18	J Fedderke & P Flamand	Macroeconomic News 'Surprises' and the Rand/Dollar Exchange Rate	2005, Studies in Economics & Econometrics	National

21	K Pauw & L Edwards	Evaluating the general equilibrium effects of a wage subsidy scheme for SA	2006, South African Journal of Economics	Internationally ranked
22	J Fedderke & J Luiz	Fractionalization and long-run economic growth: Webs and direction of association between the economic and the social – SA as a time series study	2007, Applied Economics	International
23	J Fedderke & G Szalontai	Industry concentration in SA manufacturing industry: trends and consequences, 1972-96	2008, Economic Modelling	International
24	S Koch	The AID and MAID Systems: South African Household Data Pitfalls	2007, Studies in Economics and Econometrics	National
26	J Fedderke	An analysis of industry concentration in SA manufacturing, 1972-2001	2009, Applied Economics	International
27	J Fedderke	Technology, human capital and growth	2006, SARB, Banco de Mexico and the People's Bank of China (eds). Economic Growth, Proceedings of a G20 seminar held in Pretoria, SA on 4 – 5 August 2005.	International
28	J Kibambe & S Koch	South African Hospital Efficiency: DEA Applied to a Gauteng Sample of SA Public Hospitals	2007, South African Journal of Economics	Internationally ranked
29	J Fedderke & J Luiz	Does human generate social and institutional capital? Exploring evidence from time series data in a middle income country	2008, Oxford Economic Papers	International
31	C Simkins	The determinants of educational attainment	2012, Economic History of Developing Regions	National
32	A Zimper	A fixed point characterization of the dominance solvability of lattice games with strategic substitutes	2007, International Journal of Game Theory	International

33	W Simbanegavi	Informative Advertising: Competition or Cooperation?	2009, Journal of Industrial Economics	International
36	Z Bogetic & J Fedderke	Forecasting investment needs in SA's Electricity and Telecom Sectors	2006, South African Journal of Economics	Internationally ranked
38	P Burger & M Marinkov	The SA Phillips curve: How applicable is the Gordon model?	2008, South African Journal of Economics	Internationally ranked
39	J Fedderke & Z Bogetic	Infrastructure and growth in SA: Direct and indirect productivity impacts of 19 infrastructure measures	2009, World Development	International
40	A Guerdjikova and A Zimper	Flexibility of choice versus reduction of ambiguity	2008, Social Choice and Welfare	International
42	N Samouilhan	The relationship between international equity market behaviour and the JSE	2006, South African Journal of Economics	Internationally ranked
43	J Fedderke	Industry structure and labour markets flexibility in the SA manufacturing sector: A time series and panel data approach	2011, Economic Modelling	International
47	U Schmidt & A Zimper	Security and potential level preferences with thresholds	2007, Journal of Mathematical Psychology	International
49	N Samouilhan	The Price of Risk on the JSE	2007, South African Journal of Economics	Internationally ranked
50	A Kabundi	Synchronization between SA and the US: A structural dynamic factor analysis	2009, South African Journal of Economics	Internationally ranked

51	R Gupta	Forecasting the SA Economy: A DSGE- VAR approach	2010, Journal of Economic Studies	International
52	E Muchapondwa, F Carlsson & G Kohlin	Can local communities in Zimbabwe be trusted with wildlife management?: Evidence from contingent valuation of elephants	2008, South African Journal of Economics	Internationally ranked
54	P Aghion, M Braun & J Fedderke	Competition and productivity growth in South Africa	2008, Economics of Transition	International
55	J Geldenhuys & M Marinkov	Robust estimates of Okun's Coefficient for South Africa	2007, South African Journal of Economics	Internationally ranked
56	D Lam, C Ardington & M Leibbrandt	Schooling as a lottery: Racial differences in school advancement in urban South Africa	2010, Journal of Development Economics	International
57	D Casale & D Posel	Bridewealth and the marital earnings premium for men	2010, Economic Dev & Cultural Change	International
58	A Zimper	Half empty, half full and the possibility of agreeing to disagree	2009, Journal of Economic Behaviour and Organization	International
59	C Ardington, A Case and V Hosegood	Labor supply responses to large social transfers: longitudinal evidence from South Africa	2009, American Economic Journal, Applied Economics	International
60	W Simbanegavi	Exchange Rates and Product Variety	2009, International Journal of Finance and Economics	International
61	D Posel & C Muller	Is there evidence of a wage penalty to female part-time employment in South Africa?	2008. South African Journal of Economics	Internationally ranked

63	D Hodge	Economics, realism and reality: a comparison of Maki and Lawson	2008, Cambridge Journal of Economics	International
64	N Pillay	Theory consistent formal risk measures	2010, Oxford Bulletin of Economics and Statistics	International
65	W Akpalu, E Muchapondwa & P Zikhali	Can the restrictive harvest period policy conserve mopane worms in Southern Africa? A bio-economic modelling approach	2009, Environment and Development Economics	International
67	M Bittencourt	Inflation and financial development: Evidence from Brazil	2010, Economic Modeling	International
68	R Gupta & J Uwillingiye	Measuring the welfare cost of inflation in South Africa	2008, South African Journal of Economics	Internationally ranked
72	H Amusa	Fiscal Illusion at the local sphere: An empirical test of the flypaper effect using SA municipal data	2008. South African Journal of Economics	Internationally ranked
74	A Zimper	A parsimonious model of subjective life expectancy	2013, Theory & Decision	International
75	S Muller	Begging the question: Permanent Income and Social Mobility	2010, Economic Letters 108: 291-295	International
76	C Ardington, M Leibbrandt	Orphanhood and Schooling in SA: Trends in the vulnerability of orphans between 1993 & 2005	2009, Economic Development and Cultural Change	International
77	A Hofmeyr, J Burns and M Visser	Income Inequality, Reciprocity and public good provision: An experimental analysis	2007, South African Journal of Economics	Internationally ranked

78	J Fedderke & Simbanegavi	Price Elasticities and Pricing Power in Emerging Markets: The Case of Petrochemical-Derived Plastics in South Africa	2012, South African Journal of Economics	Internationally ranked
79	M Aziakpono	Exchange rate pass-through to import prices in SA	2008, South African Journal of Economics	Internationally ranked
81	R Gupta & E Ziramba	Costly tax enforcement and financial repression	2008, Review of Banking, Finance and Monetary Economics	International
83	A Hofmeyr	Social networks and ethnic niches: An econometric analysis of the manufacturing sector in SA	2010, South African Journal of Economics	Internationally ranked
84	L Bonga-Bonga	Modelling the rand-dollar future spot rates: The Kalman Filter approach	2008, African Finance Journal	National
86	M Bittencourt	Macroeconomic performance and inequality: Brazil 1983-1994	2008, The Developing Economies	International
89	W Boshoff & J Fourie	Ship Traffic and the economy of the Cape Colony: 1652-1794.	2010, European Review of Economic History	International
90	E Muchapondwa	Estimation of the aggregate agricultural supply response in Zimbabwe: the ARDL approach to cointegration	2009, Afjare	National
91	W van der Merwe & J Burns	What's in a name? Racial identity and altruism in post-apartheid South Africa	2008, South African Journal of Economics	Internationally ranked
92	A Zimper	Asset pricing in a lucas 'fruit-tree' economy with the best and worst in mind	2011, Journal of Economic Dynamics & Control	International

93	J Fedderke	Testing creative destruction in an opening economy: The case of the SA manufacturing industries	2013, Economics of Transition	International
95	J Luiz	Perceptions regarding entrepreneurship in an emerging and culturally diverse economy: A SA survey	2011, SAJEMS	National
97	A Zimper	Revisiting independence and stochastic dominance for compound lotteries	2008, B E Journal of Theoretical Economics	International
98	L Bonga-Bonga	National savings and fiscal policy in SA: An empirical analysis	2009, Acta Academica	National
101	M Bittencourt	Macroeconomic performance & inequality: Brazil 1983-1994	2009, The Developing Economies	International
102	E Giovannetti	Asymmetry and discrimination in internet peering: evidence from the LINX	2009, International Journal of Industrial Organization	International
103	S Das	Adaptive Bayesian Analysis for Binomial Proportions	2009, South African Statistical Journal	National
104	A Zimper	On attitude polarization under Bayesian learning with non-additive beliefs	2009, Journal of Risk and Uncertainty	International
109	E Gilbert	Does survivorship bias really matter? An empirical investigation into its effects on the mean reversion of share returns on the JSE securities Exchange (1984-2006)	2010, Investment Analysts Journal, Vol 72	National
111	J Fedderke, & W Simbanegavi	SA Manufacturing industry structure and its implications for competition policy	2008, Journal of Development Perspectives	National

112	F Gwenhamo	Measuring institutions: The Zimbabwean Case	2012, The Journal of Peace Research	International
113	D Casale & D Posel	Unions and the gender wage gap in South Africa	2010, Journal of African Economies	National
115	L Rangasamy	How persistent is SA's inflation	2009, South African Journal of Economics	Internationally ranked
116	W Krugell	Local municipalities and progress with the delivery of basic services in SA	2010, South African Journal of Economics	Internationally ranked
118	J Luiz	Factors influencing foreign direct investment of SA financial services firms in sub-saharan Africa	2009, International Business Review	International
119	D Hodge	Growth, employment and unemployment in SA	2009, South African Journal of Economics	Internationally ranked
120	E Muchapondwa	Using economic incentives in conservation oriented regional management in Southern Africa	2012, Journal of Sustainable Development	National
122	L Bonga Bonga	Forward exchange rate puzzle: joining the missing pieces in the rand-US dollar exchange market	2009, Journal of Studies in Economics and Econometrics	National
130	W Akpalu	Ostracism and common pool resource management in a developing country: young fishers in the laboratory	2011, Journal of African Economies	International
135	E Muchapondwa	Assessing the viability of small-scale wind turbines in different scenarios in SA	2011, Journal of Energy in Southern Africa	National

139	R Seymore	The impact of an electricity generation tax on the SA economy	2010, Journal of Studies in Economics and Econometrics	National
141	J van Heerden	Is Water Shedding Next?	2009, Water SA	National
142	S Koch	Dynamic Health Care Decisions and Child Health in SA	2010, Journal of Income Distribution	International
144	F Gwenhamo	Foreign direct investment in Zimbabwe: the role of institutional factors	2011, South African Journal of Economics	Internationally ranked
146	M Aziakpono	Dynamic returns linkages and volatility transmission between SA and the world market equity markets	2009, Journal of Studies in Economics and Econometrics	National
147	H Bezuidenhout	A regional perspective on Aid and FDI in Southern Africa	2009, Int Adv Econ Res	International
149	A Kabundi	Could we have predicted the recent downturn in the South African housing market?	2009, Journal of Housing Economics	International
150	J Luiz	Evaluating the performance of SA economics departments and economists	2009, South African Journal of Economics	Internationally ranked
153	D Posel & D Casale	Sex ratios and racial differences in marriage rates in South Africa	2011, Applied Economics	International
154	S Hassan	In sample predictability does not imply opportunities for profitable trading in real time: evidence from the cross-section of SA common stocks	2011, Australian Journal of Management	International

155	M Reid	Loud and Clear? Can we hear when the SARB speaks?	2010, South African Journal of Economics	Internationally ranked
156	S Hassan	The equity premium and risk-free rate puzzles in a turbulent economy: evidence from 105 years of data from SA	2010, South African Journal of Economics	Internationally ranked
157	Er Danan, A Guerdjikova & A Zimper	Indecisiveness aversion and preference for commitment	2011, Theory and Decision	International
158	R Burger et al	Rising unemployment in a growing economy: A business cycle, generational and life cycle perspective of post-transition South Africa's labour market	2014, Studies in Economics and Econometrics	National
160	D Igan, A Kabundi et al.	Three cycles: Housing, credit and real activity	2011, Journal of Housing Economics	International
161	U Schmidt & A Zimper	The harmonic sequence paradox reconsidered	2011: British Journal of Mathematical and Statistical Psychology	International
162	J Luiz & R Fidal	An economic analysis of sports performance in Africa	2011, International Journal of Social Economics	International
163	F Gwenhamo	The composition of foreign capital stocks in SA: the role of institutions and domestic risk	2013, Economic Modelling	International
165	J Fedderke	Measuring institutions: indicators of political rights, property rights and political instability in Malawi	2011, Social Indicators Research	International
168	Ayo Akanbi	Role of governance in explaining domestic investment in Nigeria	2012, South African Journal of Economics	Internationally ranked

169	M Bittencourt	Polarization, Populism and Hyperinflation: some evidence from Latin America	2012, Economic Governance	International
173	J Rossouw, V Padayachee & A Bosch	Inflation expectations and inflation credibility revisited: a multinomial analysis of SA data	2011, SAJEMS	National
177	J Agbor	How Colonial Education practices helped shape the pattern of decolonization in West Africa	2014, International Journal of Development and Conflict	International
178	R Hasson	Climate change diasaster management: Mitigation and adaptation in a public goods framework	2010, Ecological Economics	International
179	J Kibambe	Some policy experiments using a marshallian macroeconometric model: Case of South Africa	2012, Macroeconomic Dynamics	International
181	D Casale & D Posel	English language proficiency and earnings in a developing country: the case of South Africa	2011, The Journal of Socio-Economics	International
182	S Hosking	The value of the trout fishery at Rhodes, North Eastern Cape, Sa: A travel cost analysis using count data models	2011, Journal of Environmental Planning and Management	International
183	M Sarr et al	On the Looting of Nations	2010, Public Choice	International
184	J Fourie	A history with evidence: Income inequality in the Dutch Cape Colony	2011, Economic History of Developing Regions	International
187	Z Chinzara	Macroeconomic uncertainty and emerging market stock market volatility: the case for South Africa	2011, South African Journal of Economics	Internationally ranked

189	R Naraidoo & I Paya	Forecasting monetary policy rules in South Africa	2011, International Journal of Forecasting	International
191	M Bittencourt	Financial development and economic growth in Latin America: is Schumpeter right?	2012, Journal of Policy Modelling	International
193	D Casale	Indirect taxation and gender equity: evidence from South Africa	2012, Feminist Economics	International
194	J Luiz	Foreign direct investment and the internationalization of SA mining companies into Africa	2013, Emerging Markets, Finance and Trade	International
195	N Monkam	Mobilizing tax revenue to finance development: The case of property taxation in francophone Africa	2011, Public Finance & Management, Vol 11	National
196	M Chitiga	Analysing alternative policy responses to high oil prices using an energy integrated CGE micro simulation approach for SA	2012, Environment and Development Economics	International
198	Z Chinzara	Risk return tradeoff and the behavior of volatility on the South African stock market: Evidence from both aggregate and disaggregate data	2012, South African Journal of Economics	Internationally ranked
202	A Duncan	Volatility spillovers across SA asset classes during domestic and foreign financial crises	2012, Economic Modelling	International
203	R Inglesi-Lotz & J Blignaut	SA's electricity consumption: A sectoral decomposition analysis	2012, Applied Energy	International
204	R Inglesi-Lotz	Electricity intensities of the OECD and South Africa: a comparison	2012, Renewable and Sustainable Energy Reviews	National

205	D Posel	Gendered trends in poverty in the post-apartheid period: 1997-2006	2011, The Journal of Socio-Economics	International
208	A Zimper	Optimal liquidity provision through a demand deposit scheme: The Jacklin critique revisited	2012, German Economic Review	International
209	J Eita	Determinants of stock market prices in Namibia	2012, Journal of Applied Business Research	National
210	D Casale	Relative standing and subjective well being in Sa, the role of perceptions expectations and income mobility	2011, Social Indicators Research	International
212	S Koch	An analysis of Specialist Surgeons and their practices	2011, SAJEMS	National
213	J Fourie	Settler skills and colonial development	2013, Economic History Review	International
215	F Tregenna	What are distributional implications of halving poverty in South Africa when growth alone is not enough?	2011, Applied Economics	International
217	H Ngalawa	Dynamic effects of monetary policy shocks in Malawi	2011, South African Journal of Economics	Internationally ranked
219	J Luiz	Constructing institutional measures: indicators of political and property rights in Mozambique, 1900-2005	2013, International Journal Policy, Admin & Institutions	International
220	J Fedderke	How do rights matter?	2013, World Development	International

221	D Liu	Business Cycle and Bank Capital Regulation: Basel II Procyclicality	2012, Economic Modelling	International
222	J Luiz	Determinants of Foreign Direct Investment of South African telecommunications firms into sub-saharan Africa	2012, Telecommunications Policy	International
225	A Sundaram	The impact of Trade Liberalization on Micro Enterprises: Do Banks Matter? Evidence from Indian Manufacturing	2015, Oxford Bulletin of Economics and Statistics	International
226	W Boshoff	Gasoline, diesel fuel and jet fuel demand in South Africa	2012, J.Stud.Econ.Econometrics	National
227	K Brick et al.	Risk Aversion: Experimental Evidence from South African Fishing communities	2012, American Journal of Agricultural Economics	International
229	S Koch	Clean fuel-saving technology adoption in Urban Ethiopia	2013, Energy Economics	International
232	M Kohler	Measuring the impact of trade finance on South African export flows	2011, SAJEMS	National
234	J Fedderke	What price the court of St James? Political influences on ambassadorial postings of the USA	2016, Governance	International
237	K Behrens & A Pholo-Bala	Do rent seeking and interregional transfers contribute to urban primacy in sub-saharan Africa?	2011, Papers in Regional Science	International
238	G Verhoef	Global since Gold: The globalization of conglomerates: explaining the experience from SA: 1990-2009	2011, The Globalization of South African Conglomerates, 1990-2009	National

239	M du Preez et al	The recreational value of beaches in the Nelson Mandela Bay area, South Africa	2011, J Stud Econ Econometrics	National
240	A Zimper	Do Bayesians learn their way out of ambiguity?	2011, Decision Analysis	International
241	M du Preez	The impact of social housing developments on nearby property prices: A Nelson Mandela bay case study	2013, South African Journal of Economics	Internationally ranked
243	W Akpalu	Demand for cooking fuels in a developing country: To what extent do taste and preferences matter?	2011, Energy Policy	International
244	C Delavallade	What drives corruption? Evidence from North African Firms	2013, Journal of African Economics	International
245	S Koch	Property rights, institutions and source of fuel wood in rural Ethiopia	2013, Forest Policy and Economics	International
247	S Hove	Do monetary fiscal and financial institutions really matter for inflation targeting in emerging market economics	2016, Research in International Business & Finance	International
248	S Koch	Does one size fit all? Heterogeneity in the valuation of community forestry programmes	2011, Ecological Economics	International
249	J Visagie	A reconsideration of what and who is middle class in South Africa	2013, Development Southern Africa	National
250	M Cakir	Trade Shocks from BRIC to South Africa; A Global VAR Analysis	2013, Economic Modelling	International

251	J Luiz	The economics of information technology in public sector health facilities in developing countries: the case of South Africa	2013, BMC Medical Informatics & Decision Making	International
252	L Bonga-Bonga	Volatility spillovers between the equity markets and foreign exchange market in South Africa	2013, South African Journal of Economics	Internationally ranked
253	A Duncan	Global financial crises and time-varying volatility co-movement in World Equity Markets	2013, South African Journal of Economics	Internationally ranked
257	J Dikgang	The valuation of biodiversity conservation by the SA Khomani San 'bushmen' community	2012, Ecological Economics	International
258	M du Preez et al	Measuring the indirect costs associated with the establishment of a wind farm: An application of the contingent valuation model	2012, Journal of Energy in Southern Africa	National
260	J Fourie	The Determinants of African Tourism	2012, Tourism Management	International
261	C Claasen	Chinese Foreign Direct Investment in Africa	2012, African Journal of Business Management	National
264	J Ngoie	Modeling and policy analysis for the US Science Sector	2013, Journal of Policy Modeling	International
265	M du Preez	Determining the impact of low-cost housing development on nearby property prices using discrete choice analysis	2012, J.Stud. Econ Econometrics	National
268	J Fourie	The wealth of the Cape Colony: measurements from probate inventories	2012, Economic History Review	International

270	J Baten et al	Slave numeracy in the Cape Colony and comparative development in the 18th century	2014, The Economic History Review	International
271	L Grzybowski	Fixed-to-Mobile substitution in the European Union	2014, Telecommunications Policy	International
272	D Gelo	Contingent valuation of community forestry programs in Ethiopia: Controlling for preference anomalies in double – bounded CVM	2015, Ecological Economics	International
273	S Hove	Terms of Trade Shocks and Inflation Targeting in Emerging Market Economies	2015, South African Journal of Economics	Internationally ranked
275	D Liu	Will the SARB always succeed in fighting inflation with contractionary policy?	2013, South African Journal of Economics	Internationally ranked
276	J Luiz	The Strategic Location of Regional Headquarters for Multinationals in Africa	2016, Economics & Management	Internationally ranked
277	D Gelo et al	The impact of common property right forestry: Evidence from Ethiopian Villages	2014, World Development	International
278	M Reid	Inflation expectations of the inattentive general public	2015, Economic Modelling	International
280	A Zellner et al	Evaluation of the Effects of Reduced Personal and Corporate Tax Rates on the Growth Rates of the U.S. Economy	2014, Economic Reviews	International
281	D Hodge	Commodity prices, the exchange rate and manufacturing in South Africa: what do the data say?	2016, African Journal of Economic & Management Studies	National

282	W Krugell et al	Micro-evidence on day labourers and the thickness of labour markets in South Africa	2014, SAJEMs	National
283	A Mahomedy	Islamic Economics: Still in search of identity	2013, International Journal of Social Sciences	National
284	J Fourie et al	Literacy at South African Mission Stations	2014, Journal of Southern African Studies	National
285	T Leshoro	Estimating the inflation threshold for SA	2012, J.Stud.Econ.Econometrics	National
286	S Koch	The consistency of merger decisions in a developing country: the SA competition commission	2014, South African Journal of Economics	Internationally ranked
288	M Rogan	Poverty and headship in post-apartheid SA: 1997-2008	2012, Social Indicators Research	International
289	R Burger	The unintended consequences of education policies on South African participation and unemployment	2015, South African Journal of Economics	Internationally ranked
290	J Fedderke	The cost of rigidity: The case of the SA labour market	2012, Comparative Economic Studies	International
291	A Zimper	The emergence of 'fifty-fifty' probability in a conditional savage world	2012, Fuzzy Sets and Systems	International
293	J Fourie	Ethnic reunion and cultural affinity	2012, Tourism Management	International

294	J Snowball	Are arts events a good way of augmenting the economic impact of sports? The case of the 2010 Soccer World Cup and the National Arts Festival in SA	2013, International Journal of Arts Management	International
296	A Zimper	A decision-theoretic model of asset price underreaction and overreaction to dividend news	2012, Ann Finance	International
300	J Fedderke	The objectivity of NRF Peer Review Based Ratings in SA	2013, Scientometrics	International
303	E Makaudze	Assessing the economic value of El Nino Based seasonal climate forecasts for smallholder farmers in Zimbabwe	2012, Meteorological Applications	International
304	J Mbonigaba	The cost effectiveness of intervening in low and high HIV prevalence areas in South Africa	2013, South African Journal of Economics	Internationally ranked
307	S Hove	Monetary policy and commodity terms of trade shocks in emerging market economies	2015, Economic Modelling	International
308	I Kanyama	Quality of institutions: Does intelligence matter?	2013, Intelligence	International
314	A Hoeffler	Can international interventions secure the Peace?	2014, International area studies review	International
316	A de Waal	Monetary policy and inflation in SA: A VECM augmented with foreign variables	2013, South African Journal of Economics	Internationally ranked
317	Y Bofoto	Social capital as an engine of growth: multisectoral modelling and implications	2016, Macroeconomics Dynamics	Internationally ranked

319	M Zerihun et al	A Greek Wedding in SADC? Testing for Structural Symmetry Towards SADC Monetary Integration	2014, The African Finance Journal	National
320	J Agbor et al	Does Famine Matter for Aggregate Adolescent Human Capital Acquisition in Sub-Saharan Africa?	2014, African Development Review	National
321	S Makanjari	Evaluating the prospects of benefit sharing schemes in protecting mountain gorillas in Central Africa	2013, Natural Resource Modelling	International
322	M Sarr	Risk preferences and environmental uncertainty: implications for crop diversification decisions in Ethiopia	2012, Environ Resource Economics	International
324	M Cakir	Business cycle and co-movements between South Africa and the BRIC countries	2013, Applied Economics	International
326	H Ngalawa	Interaction of formal and informal financial markets in quasi-emerging market economics	2013, Economic Modelling	International
327	V Gorchach	The impact of Economic Freedom on Economic Growth in the SADC: An individual component analysis	2015, J.Stud.Econ.Econometrics	National
328	A Maredza	The impact of the Global Financial Crisis on Efficiency and Productivity of the Banking system in SA	2013, Mediterranean Journal of Social Sciences	National
331	D Lee	Using a choice experiment to manage the excess demand challenges facing the Sundays River Estuary recreational fishery in SA	2014, Water South Africa	National
333	J Fedderke	The productivity impact of infrastructure in Turkey, 1987-2006	2014, J. Infrastructure Systems	International

335	I Kanyama	Time-varying parameters in the almost ideal demand system and the Rotterdam model: will the best specification please stand up?	2013, Applied Economics	International
337	P Blaauw	Happy in the informal economy? A case study of well being among day labourers in SA	2013, International Business & Economics Research Journal	International
339	D Lee et al	Improving navigability on the Kromme River Estuary: A Choice experiment application	2014, Water South Africa	National
341	M Bittencourt	Inflation and Economic Growth: Evidence from the Southern African Development Community	2015, South African Journal of Economics	Internationally ranked
343	M du Preez	A cost benefit analysis of concentrator photovoltaic technology use in SA: A case study	2013, Journal of Energy in Southern Africa	National
344	P Alagidede	Short run under pricing of initial public offerings (IPOs) in the JSE	2012, Review of Development Finance	International
347	J Agbor	Effects of Primary, Secondary and Tertiary Education on Conflict Intensity in Africa	2015, Economies	International
348	A Mahomed	International trade and labour demand Elasticities: Is there any empirical evidence from SA	2013, J.Stud.Econ. Economics	National
349	F Botha	Life satisfaction and Education in SA: Investigating the role attainment and the likelihood of education as a positional good	2013, Social Indicator Research	International
352	J Dikgang et al	The effect of land restitution on poverty reduction among the Khomani San 'Bushmen' in South Africa	2015, South African Journal of Economics	Internationally ranked

353	D Lee	Valuing user preferences for improvements in public nature trails around the Sundays river estuary, eastern cape SA	2016, Journal of Economic and Financial Sciences	International
354	A Zimper	Bank-Deposit contracts versus financial-market participation in Emerging Economics	2015, Emerging Markets Finance and Trade	International
355	P Wa Cipamba	The export-output relationship in South Africa: an empirical investigation	2015, J.Stud.Econ.Econometrics	National
356	M Kohler	Co2 emissions, energy consumption, income and foreign trade: A SA perspective	2013, Energy Policy	International
359	C May	Copious structural shifts in exchange rates of the South African rand	2015, J.Stud.Econ.Econometrics	National
360	H Hollander	The equity price channel in a New-Keynesian DSGE model with financial frictions and banking	2016, Economic Modelling	International
361	M Bittencourt	Economic Growth and inequality, evidence from young democracies South America	2014, Macroeconomic analysis & Int Finance	International
363	F Botha	Family functioning and life satisfaction and happiness in SA households	2013, Social Indicators Research	International
364	A Kabundi	Monetary policy and balance sheets	2016, Journal of Policy Modelling	International
365	N Kilimani	Water resource accounting for Uganda: use and policy relevancy	2015, Water Policy	National

366	D Lee	Managing some motorized recreational boating challenges in SA estuaries: A case study at the Kromme River Estuary	2015, South African Journal of Economics	Internationally ranked
368	J Dikgang	Conservation fees in the Kgalagadi transfrontier park between botswana and SA in the presence of land restitution	2016, Tourism Economics	National
367	H Ngalawa	Southern African customs union revenue, public expenditures and HIV/AIDS in BLNS countries	2014, SAJEMS	National
369	J Mbonigaba	Modeling the cost-effectiveness of HIV/AIDS interventions in different socio-economic contexts in SA (2007-2020)	2013, Mediterranean Journal of Social Sciences	International
370	G Thondhlana et al	Dependence on environmental resources and implications for household welfare: Evidence from the Kalahari Drylands, South aFrica	2014, Ecological Economics	International
371	J Fourie	The Quantitative Cape, A review of the New Historiography of the Dutch Cape Colony	2014, South African Historical Journal	National
373	S Koch	Health care facility choice and user fee abolition: regression discontinuity in a multinomial choice setting	2016, Journal of Statistics in Society	International
374	H Ngalawa	Anatomy of the Southern African customs union: structure and revenue volatility	2013, International business & economics research journal	International
376	J Fedderke	Promotion and Relegation between Country Risk Classes as Maintained by Country Risk Rating Agencies	2015, Procedia Economics and Finance	International
377	F Tregenna	Sources of subsectoral growth in South Africa	2013, Oxford Development Studies	International

378	N Obikili	The impact of the Slave Trade on Literacy in West Africa: Evidence from the Colonia Era	2015, Journal of African Economies	International
379	M du Preez	Nonparametric estimation of a hedonic price model: A SA case study	2013, J. Stud. Econ. Econometrics	National
381	M Reid et al	A Sticky Information Philips Curve for South Africa	2014, South African Journal of Economics	Internationally ranked
382	N Obikili	Social Capital and Human Capital in the Colonies: A study of Cocoa Farmers in Western Nigeria	2014, Economic History of Developing Regions	International
383	J Dikgang	The economic evaluation of dryland ecosystem services in the SA kgalagadi by the local communities	2016, Journal of Environment Economics and Policy	National
384	J Dikgang et al	The economic evaluation of dryland ecosystem services in the South African Kgalagadi area and implications for PES involving the Khomani San	2014, Journal of Environmental Economics and Policy	International
385	S du Plessis et al	Slave prices and productivity at the Cape of Good Hope from 1700 to 1725: Did everyone win from the trade?	2014, Cliometrica, Journal of Historical Economics and Econometric History	International
386	N Nicholls	The impact of statistical learning on violations of the sure-thing principle	2015, Journal of Risk and Uncertainty	International
388	F Botha	Determinants of Student Satisfaction with Campus Residence Life at a SA university	2015, Social Indicators Research	International
389	J W Fedderke et al	Does massive funding support of researchers work?: Evaluating the impact of the South African research chair funding initiative	2014, Research Policy	International

390	A Zimper	Biased Bayesian learning with an application to the risk-free rte puzzle	2014, North American Journal of Economics & Finance	International
395	J Visagie	Race, Gender and Growth of the Affluent Middle Class in Post-Apartheid South Africa	2014, Development Southern Africa	National
396	M Kohler	Differential electricity pricing and energy efficiency in SA	2013, Energy	International
399	A Zimper	On the impossibility of insider trade in rational expectations equilibria	2014, North American Journal of Economics & Finance	International
400	D Gelo	Decentralization, market integration and efficiency-equity trade-offs: Evidence from Joint Forest Management in Ethiopian villages	2016, Journal of Forest Economics	International
401	J Snowball	Transformation, job creation and subsidies to creative industries: the case of SA film and TV sector	2013, International J of Cultural Policy	International
404	M Bittencourt	Inflation and Economic Growth: Evidence from the Southern African Development Community	2015, South African Journal of Economics	Internationally ranked
406	N Obikili	The trans-atlantic slave trade and local political fragmentation in africa	2016, The Economic History Review	International
407	L Grzybowski	Estimating broadband diffusion in the EU using NUTS 1 regional data	2014, Telecommunications Policy	National
409	N Mupunga	Analyzing the theoretical and empirical foundations of public debt dynamics in zimbabwe	2016, J.Stud.Econ.Econometrics, 2016	National

410	D King et al	Modelling stock return volatility dynamics in selected African markets	2014, Economic Modelling	International
413	S Oumar et al	An assessment of the performance of the Cameroon water corporation for the period 1967 to 2013	2014, Journal of Applied Business Research	National
414	M Sarr et al	Resistance to the regulation of common water resources in rural Tunisia	2015, Land Economics	International
415	H Bezuidenhout	Profiling sectoral risks of Foreign Direct Investment in Africa	2016, Journal of Economic and Financial Sciences	National
416	H Bohlmann	Quantifying shifts in primary factor demand in the SA economy	2016, Development Southern Africa	National
417	M Nchake	Price setting behavior in Lesotho: stylized facts from consumer retail prices	2015, South African Journal of Economics	National
421	N Balchin et al	A disaggregated analysis of product price integration in the Southern African Development Community	2014, Journal of African Economies	International
422	A Kabundi et al	Monetary policy and heterogeneous inflation expectations in South Africa	2014, Economic Modelling	International
425	J Fourie	The missing people: Accounting for the productivity of indigenous populations in Cape Colonia history	2015, The Journal of African History	International
429	S Chetty et al	The experience of private investment in the South Africa water sector: The Mbombela Concession	2014, Development Southern Africa	National

430	A Brink et al	Did primary healthcare user fee abolition matter? Reconsidering South Africa's experience	2014, Development Southern Africa	National
438	N Obikili	An examination of sub national growth in Nigeria: 1999-2012	2015, South African Journal of Economics	Internationally ranked
440	S Mishi et al	Remittances and Sustainability of Family Livelihoods: Evidence from Zimbabwe	2014, Journal of Economics and Behavioural Studies	National
441	F Botha	The Good African Society Index	2014, Social Indicators Research	International
446	H Ngalawa	A portrait of informal sector credit and interest rates in Malawi: Interpolated monthly time series	2014, The African Finance Journal	National
448	P Piraino	Intergenerational earnings mobility and equality of opportunity in South Africa	2014, World Development	International
454	H Hollander	Credit spread variability in the U.S. business cycle: The Great Moderation versus the Great Recession	2016, Journal of Banking and Finance	International
456	B Tibesigwa	Multiple and concurrent sex partnerships and social norms: young adults' sexual relationships in the metropolitan communities of Cape Town	2015, Sexuality Research and Social Policy	International
457	J Rossouw	Private shareholding: an analysis of an eclectic group of Central Banks	2016, SAJEMS	National
459	W Krugell	The Spatial Persistence of Population and Wealth During Apartheid: Comparing the 1911 and 2011 Censuses	2014, Economic History of Developing Regions	National

462	N Kilimani	Water taxation and the double dividend hypothesis	2015, Water Resources and Economics	National
464	M Pretorius	A panel ordered response model for sovereign credit ratings in Africa	2016, The African Finance Journal	National
470	B Tibesigwa	Investigating the sensitivity of household food security to agriculture-related shocks and the implication of social and natural capital	2015, Sustainability Science	International
471	Y Getachew	Optimal public investment, Growth and Consumption: Evidence from African Countries	2016, Macroeconomic Dynamics	International
473	M Groneck	A life-cycle model with ambiguous survival beliefs	2016, Economic Modelling	International
474	J Mbonigaba	The relative (in) efficiency of SA municipalities in providing public health care	2016, African Journal of Economics & Management Studies	National
475	M Some	The impact of obesity on employment in SA	2016, J.Stud.Econ.Econometrics	National
478	H Bohlman et al	The impact of the 2014 platinum mining strike in South Africa	2016, Economic Modelling	International
481	T Greyling	Construction and Analysis of a Composite Quality of Life Index for a Region of South Africa	2016, Social Indicators Research	International
483	B Bedasso	A Dream Deferred: The microfoundations of direct political action in pre and post democratization South Africa	2015, Journal of Development Studies	International

485	Wei Ma	A simple method for computing equilibria when asset markets are incomplete	2015, Journal of Economic Dynamics & Control	International
487	J Dikgang	A comparison of the values of water inflows into selected SA estuaries: the Heuningnes, Kleinmond, Klein, Palmiet, Cefane, Kwelera and Haga-haga	2016, Water Resources and Economics	National
494	I Botha	Comparing Linear and Non-Linear Benchmarks of Exchange Rate forecasting	2016, J.STUD.ECON.ECONOMETRICS,2016	National
498	P Blaauw	I would rather have a decent job': Barriers preventing street waste pickers from improving their socioeconomic conditions	2016, SAJEMS	National
499	N Mahonye	Mechanism between mining sector and economic growth in Zimbabwe, is it a resource curse?	2015, Environmental Economics	International
501	A Suderam	Buyer-Seller Relationships in International Trade: Do your neighbors Matter?	2016, Journal of International Economics	International
502	D Lee	Determining visitor preferences for rhino conservation management at private, ecotourism game reserves in the Eastern cape Province, SA: A choice modeling experiment	2016, Ecological Economics	International
503	S du Plessis	Measuring core inflation in South Africa	2015, Social Indicators Research	International
506	D Crookes	A categorization and evaluation of rhino management policies	2016, Development Southern Africa	National
507	T Greyling	The expected well being of urban refugees and asylum seekers in Johannesburg	2016, SAJEMS	National

508	J Fourie	The invisible hand of Thierry Henry: How World Cup qualification influences host country tourist arrivals	2015, Journal of Sport Economics	International
510	N Marwa	Technical and Scale Efficiency of Tanzanian Saving and Credit Cooperatives	2016, Journal of Developing Areas	National
514	J Luiz	The impact of ethno-linguistic fractionalization on cultural measures: Dynamics, endogeneity and modernization	2016, Journal of International Business Studies	International
515	F Stofberg et al	The short-term economic impact of levying e-tolls on industries	2016, South African Journal of Economics	National
520	D Crookes	Debunking the myth that a legal trade will solve the rhino horn crisis: A system dynamics model for market demand	2015, Journal of Nature Conservation	National
521	A Zimper	Bayesian learning with multiple priors and non-vanishing ambiguity	2016, Economic Theory	International
522	L Grzybowski	The role of network effects and consumer heterogeneity in the adoption of mobile phones: Evidence from SA	2015, Journal of International Business Studies	International
524	J Bohlmann	An economy-wide evaluation of new power generation in SA: The case of kusile and medupi	2016, Energy Policy	International
527	B Tibesigwa	Small scale subsistence farming, food security, climate change and adaptation in SA; male - female headed households and urban-rural nexus	2016, World Development	International
529	N Marwa	Financial sustainability of Tanzanian saving and credit cooperatives	2016, International Journal of Social Economics	International

537	F Botha	Art investment as a portfolio diversification strategy in SA	2016, SAJEMS	National
547	C Vermeulen	inflation, growth and employment in SA: Trends and trade-offs	2017, Southern African Business Review	National
554	J Fedderke	Accounting for productivity growth: Schumpeterian versus semi-endogenous explanations	2016, Economics of Transition	International
555	J Fourie	The data revolution in African Economic History	2016, Journal of Interdisciplinary History	International
569	G Boako	Global commodities and African stocks: insights for hedging and diversification strategies	2016, International review of financial analysis	International
575	D Yu	Underemployment in South Africa	2017, Development South Africa	National
580	N Mupunga	Simulation analysis of alternative strategies for public debt issuance in Zim: is there a trade-off?	2016, African Review of Economics and Finance	National
585	J Fedderke	Estimating South Africa's output gap potential growth rate	2017, SAJE	Internationally ranked
599	A Sanderson	Assessing banking sector competition in Zimbabwe using a panzar-rosse approach	2016, Journal of Economic & Financial Sciences	National
605	M Kohler	Confronting South Africa's Water Challenge: A Decomposition Analysis of Water Intensity	2016, SAJEMS	Internationally ranked

615	A Bara	Financial Reforms and the Finance-Growth Relationship in the Southern African Development Community (SADC)	2017, J.Stud.Econ.Econometrics, 2016, 40 (3)	National
618	R Inglesi-Lotz	Social Rate of Return to R&D on Various Energy Technologies: Where Should We Invest More? A Study of G7 Countries	2016, Energy Policy	International
624	Odei Mensah	How are Africa's emerging stock markets related to advanced markets? Evidence from copulas	2016, African Journal of Science, Technology, Innovation and Development	National
627	A Bara	Financial Innovation And Economic Growth in the SADC	2016, African Journal of Science, Technology, Innovation and Development	National
636	H Ntuli	Effects of wildlife resources on community welfare in Southern Africa	2016, Ecological Economics	International
640	T Greyling	Non-Economic Quality of Life and population density in SA	2016, Social Indicators Research	International
658	J Luiz	The impact of home and host country institutions in the internationalization of an African multinational enterprise	2017, Global Strategy Journal	International
Policy Papers				
01	J Fedderke	From Chimera to Prospect: SA Sources of and Constraints on Long Term Growth, 1970-2000	2006, in Borat, H. and Kanbur, R., eds., Poverty and Policy in Post Apartheid South Africa, HSRC Press	National
02	S Koch & M Peet	Non-tariff Barriers Faced by SA Firms: Are there any Lessons?	2007, South African Journal of Economic and Management Sciences	National

07	Z Bogetic & J Fedderke	International Benchmarking of South Africa's Infrastructure Performance	2006, Journal of Development Perspectives	International
10	C van Walbeek	Official revisions to SA National accounts data: magnitudes and implications	2006, South African Journal of Economics	Internationally ranked
13	Evan Blecher	The impact of tobacco advertising bans on consumption in developing countries	2008, Journal of Health Economics	International

Statement by the Chair of the ERSA Editorial Committee

The Board

ERSA

Dear Sirs/Madams

ERSA Working Paper Series – April 2016 to March 2017

On behalf of the editorial committee I would briefly like to report on the state of the ERSA Working Paper Series (hereafter "The WPS").

Since the start of the WPS in 2005, we have accepted and published 675 working papers, 22 policy papers and 106 research briefs.

The popularity of the WPS has been growing, and this is clear from the fact that in the period Jan 16 – March 17 there were 188 papers received to be sent out for review. 34 of these were accepted unconditionally, 18 were rejected outright, while most others were sent back with comments to be revised and resubmitted. During the above mentioned reporting period, 106 working papers were published.

The editorial committee has been expanded to 14 persons to include all the recently appointed "Affiliates" of ERSA. These persons are leading researchers in South Africa and can publish in the WPS without review, if they so wish. They would only receive funding for the research upon publication in recognized journals. To enhance the policy relevance of the working paper series, we have also appointed two senior policy makers from National Treasury and the SARB to the editorial committee.

The electronic platform, namely ScholarOne Manuscripts, is working very well and we have addressed most if not all teething problems with it.

The WPS is still the premier series in Economics to publish the first versions of significant research articles, and will continue to encourage more and better research in Economics in the future.

Yours truly,

Co-Pierre Georg

4 ERSA Economics Prizes

As a means of incentivizing study in economics, ERSA introduced a mechanism for the recognition in student performance in the economics discipline.

To this end, the Academic Committee introduced monetary awards to the best two economics students in South Africa across all universities, in each year of study. While very moderate in amount, the prizes nevertheless allow universities to recognise the best achievers in each year of study, and to motivate them to continue studying further in economics.

The prizes are R1000 for the first placed student, and R800 for the second placed student.

The following universities have applied for and are being awarded the prizes for their top students and are also given a donation of R3500 towards hosting a departmental social function to honour their top students. Details of student prize winners are listed in Table 4.

Table 4: Prize Winning Students

Institution	Placing	First Year	Second Year	Third Year	Honours	Masters	PhD
North West U Potchefstroom Campus	First Place	N. Anderson	M. Aucamp	L. Du Toit	J. Möller	H.L. Louw	
	Second Place	S. Botha	T.D. Hagerdorn	L. Maré	J.A. Pain	S.D. Makumbirofa	
Tshwane University of Technology	First Place	P.T. Phora	T.P. Mokumo	R. Seleka	G.I. Nokoane		
	Second Place	K.A. Wesi	M.F. Boshomane	A. Mfengwana	L. Lemeke		
U Cape Town	First Place	J. Knipe	C. Cullinan	R. Hopkins	M. Dyer	A. Thornton	K. Eyal
	Second Place	D. Parschau	R. Freund	L. Suddards	I. Bassier	T. Harris	E. Kasekende
U Johannesburg	First Place	A.M. Shaikh	R.B. Mabunda	M.A.D. Folgado	C.M. Samkange	N.P. Nkosi	A. Wentzel
	Second Place	K.D. Clark	A. Khoza	L.P. Kgaladi	N. Nhlapo	R. Govender	R. Nkomo A. Pretorius
U Stellenbosch	First Place	J.M. Evezard	R.E. Piggott	W.J. Wilken	J. Pfitzinger	L. McLean	
	Second Place	L. Nel	C.G. Huskisson	M.A. Hamman	J. Roelofse	D. Popov	
U Western Cape	First Place	T. Phuti	N. Le Roux	H. Wakefield	J. Feder	H. Govera	
	Second Place	L. Du Plessis	A. Tray	R. Mohonoe	K. Kruger	N. Mtshali	
U Witwatersrand	First Place	T. Shumba	C.M. Kikillus	D. Barry	M. Capazario	K. Wapenaar	L. Keeton
	Second place	M. Naidoo	K. Diphokwane U. Sahabodien	S. Reddy R. Ngarachu	J. Harris	R. Fairon	T. Leshoro

5. ERSA Economics Scholarships

The ERSA Scholarship initiative was reinstated at the end of 2013. Ten scholarships to the value of R80000 were offered to South African citizens, enrolled full-time for a master's degree in Economics at a South African institution. Specific selection criteria were academic excellence and ability to succeed in a credible post-graduate programme in economics, with a further requirement for students, to work in South Africa as economists for the period of one year after obtaining the master's degree.

From a total of 30 applications received, ten candidates from a diverse range of institutions were unanimously selected by the scholarship committee (Profs Jan van Heerden (chair), Asrat Tsegaye and Dr Johan Fourie), to receive an upfront payment of R70000 to be followed by R10000 upon submission of their final dissertation to the ERSA working paper series.

See below list of Scholarship Awardees for 2017.

Student Name	Institution	Course
Lelani Coetzee	University of Pretoria	Master's degree
Leeuwner Esterhuysen	University of Stellenbosch	Master's degree
Nosiphelo Gengele	University of Fort Hare	Master's degree
Karabo Mabusela	University of Limpopo	Master's degree
Richard T. McCamel	North West University	Master's degree
Smangaliso I. Mncube	University of Zululand	Master's degree
Sandisele Mtandana	University of the Western Cape	Master's degree
Senzo P. Mthembu	University of Cape Town	Master's degree
Thabang S. Ndlovu	University of KwaZulu-Natal	Master's degree
Mosima W. Ngwenya	North West University	Master's degree

6. Skills Development Programme

The Skills Development Initiative, which is aimed at raising the technical skills of young faculty members for an active research career, continues. Two Skills Development workshops were held in the 2016/2017 year. See reports below.

Panel Data Analysis, Presented at the University of Pretoria, 23 – 27 May 2016

Background

During April 2014 a proposal for the offering of basic Econometrics training for academics from South African universities was presented to, and accepted by the ERSA board. The motivation of the project stemmed from the fact that a significant number of academics affiliated with South African Universities, and employed within Economics departments around the country, are inadequately skilled in Econometrics. They are consequently not able to take advantage of the advanced training programmes in economic modelling techniques offered by ERSA, neither are they suitably equipped to conduct empirical research and/or supervise students. This project aimed to bridge this gap by providing basic econometrics training at a level accessible to persons with limited background in Econometrics.

The approved project comprised three components that were offered to ten deserving academics selected from South African universities spread over a three-year period (this was extended to a second cohort of ten academics, lagging the first programme by six months). The first component, focusing on Time-series Econometrics was offered during the week of 7 – 11 April 2014, Microeconometrics was offered from 23 – 27 May 2015, and Panel Data Econometrics 23 – 27 May 2016. Upon completion participants were issued with a certificate of attendance.

Selection of participants

The ten academics selected by the ERSA Skill Development Committee, include representatives from the Nelson Mandela Metropolitan University (2), the Tshwane University of Technology (1), University of Fort Hare – Alice Campus (1) and East London Campus (2), University of Johannesburg (1), University of Kwa-Zulu Natal (1), the University of Pretoria (1) and the University of Witwatersrand (1). They all hold master's level degrees and are all appointed in lecturer positions at their respective institutions. The majority are currently enrolled for a doctoral level degree, and in their applications expressed the need for a deeper understanding of

econometric techniques to equip them better to do research and also to supervise students, which form part of their responsibilities. The participants in the workshop are listed below, together with their affiliation and most recent academic qualifications.

Name and Surname	Institution and position
Debrah Du Preez	Nelson Mandela Metropolitan University, Lecturer
Hildah Lefophane	University of Pretoria, Lecturer
Koye Gerry Bokona	University of Kwa-Zulu Natal
Naiefa Rashied	University of Johannesburg
Ndiadvha Tempia	Tshwane University of Technology
Nina-Mari Taylor	University of Fort Hare (East London Campus)
Ronney Ncawdi	Nelson Mandela Metropolitan University, Associate Professor
Rubina Jogee	University of Witwatersrand, Lecturer
Sizwe Dlwangushe	University of Fort Hare (Alice Campus)
Syden Mishi	University of Fort Hare (East London Campus)

Format and timing of delivery of the programme

The workshop was conducted in a computer lab at the Department of Economics at the University of Pretoria, with the aim of participants not only acquiring the necessary theoretical background, but also being exposed to hands-on empirical application, using software EViews and STATA. For the time series course, EViews was used exclusively. (STATA was be software of choice for the workshop on cross-section techniques, while both EViews and STATA have been used in the Panel Data course.

A typical day started at 8:30 and ended at 16:30 with a lunch break of one hour and a mid-morning and mid-afternoon coffee/tea break of 20 to 30 minutes. Early morning coffee/tea was available at 8:00, with water provided in the venue.

With specific reference to the Panel Data workshop, extensive lecture notes with text book references and practical exercises with solutions were made available in printed form and on CD and web site link. Time was divided between theoretical discussions and practical applications. Lecturers involved in the Panel Data workshop were Proff. René van Eyden and Manoel Bittencourt.

Workshop participants freely and frequently made use of the opportunity to raise questions and take part in discussions. Since delegates have had prior exposure to the software, everyone kept us fairly easily.

Topics covered during the workshop

For this workshop the following prior knowledge was assumed to be in place: basic statistical methods, such as the calculation of means and standard deviations, as well as hypothesis testing, primarily t , z , F and χ^2 distribution based tests. It also assumed a fair understanding of matrix algebra. Finally, it assumed a modicum of understanding of the structure of programming. A combination of EViews and STATA software was used in the demonstration of techniques.

Topics:

1. Introduction to Panel Data Modelling
 - a. Benefits and Limitations
 - b. Efficiency of Parameter Estimates
 - c. Identification of Parameters
2. The Static Linear Model
 - a. The Fixed Effect (LSDV, Within) Model
 - b. The First Difference (FD) Estimator
 - c. The Random Effects Model
 - d. Fixed Effects of Random Effects?
 - e. One-way vs. Two-way Error Component Models
 - f. Seemingly Unrelated Regression with Error Components
 - g. Example and Practical Exercise in EViews and STATA
3. Hypothesis Testing with Panel Data
 - a. Tests for Poolability
 - b. Tests for Individual and Time Effects
 - c. Hausman's Specification Test
 - d. Serial Correlation Tests
 - e. Heteroskedasticity Tests
 - f. Example and Practical Exercise in EViews and STATA
4. Simultaneous Equations with Error Components
 - a. Endogeneity of Regressors
 - b. Instrumental variables (IV) (Within 2SLS, Between 2SLS, Error Component 2SLS, Generalized 2SLS)

- c. Example and Practical Exercise in STATA
5. Dynamic Linear Models
 - a. An Autoregressive Panel Data Model
 - b. Nickel (1981) bias and corrections
 - c. The Anderson-Hsiao (IV) Estimator
 - d. The Arellano and Bond (1991) (DIF-GMM) Estimator
 - e. The Arrelano and Bover (1995) Estimator
 - f. The Blundell and Bond (1998) (SYS-GMM) Estimator
 - g. Too Many Instruments
 - h. Example and Practical Exercise in STATA
 6. Panel Heterogeneity and Cross-section dependence
 - a. Extend intercept heterogeneity to slope heterogeneity
 - b. Mean Group (MG) estimator of Pesaran and Smith (1995)
 - c. Pooled Mean Group (PMG) estimator of Pesaran, Shin & Smith (1997, 1999)
 - d. Swamy's (1970) Random Coefficients (RC)
 - e. Zellner's (1962) Seemingly Unrelated Regression (SUR) estimator
 - f. Cross-section (between group) dependence: Pesaran's (2006) Common Correlated Effects (CCE) estimator
 - g. Examples and Practical Exercise in STATA
 7. Panel Time Series (Non-stationary Panels)
 - a. Panel Unit Root Tests Assuming Cross-sectional Independence
 - b. Panel Unit Root Tests Assuming Cross-sectional Dependence
 - c. Spurious Regression in Panel Data
 - d. Panel Cointegration Tests
 - e. Example and Practical Exercise in EViews

Feedback from participants and our impressions

Without exception the delegates were extremely grateful for the opportunity granted to them, and they were eager to participate and learn. Overall it was a positive experience for all involved.

Even though we have witnessed a great deal of growth and development, some of the delegates may still need some guidance in getting an article published. We have invited participants to stay in touch in which case we will offer some informal guidance in this regard.

We thank ERSA for the opportunity granted to the participants to be part of the programme and for lecturers from the University of Pretoria to be involved in the training. We undertook to keep contact with the delegates and we invited them to contact us when they need assistance in applying the techniques they were exposed to during the workshop.

25 May 2017

Attention: ERSA Board
Economic Research Southern Africa
Claremont, Cape Town

Dear Sirs

Report: ERSA Skills Development Workshop (Time-series Econometrics)

In this document, we present a report on the Workshop hosted by the Department of Economics at the University of Pretoria, between 31 October and 4 November 2016. The third cohort of (15) delegates attended the workshop in a continued effort towards the goal of deepening economic research capacity through the training of young academics employed in Economics departments at academic institutions in South Africa.

The report is organized under the following headings:

- Background;
- Selection of participants;
- Format and timing of delivery of the programme;
- Topics covered during the workshop; and
- Feedback from participants and our impressions.

As in the past, we thank ERSA for the opportunity granted to participants to be part of the programme and for lecturers from the University of Pretoria to be involved in the training.

Sincerely,

Reneé van Eyden Professor, Department of Economics

Report: ERSA Skills Development Workshop
Time-series Econometrics Presented at the University of Pretoria
31 October – 4 November 2016

Background

The ERSA sponsored Skills Development programme commenced in November 2013, after the ERSA board accepted a proposal for the offering of basic Econometrics training to academics from South African universities. The motivation of the project stems from the fact that a significant number of academics affiliated with South African Universities, and employed within Economics departments around the country, are inadequately skilled in Econometrics. They are consequently not able to take advantage of the advanced training programmes in economic modelling techniques offered by ERSA, neither are they suitably equipped to conduct empirical research and/or supervise students. This project aims to bridge this gap by providing basic econometrics training at a level accessible to persons with a limited background in Econometrics.

The first two cohorts comprised 10 delegates for each three-year training period, however, the number of deserving academics selected to the current (third) cohort was increased to 15. The first of the series of three workshops, once again focussed on Time-series Econometrics and was offered during the week of 31 October to 4 November 2016.

Selection of participants

Given the ongoing demand for econometrics training and capacity building, the third cohort of 15 academics was selected by the ERSA Skills Development Committee. The group comprises representatives from the University of Fort Hare (3); Nelson Mandela Metropolitan University (2); University of the Western Cape (2); University of Limpopo (2); North West University (3); Walter Sisulu University (1); Durban University of Technology (1), and the National University of Lesotho (1). Four delegates hold doctoral degrees.

The participants in this workshop are listed below, together with their affiliation.

Name	Surname	Affiliation
Achiapo Jessica Lisette	Atsin	University of the Western Cape
Daniel	Meyer	North West University
Emmanuel	Baidoo	University of the Western Cape

Gladys	Fernandes	Nelson Mandela Metropolitan University
Hlompo Panelope	Maruping	North West University (Mafikeng)
Kin	Sibanda	University of Fort Hare
Koo (Kudayja)	Parker (Jhazbhai)	Durban University of Technology
Letsie	Mohatonyane	National University of Lesotho
Leward	Jeke	Nelson Mandela Metropolitan University
Mushoni	Bulagi	University of Limpopo
Palesa	Makhetha	University of Fort Hare
Phakama	Senzangakhona	Walter Sisulu University
Sibanisezwe	Khumalo	University of Fort Hare
Steven	Dunga	North West University
Tshepo Shumani	Masipo	University of Limpopo

Format and timing of delivery of the programme

The workshop was conducted in a computer lab at the Department of Economics at the University of Pretoria, with the aim of participants not only acquiring the necessary theoretical background but also being exposed to hands-on empirical application, using software like EViews and STATA. For the time series course, EViews was used exclusively. (STATA is the software of choice for the workshop on cross-section techniques, while both EViews and STATA, but predominantly STATA, are used in the panel data course.)

The instructors for the Time-series Econometrics workshop were Ruthira Naraidoo and Reneé van Eyden.

A typical day started at 8:30 and ended at 16:30 with a lunch break of one hour and a mid-morning and mid-afternoon coffee/tea break of 20 to 30 minutes. Early morning coffee/tea was available at 8:00, with water and mints provided in the venue.

Extensive lecture notes with textbook references and practical exercises with solutions were made available in hard copy form and on memory device. Time was divided between theoretical discussions and practical applications.

Workshop participants freely and frequently made use of the opportunity to raise questions and take part in discussions. Whereas the majority had prior exposure to

the software, the ones with no prior experience managed to catch up and keep up fairly easily.

Topics covered during the workshop

The topics below were addressed during the course of the week.

1. Research Orientation and the Econometric Approach to Analysis (1 day)
 - a. Research Orientation
 - b. The Nature of the Econometric Approach
 - c. Purposes of Econometrics
 - d. Example in EViews: Model Specification, Estimation, Evaluation and Interpretation
 - e. Introduction to the Simple Linear Regression Model
 - f. OLS Estimator, Properties
 - g. The Classical Normal Linear Regression Model (CNLRM)
 - h. Goodness of Fit
 - i. Hypothesis Testing
 - j. Practical Exercise in EViews
2. Time Series Econometrics (Part 1) (1¼ days)
 - a. Underlying Data Generating Process and Concepts of Stationarity & Non-stationarity
 - b. Unit Root Tests (ADF, PP, DG-GLS, Ng-Perron, KPSS)
 - c. Concept of Cointegration
 - d. Residual Based Test for Cointegration (Engle-Granger Cointegration Test)
 - e. Error Correction Model (ECM) specification
 - f. Diagnostic Checking
 - g. Model Simulation and Model Response Characteristics
 - h. Practical Examples and Hands-on Exercises in EViews
3. Time Series Econometrics (Part 2) (2 days)
 - a. Vector Autoregressive (VAR) Model
 - b. Impulse Response and Variance Decomposition Analysis
 - c. Multivariate Cointegration Technique (Johansen Maximum Likelihood Method)
 - d. Block Causality and Exogeneity Test
 - e. Weak Exogeneity Tests and Model Identification
 - f. Practical Example and Hands-on Exercise in EViews
4. Volatility Models (½ day – Introduction and demonstration)
 - a. Properties and Theoretical and Empirical Issues
 - b. ARCH Processes
 - c. ARCH and GARCH Modes
 - d. Estimation and Prediction
 - e. Interpretation and Evaluation of Results

The following prior knowledge was assumed: Basic statistical methods, such as the calculation of means and standard deviations, as well as hypothesis testing, primarily t, z, and F distribution based tests. A modest understanding of matrix algebra was

assumed (meaning that the participant can, for example, interpret the solution to the OLS problem, as well as follow the explanation of the concept of multivariate cointegration).

Topics 3 and 4 received emphasis and a little more time were spent on them than on topics 1 and 2. On the last day, we closed around 13:30 to accommodate delegates' travel arrangements.

Feedback from participants and our impressions

In general, the delegates were extremely grateful for the opportunity granted to them, and they were eager to participate and learn. Overall, it was a positive experience for all involved.

One individual however constantly remarked that he was not interested in the mathematical/statistical explanation of econometric theory/techniques, and only wanted to be shown how to operate the software. He has voiced this complaint to the ERSA personnel involved in organizing the workshop as well and ended up being absent for the two days of training on multivariate cointegration and volatility models. He also did not attend the cross-section training workshop due to work commitments. So, it remains to be seen if he will attend the Panel data workshop, which econometric theory also involves quite a bit of mathematics.

As some of the delegates already have publication records, the skills obtained will most definitely strengthen their capacity in this regard, as well as in terms of their supervision duties. For the younger researchers, the workshop seemed to have increased their motivation for research and publication of their research ideas.

Something that is of concern to us, is the fact that not all delegates have access to either EViews or STATA software installed on their office and/or personal computers. Some campuses do not have STATA at all, while the majority of campuses represented at the workshop have EViews installed in their computers labs. Lecturers have to go the labs and sit amongst the students if they want to do research. It may be a good idea, in the interest of sustainability, to **include a software license(s) in the package for each delegate** for future workshops. The student version of EViews can be obtained from for as little as R500, while a full license is priced in the

order of R1 400.

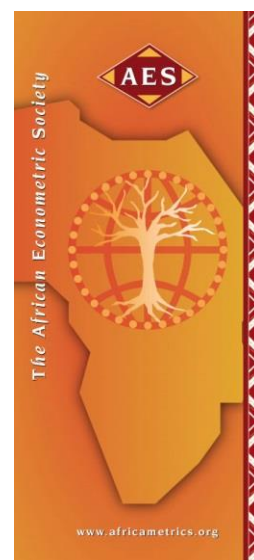
As in the past, we thank ERSA for the opportunity granted to the participants to be part of the programme and for lecturers from the University of Pretoria to be involved in the training. We undertook to keep contact with the delegates and we invited them to contact us when they need assistance in applying the techniques they were exposed to during the workshop.

7 African Econometrics Society

A note on ERSA's support of the [Africametrics.org](http://www.africametrics.org) website

Economic Research Southern Africa's involvement in sponsoring the website (www.africametrics.org), making resources available for the maintenance and updating of the website, dates back to 2007 when the 12th Annual Conference of the African Econometric Society (AES) was hosted by the University of Cape Town. Since 2013 Mr. Charles Tanton is responsible for assisting the Society and local organizers of annual conferences in updating the website. During 2014 the AES transitioned into the Africa Regional Chapter of the Econometric Society. The 2014 and 2015 Meetings were hosted by the Ethiopian Economics Association in Addis Ababa and by the University of Zambia in Lusaka, respectively. The 2016 Africa Meeting of the Econometric Society was held in South Africa again, with the Department of Economics, University of Pretoria hosting the event at the Kruger Gate Protea Hotel in Mpumalanga. Even though the Call for papers was posted on the website of the Econometric Society (<https://www.econometric-society.org/meetings/future-meetings>), the [Africametrics.org](http://www.africametrics.org) website, was still used for posting announcements regarding logistics, academic program, etc. This practice has been extended for the 2017 conference, hosted by the Bank of Algeria, and scheduled to take place at the Ecole Supérieure de Banques in Algiers, Algeria from June 29 to July 1, 2017, see <http://www.africametrics.org>

The Africa Standing Committee and respective Conference Organizers acknowledge ERSA's contribution with much appreciation. Mr. Tanton has been extremely helpful and efficient in updating the website to reflect the transition of the AES to the Econometric Society Africa Region, as well as posting the information for the respective annual conferences.



Appendix I: Workshop Reports: April 2016 – March 2017

1 “Banking in Emerging Markets” workshop held at the UCT Graduate School of Business from 8-9 December 2016

This workshop was in the format of a full-scale academic conference with two outstanding keynote speakers. Prof. Manju Puri from the Duke Fuqua School of Business is a world renowned expert on bank insolvencies and in particular on the design of deposit insurance. Given that this is currently a key policy issue in South Africa, Prof Puri's input was a substantial contribution to a highly relevant topic. The other keynote speaker was Lesetja Kganyago, the Governor of the South African Reserve Bank. His keynote showed that our workshops start to reach senior government officials.

The conference was jointly organized with the Imperial College Business School, the South African Reserve Bank, and the African Institute of Financial Markets and Risk Management. The Review of Finance, the 4th best international journal in finance, committed to publishing a special issue on the theme of the conference, which significantly increased the number of top international contributions. We had participants from leading policy institutions like the World Bank, the European Bank of Reconstruction and Development, the Federal Reserve Board, the Federal Reserve Bank of Richmond, the Bank of England, and, and this is something I am proud of, from the Bank of Uganda. We also had participants from leading US and EU universities, including Columbia University, Georgetown University, Cass Business School, Goethe University Frankfurt, Maastricht University, and New York University.

For this 2+1 day high-level academic conference we had 57 participants in total. Of those were 14 black male, 7 black female, 28 white male, and 8 white female. The relatively high number of white male participants was in part because the conference had a very high number of 21 international participants.

The first day of the conference was designed for local delegates to present their work in front of an audience of international experts. The feedback I got from the local delegates was that, while they were a bit intimidated to present in this audience, the feedback was extremely helpful for them. The second and third day of the conference was designated for papers that were invited to submit to the special issue in the Review of Finance. Seeing that the RoF usually has a rejection rate of 80-90%, and that it counts towards tenure in all business schools, these spots were highly competitive. The quality of the presentations was extremely high and many local delegates commented to me afterwards that this was the first time they had seen such a high level of presentations.

Overall, I think the workshop was a great success. We have always experimented with different workshop formats, and while the amount of time necessary for such a large-scale conference is daunting, the enthusiastic feedback I got leaves me motivated to have a similar style workshop at some point in the future.

For the next ERSA financial economics workshop, however, I would like to focus more on local matters and invite only one international speaker. As a topic I would like to focus on "The Role of the State in Financial Markets" and touch upon topics like state-owned banks, sovereign debt, and corruption/patronage. Some of the papers presented at the 2016 workshop touched on these topics already and participants were highly engaged. This motivates me to take these topics further.

Appendix II: ERSA Working and Policy Papers published: April 2016- March 2017

Working paper 592

Title: Inflation in South Africa: An Assessment of Alternative Inflation Models

Author(s): Johannes W. Fedderke and Yang Liu

Publication date: April 2016

Classification-JEL: E31

Keywords: Inflation, South Africa

Abstract: We consider the relative empirical performance of a range of inflation models for South Africa. Model coverage is of Phillips-curve, New Keynesian Phillips curve, monetarist, and structural models of inflation. Our core findings are that the single most robust covariate of inflation is unit labour cost. We further decompose unit labour cost into changes in the nominal wage and real labour productivity. The principal association is a strong positive relationship between inflation and nominal wages, while improvements in real labour productivity report only a relatively weak negative association with inflation. Supply side shocks also consistently report an association with inflation. As to demand-side shocks, the output gap does not return a robust statistical association with inflation. Instead, it is growth in the money supply and government expenditure which return robust and theoretically consistent associations with inflationary pressure.

Working paper 593

Title: Taxes Rates, Economic Crisis and Tax Evasion: Evidence using Zimbabwe and South Africa Bilateral Trade Flows

Author(s): Marko Kwaramba and Calvin Mudzingiri

Publication date: April 2016

Classification-JEL: F14, F18, H26

Keywords: Economic crisis, tariff rates, tax evasion, trade flows

Abstract: Prompted by the theoretical ambiguity in the relationships between tax rates and tax evasion, this study investigates the relationship between tariff (tax) rates and tax evasion using highly disaggregated trade data for Zimbabwe and South Africa. The study uses cross-sectional data analysis for three periods; pre-crisis (1980 to 1999), crisis (2000-2008) and post-crisis (2009-2014). The results show different responses of tax evasion to tariff changes in the three periods. During both the pre-crisis and post-crisis periods, a decrease in tariff rates is associated with a reduction in tax evasion, while during the crisis period, a decrease in tariff rates is associated with an increase in tax evasion. The results suggest that tariff reduction during an economic crisis is not always associated with a decrease in tax evasion. Further disaggregating products using Rauch and UNCTAD product classification show that tariff changes have a positive impact on tax evasion for consumer goods and differentiated products.

Working paper 594

Title: The Political and Economic Dynamics of Foreign Aid in Africa: A case study of United States and Chinese Aid to Sub-Saharan Africa

Author(s): Kafayat Amusa, Nara Monkam, Nicola Viegi

Publication date: April 2016

Classification-JEL: F35

Keywords: foreign aid allocation, donor motives, recipient need, Sub-Saharan Africa

Abstract: The foreign aid arena as it pertains to the African continent has traditionally been dominated by the Organization of Economic Co-operation and Development (OECD) countries, however over the last three decades non-traditional donors such as the China, South Africa and Brazil have emerged in the donor field. The increasing importance of non-traditional donors has meant that the economic and political stronghold of Western and OECD countries in sub-Saharan African (SSA) has gradually ebbed, due to increased competition amongst donors on the continent. Specifically, as the economic and political reach of the United States (USA), the second largest bilateral donor to SSA has diminished, amongst the group of emerging donors, China has become the largest contributor of aid to SSA countries. There appears to be a political - economic dynamic that points to the existence of two competing reasons underpinning the foreign aid trend in SSA. Using a comparative approach, this study examines the determinants of aid allocation by China and the United States to SSA countries. The study finds that both donor motives and recipient need are factors in US and Chinese aid allocation to SSA. Additionally, the study finds differences in US aid allocation determinants pre and post China's entry into SSA's aid field. Furthermore, evidence of income and population bias is observed for both donor countries.

Working paper 595

Title: The effects of terrorism, crime and corruption on tourism

Author(s): María Santana-Gallego, Jaume Rosselló-Nadal and Johan Fourie

Publication date: April 2016

Keywords: terrorism, crime, corruption, international tourism, gravity model

Abstract: This article examines the effect of terrorism, crime and corruption on tourist arrivals for 171 countries for the period 1995–2013. We apply two types of analysis: a tourism demand model and a disaggregation of tourism arrivals by origin. The findings of the tourism demand model are that terrorism and crime have a negative effect on tourist arrivals but that corruption has no effect; that the effects of terrorism and crime are greater for leisure tourism than for business tourism but that corruption affects only business tourism; and that the effects of terrorism, crime and corruption depend on the attractiveness of the destination country and its level of development. The data on tourist arrivals disaggregated by origin are used to study the effects of instability in the destination and the origin country and to compare the instability measures of the two countries. Here the findings are that terrorism, crime and corruption in the destination country have a negative effect on inbound tourism but that instability in the origin country has no clear effect on tourist departures; and that tourists from stable countries prefer travelling to countries with the same stability but tourists from unstable countries are more tolerant of crime, terrorism and corruption in the destination country.

Working paper 596

Title: Foreign Firm Ownership and Productivity Spillovers in the Southern African Development Community (SADC) Region

Author(s): Paul J Dunne and Nicholas Masiyandima

Publication date: April 2016

Classification-JEL: O33

Keywords: Growth; development; firm; technology; spillovers; productivity; FDI; SADC

Abstract: The study uses firm level data from the World Bank Enterprise Surveys and employs alternative techniques to identify and estimate the within and intra-

industry productivity impact of firm foreign ownership in SADC. Using firm labour productivity and employing sector fixed effects to identify the impact of foreign firm ownership on productivity, we find results that strongly suggest the existence of positive within firm and intra-industry FDI productivity spillovers for both small and large firms in the region. The productivity gains are, however, larger for small firms than for large firms suggesting greater productivity spillover advantages for the relatively technologically backward small firms. Similarly, there is heterogeneity with regard to productivity spillovers across individual countries, with the relatively technologically advanced countries such as South Africa and Mauritius experiencing larger intra-industry spillovers while less technologically endowed countries enjoy larger within firm gains.

Working paper 597

Title: The Contribution of Fiscal Decentralization to Regional Inequality: Empirical Results for South African Municipalities

Author(s): Hammed Amusa and Ramos Mabugu

Publication date: April 2016

Classification-JEL: H73, H77, O18, R11, R12

Keywords: Decentralization, inequality, Intergovernmental fiscal relations

Abstract: Over the past two decades, many African countries have carried out reforms aimed at decentralizing the political, administrative and fiscal structures of the public sector. The need to transform the structure of governance is informed by the view that decentralization increases the overall efficiency and responsiveness of the public sector in providing services, an outcome that enhances economic development and contributes to a reduction in regional disparities. Using panel data for South Africa's 234 municipalities over the period 2003–2012, we test whether the decentralization of some fiscal powers to municipalities acts as a commitment tool that motivates local authorities to implement policies that reduce inter-regional inequality. The results of the empirical analysis provide evidence of a statistically significant relationship between fiscal decentralization and inequality in the context of South Africa's local government sphere, with the specific nature of the relationship contingent on how fiscal decentralization is measured. In the case of revenue based measures of fiscal decentralization, the results support the hypothesis that the commitment device of fiscal decentralization provides incentives that decrease inter-municipal inequality. On the other hand, expenditure based fiscal decentralization contribute to increased inter-municipal disparities.

Working paper 598

Title: The impact of monetary policy on household consumption in South Africa. Evidence from Vector Autoregressive Techniques

Author(s): Emmanuel Owusu-Sekyere

Publication date: April 2016

Classification-JEL: C11, C32, E51, E52

Keywords: Bayesian inference, Household consumption, Monetary policy, Household credit, Time-varying parameter VAR

Abstract: This paper investigates the "cost of credit effect" of monetary policy on household consumption of final goods and services in South Africa, testing the hypotheses of the Keynesian interest rate channel of monetary policy transmission. We focus on three periods; post transition from apartheid, during inflation targeting and during the global financial crisis. Quarterly data from 1994Q1 to 2012Q4, constant parameter vector autoregressive techniques (VAR) by Sims (1980) and time

varying parameter VAR by Primiceri (1995) are used in this study. The results show that household credit and consumption declined and stayed negative post transition and after inflation targeting - periods of monetary tightening in South Africa, but turned positive during the global financial crisis which saw passive or quasi expansionary monetary policy measures aimed at mitigating the negative output gap in South Africa. These changes in household credit and consumption across the different time periods show evidence of the cost of credit effect of monetary policy on household consumption in South Africa. They further reflect the impact of different structural changes and exogenous shocks on monetary policy conduct in South Africa and its pass through effect on household consumption in South Africa.

Working paper 599

Title: Assessing Banking Sector Competition in Zimbabwe Using a Panzar-Rosse Approach

Author(s): Sanderson Abel & Pierre Le Roux

Publication date: April 2016

Keywords: banking, Competition, Zimbabwe, Panzar-Rosse

Abstract: This paper assesses the level of competition in Zimbabwe's banking sector using the Panzar-Rosse H-statistic. The H-Statistic has been assessed, using the total revenues regression equation, and applying the panel least square regression model with fixed effects. The H-statistics is estimated at 0.56, which result is confirmed, using bank random effects and the General methods of moments, yield similar results. The H-statics obtained from the two methods are 0.54 and 0.51 for the random effect and generalised methods of moments, respectively. The results confirm the presence of a monopolistic competition. On an annual basis, the results show that the Zimbabwean banking sector is evolving towards perfect competition. The increased competition was evident through aggressive promotions, increased marketing of banking products, and increased tenure of loans from one year to three years for individuals as banks tried to outclass each other. The study recommends that the government should desist from tampering with market forces as this reduces the amount of competition.

Working paper 600

Title: Determinants of Cross-Border Mergers and Acquisitions Targeting Africa: 1991-2011

Author(s): MK Wilson and DJM Vencatachellum

Publication date: April 2016

Classification-JEL: F23, C23, G15

Keywords: Africa, Mergers and Acquisitions, Foreign Direct Investment

Abstract: The fast output growth that a number of countries in Sub-Saharan Africa have achieved in the last decade has led to significant inflow of FDI into the continent. A number of studies have examined the trend of such FDI inflows generally but only a few have focused on these flows that are mainly mergers and acquisitions (M&A). Using a dynamic panel data model, this paper examines the determinants of FDI that targeted Africa between 1990 and 2011, a period when the continent exhibited high and sustained economic growth. The paper finds that the trend of M&A in Africa is similar to that of the other developing regions suggesting that the underlying factors driving M&A globally also apply to Africa. However, M&A activity in Africa respond with a lag, showing the role of inertia in driving M&A activity. In particular, we find that M&A targeting Africa responds positively and significantly to international stock markets (S&P) and international bond yields (G7). Internal factors which are location specific are also important determinants. Not

surprisingly, given the continent's endowment in natural resources such as oil and rare metals, and the high demand for such commodities in this period, our results further indicate that natural resources are a positive driver of M&A targeting Africa.

Working paper 601

Title: The Impact of health on the employment and earnings of young South Africans

Author(s): Chijioke O. Nwosu

Publication date: April 2016

Classification-JEL: I15, J21, J31, O12

Keywords: Health; Employment; Wages; Youth; South Africa

Abstract: This paper estimates the impact of health on employment and earnings among individuals aged 15-39 years in South Africa. Though one of the richest countries in Africa, South Africa is plagued by substantial disease burden especially from communicable diseases, injuries, maternal and child mortality, and non-communicable diseases. The country also has very high unemployment rates, with the unemployment rate among those aged 15-24 years exceeding 50% in 2014 (according to the International Labour Organization definition). The National Income Dynamics Study, a nationally representative panel survey of South African individuals and households, is used for the analysis. Using the second and third data waves (collected in 2010 and 2012 respectively) and controlling for genetic unobserved heterogeneity using sibling fixed effects, we find robust negative and statistically significant impact of adverse health status on employment and wages. These findings indicate that ill health is an added hindrance to young South Africans' employment and earnings, and is therefore likely to worsen poverty. Health policy can be a tool for improving the employment and earnings of young South Africans.

Working paper 602

Title: Structural Breaks in Renewable Energy in South Africa: A Bai & Perron Test Approach

Author(s): Jaco Pieter Weideman and Roula Inglesi-Lotz

Publication date: April 2016

Classification-JEL: renewable energy, policy analysis, Bai and Perron, breakpoint

Abstract: South Africa has been struggling to cope with its energy demand. In order to remedy the problem, the government of South Africa has committed itself to pursuing renewable energy as a viable alternative to traditional sources such as fossil fuels. The aim of this study is to understand whether or not the policies pursued by the South African government in the period 1990-2010 have had any effect on the behaviour of consumers and producers of renewable energy. To this end, the Bai & Perron (1998, 2003) break test methodology is employed to understand how renewable energy production and consumption series have evolved over this period. Deviations from the base case are then explained in the South African economic and policy context.

Working paper 603

Title: "Sometimes you don't make enough to buy food"- an analysis of South African street waste pickers' income

Author(s): Viljoen JMM, Blaauw PF & Schenck CJ

Publication date: April 2016

Classification-JEL: E26, I30, J40

Keywords: waste pickers, income, poverty, waste management, recycling, waste, Informal economy

Abstract: In this paper we use income data of 873 street waste pickers in South Africa to assess whether their income is sufficient to make a living and to identify the possible factors that may influence their income. The results can assist policy makers to make informed decisions in designing and implementing policies aimed at improving the street waste pickers' income earning potential. The results of a linear and logistic regression analysis show that street waste pickers' income is low and many of the street waste pickers in South Africa are trapped in persistent and chronic poverty. The findings further show that the only variables under the direct control of street waste pickers that may have a small positive effect on their income are the use of a trolley and the number of hours worked. Most of the variance in the daily income is explained by the prices of, access to, and the quality of recyclable waste collected over which the street waste pickers have little or no control. This leaves street waste pickers with little scope to improve their income and consequently their socio-economic conditions. Local governments can, however, create an environment and infrastructure in which higher levels of quality waste are made accessible to the street waste pickers.

Working paper 604

Title: The Determinants of Exchange Rate Volatility in South Africa

Author(s): Trust R. Mpofo

Publication date: May 2016

Classification-JEL: F31, C22

Keywords: Exchange Rate Volatility, GARCH

Abstract: This paper investigates the determinants of exchange rate volatility in South Africa for the period 1986--2013 using the New Open Economy Macroeconomics model by Obstfeld & Rogoff (1996) and Hau (2002). The main focus of the paper is to test the hypothesis that economic openness decreases Rand (ZAR) volatility. This follows South Africa's liberalisation of its capital account in the mid-1990s and the mixed results in the literature on the relationship between exchange rate volatility and economic openness. Employing monthly time series data, GARCH models are estimated. The study ...finds that switching to a floating exchange rate regime has a significant positive effect on ZAR volatility. The results also indicate that trade openness significantly reduces ZAR volatility only when bilateral exchange rates are used, but finds the opposite when multilateral exchange rates are used. The study also ...finds that volatility of output, commodity prices, money supply and foreign reserves significantly influence ZAR volatility.

Working paper 605

Title: Confronting South Africa's Water Challenge: A Decomposition Analysis of Water Intensity

Author(s): Marcel Kohler

Publication date: May 2016

Classification-JEL: Q25

Keywords: Water intensity, Decomposition, South Africa

Abstract: Water resource intensity measures the intensity of water use in terms of volume of water per unit of value added. It is an internationally accepted environmental indicator of the pressure of economic activity on a country's water resources and therefore a reliable indicator of sustainable economic development. The indicator is particularly useful in the allocation of water resources between sectors of the economy since in water stressed countries like South Africa. The study focuses on economy-wide changes in South Africa's water intensity using both

decomposition and regression analysis in an effort to identify and understand the impact of economic activity on changes in the use of the economy's water resources. The regression analysis suggests that in the long run, water use in the economy of South African is related to the capital stock and that the capital stock is getting more water efficient over time, but that this change is gradual. The study results caution against monitoring South Africa's water/output ratio, and drawing strong conclusions from this regarding changes in water use intensity as the interpretation of this indicator is fraught with difficulties.

Working paper 606

Title: Inflation Dynamics in a Dollarised Economy: The Case of Zimbabwe

Author(s): William Kavila and Pierre Le Roux

Publication date: May 2016

Classification-JEL: E31, E42, C50

Keywords: Inflation, dollarisation, Autoregressive Distributed Lag Model

Abstract: This paper explores the dynamics of inflation in the dollarised Zimbabwean economy using the Autoregressive Distributed Lag Model (ARDL) with monthly data from 2009:1 to 2012:12. The main determinants of inflation were found to be the US dollar/South African rand exchange rate, international oil prices, inflation expectations and South African inflation rate. During the local currency era, inflation dynamics in Zimbabwe were explained by excess growth in money supply, changes in import and administered prices, unit labour costs and output (Chhibber, Cottani, Firuzabadi and Walton, 1989). According to Makochehanwa (2007), hyperinflation during the same era was attributed to excess money supply growth, lagged inflation and political factors. Coorey, Clausen, Funke, Munoz and Ould-Abdallah (2007) affirmed these findings by identifying excess money supply growth as a source of high inflation in Zimbabwe during the local currency era. In essence, the findings of this study point to a shift in inflation dynamics in Zimbabwe. This shift in inflation dynamics means that policies, which were used to respond to both internal and external shocks that have an impact on price formation, might not be applicable in a dollarised economy.

Working paper 607

Title: Estimating Income Mobility When Income is Measured with Error: The Case of South Africa

Author(s): Rulof P. Burger, Stephan Klasen and Asmus Zoch

Publication date: May 2016

Classification-JEL: J62, D63, C23

Keywords: Income Mobility, inequality, longitudinal data analysis, measurement error

Abstract: There are long-standing concerns that household income mobility is over-estimated due to measurement errors in reported incomes, especially in developing countries where collecting reliable survey data is often difficult. We propose a new approach that exploits the existence of three waves of panel data to can be used to simultaneously estimate the extent of income mobility and the reliability of the income measure. This estimator is more efficient than 2SLS estimators used in other studies and produces over-identifying restrictions that can be used to test the validity of our identifying assumptions. We also introduce a nonparametric generalisation in which both the speed of income convergence and the reliability of the income measure varies with the initial income level. This approach is applied to a

three-wave South African panel dataset. The results suggest that the conventional method over-estimates the extent of income mobility by a factor of more than 4 and that about 20% of variation in reported household income is due to measurement error. This result is robust to the choice of income mobility measure. Nonparametric estimates show that there is relatively high (upward) income mobility for poor households, but very little (downward) income mobility for rich households, and that income is more reliably captured for rich than for poor households.

Working paper 608

Title: Stock Return Predictability in South Africa: An Alternative Approach

Author(s): Ailie Charteris and Barry Strydom

Publication date: May 2016

Classification-JEL: G1, E21, C53

Keywords: real returns, forecasting, cointegration, consumption aggregate wealth ratio

Abstract: There is considerable debate internationally as to whether share returns are predictable. The limited evidence in South Africa (Gupta and Modise, 2012a, b and 2013) reveals that valuation ratios have no forecasting power but the Treasury bill rate, term spread and money supply have been found to be able to predict share returns at a relatively short horizon. In this study, the consumption aggregate wealth ratio of Lettau and Ludvigson (2001) is applied to South African share returns to assess its forecasting power using in-sample tests over both short and long horizons. The forecasting power of this composite variable is compared to a number of traditional variables. Similarly to the developed market evidence, the results indicate that the consumption aggregate wealth ratio is a significant predictor of returns and combined with the term spread, can explain a substantial component of the variation in future share returns. The implications of these findings for practitioners and policy makers are discussed.

Working paper 609

Title: What Price-Level Data Tells Us About Consumer Price Rigidity in Zimbabwe: Evidence from New Data

Author(s): Mike Nyawo and Neil Rankin

Publication date: May 2016

Classification-JEL: E30, E31, D40, D21

Keywords: Pricing conduct, multicurrency, pricing heterogeneity, price rigidity

Abstract: This paper documents the price setting behaviour, and the change in this behaviour, amongst retail firms after the introduction of the new currency system in Zimbabwe. We use sample data which covers 291 products to investigate whether prices became more flexible (rigid) and to track the adjustment process as Zimbabwe moved further away from the date the new currency system was introduced. We find evidence that prices became more flexible with time although this change is relatively small compared to the variation in the frequency of price changes between months. Compared to Lesotho and Sierra Leone, prices in Zimbabwe are stickier with more than 75 percent of products in the dataset not changing prices from the previous period. Over half of all absolute price changes are greater than 5 percent indicating that when price changes do occur, they are relatively large. Overall, the findings of the paper fit with the 'stylised facts' emerging about the micro aspects of price adjustment.

Working paper 610**Title:** The Effects of Exchange Rate Volatility on South African Investments**Author(s):** Magdeline M. Maepa**Publication date:** May 2016**Keywords:** Exchange rate, domestic credit extension to the private sector, private domestic investment, Foreign Direct Investment, foreign portfolio investment, South Africa

Abstract: This paper analysed the short- and long-run interactions between the exchange rate and different types of investments in South Africa from 1970 to 2014. The Vector Autoregressive model (VAR), a multivariate Johansen co-integration approach and Granger causality test were conducted to analyse the interactions between the exchange rate and different types of investments. The short-run analysis found that there was a short-run relationship between the exchange rate and different types of investments in South Africa. However, this short-run interaction were found to be small, thus, not significant enough to cause disruptions to the exchange rate and to the inflow of investments into the country. The long-run analysis found that a there was a long-run relationship between the exchange rate and different types of investments in South Africa. This long-run relationship was also found to be negative. This paper concluded that investments have a negative, long-run effect on the exchange rate, suggesting that a fall in the investments would cause an increase in the exchange rate in the long-run.

Working paper 611**Title:** The Disintegrating Force of Rationalism on Economics: What it means for Islamic Economics**Author(s):** Abdulkader Cassim Mahomedy**Publication date:** May 2016**Classification-JEL:** A1, B1, B2, B4, B5, N01, Z1**Keywords:** Epistemology, Economics, Rationalism, intellectualism, empiricism, Islam, Islamic Economics, unity of knowledge

Abstract: In the last of this three-part study, the impact of the two dominant epistemologies of modernity on economics is fully explained. The intrusion of their ideas profoundly shaped both the content and methodology of the discipline, eventually instigating the separation of the field from the other social sciences that invariably bear on economic decisions and outcomes. The economists, notwithstanding these interdisciplinary linkages, continued to pattern their field of study after the natural sciences, further alienating the discipline from the humanities. These developments set off several rounds of methodological controversies within economics, which split the profession into irreconcilable camps. These disputes are analysed, helping to clarify why deep divisions within the discipline persist up to this day. Mainstream economics then gravitated further towards quantification and mathematisation, the implications of which have been enormous for the discipline. Ethical and normative considerations were altogether explicitly banished from economic science. To overcome these limitations, Muslim economists attempted to erect a separate discipline of economics based on the ethical values of Islam, whilst remaining largely committed to the methodology of neoclassical economics. They have registered little success in this effort. The reasons for this are explained and an alternative framework, centred on the precept of Tawhid in the unity of knowledge, is then suggested.

Working paper 612

Title: Foreign aid and Foreign direct investment in Sub-Saharan Africa: A panel data analysis

Author(s): Kafayat Amusa, Nara Monkam, Nicola Viegi

Publication date: June 2016

Classification-JEL: F35, F 21

Keywords: Foreign aid, Foreign Direct Investment, Sub-Saharan Africa

Abstract: Funding constraints experienced by Sub-Saharan African (SSA) countries has led to reliance on foreign direct investment (FDI) and foreign aid as alternative sources of finance. Despite the importance of FDI for growth, SSA has failed to attract an increasing share of global FDI and at the same time faces volatile aid flows. This study examines the role of foreign aid in enhancing FDI inflows to 31 SSA countries for the period 1995 to 2012. Using panel data estimation techniques, the results suggest that productive infrastructure aid is complementary to FDI inflows and socio-economic infrastructure aid has no significant impact on FDI inflows. When resource (oil) motive of FDI is considered, the results indicate that productive and socio-economic infrastructure aid to oil-producing SSA countries results in less FDI inflows compared to non-oil producing SSA countries. Finally, the significance of sectoral aid analysis is highlighted by the finding of a complementary role of energy infrastructure aid to FDI inflows and an insignificant impact of transport infrastructure aid.

Working paper 613

Title: Output Decomposition in the Presence of Input Quality Effects: A Stochastic Frontier Approach

Author(s): Yasmina Rim Limam, Stephen M. Miller and Giampaolo Garzarelli

Publication date: June 2016

Classification-JEL: F43, O47

Keywords: Age of Physical Capital, Output Growth, Stochastic Frontier, Total Factor Productivity

Abstract: How do physical capital accumulation and Total Factor Productivity (TFP) individually add to economic growth? We approach this question from the perspective of the quality of both labor and physical capital, namely human capital and the age of physical capital. We build a unique dataset by explicitly calculating the age of physical capital for each country and each year of our time frame and estimate a stochastic frontier production function incorporating input quality in five groups of countries (Africa, East Asia, Latin America, South Asia, and West). Physical capital accumulation generally proves much more important than either the improved quality of factors or TFP growth in explaining output growth. The age of capital decreases growth in all groups except in Africa, while human capital increases growth in all groups except in East Asia.

Working paper 614

Title: Financial development and income inequality in Africa: A panel heterogeneous approach

Author(s): Anthanasius Fomum Tita and Meshach Jesse Aziakpono

Publication date: June 2016

Classification-JEL: C23, G21, D63, I3

Keywords: Augmented mean group, financial development, heterogeneous slopes, income inequality and poverty

Abstract: Although the financial sector of Africa has witnessed massive reforms to enhance its ability to support economic activities, reduce poverty and lower income inequality, Africa remains the poorest region and the second most unequal region in the world after Latin America. Despite these established facts, little empirical research exists on the relationship between financial development and income inequality in Africa. This study investigates the finance-income inequality nexus in a balanced panel of 15 African countries using the Augmented Mean Group estimator to determine if there is a threshold level of financial development or income inequality is related to the sectoral structure of the economy.

Overall evidence suggests that the finance-inequality relationship in the sample of African countries studied is non-linear and ranges from an inverted u-shape to a u-shape depending on the measure of financial development. Policies to boost financial development should be preceded by financial inclusion but these policies should be separated. Financial inclusion policies should focus on the quality and suitability of financial products to ensure usage and avoid dominant accounts as well as consumer protection.

Working paper 615

Title: Financial Reforms and the Finance – Growth Relationship in the Southern African Development Community (SADC)

Author(s): Alex Bara, Gift Mugano & Pierre Le Roux

Publication date: June 2016

Classification-JEL: G21, G28, O31, O33

Keywords: financial development, Financial Reforms, economic growth, SADC, Generalised Methods of Moments

Abstract: This study seeks to establish the casual relationship between financial development and economic growth in the SADC region, factoring-in the role of financial reforms. Utilising Generalised Methods of Moments (GMM) and Panel Fixed Effects estimations, the study established that financial development has a negative effect on growth in SADC. Underdeveloped financial systems, structure and distribution of credit in the SADC countries and strong country heterogeneity factors are possible explanations to the relationship obtained. The financial reforms in the post liberalisation period have a positive but weak impact on growth in SADC. A bi-directional causality between finance and growth was established, although demand-following causality proved to be stronger. Addressing underlying structural issues in both the financial sector and overall macro economy of SADC countries may help in improving the role of finance in supporting growth in the region. Countries need to continually introduce reforms that enhance performance of their financial sectors. A strong demand-following causality implies that pro-growth policies should be intensified so that growth subsequently pulls with it financial development.

Working paper 616

Title: Counting the cost of drought induced productivity losses in an agro-based economy: The case of Uganda

Author(s): Nicholas Kilimani, Jan van Heerden, Heinrich Bohlmann, Louise Roos

Publication date: June 2016

Classification-JEL: D58, Q25, Q54

Keywords: Computable General Equilibrium modelling; Drought, Economic activity, Uganda

Abstract: Climate variability can affect economies directly through its impact on agricultural output, and indirectly, through its effect on the activities of down-stream industries and household welfare. This paper uses a Computable General Equilibrium model with a disaggregated agricultural sector to analyse the impact of a drought on the Ugandan economy. The losses were assessed with respect to GDP, agricultural output, employment, the trade balance and household consumption. The drought effects were shown to vary by sector. The fall in employment within the agricultural industries was less compared to the output losses. At a macro level, exports declined, while at a household level, the terms of trade gains mitigated part of the potential welfare losses thereby reducing consumption, but to a lesser degree. The findings indicate that a drought can cause substantial losses to the economy. The need for targeted interventions to mitigate such drought impacts is therefore critical.

Working paper 617

Title: Social mobility during South Africa's industrial take-off

Author(s): Jeanne Cilliers and Johan Fourie

Publication date: June 2016

Classification-JEL: J60, J61, J62, N30, N37

Keywords: Intergenerational mobility, Social Mobility, resource curse, industrialization, colonialism, longitudinal data

Abstract: In the absence of historical income or education data, the change in occupations over time can be used as a measure of social mobility. This paper investigates intergenerational occupational mobility using a novel genealogical dataset for settler South Africa, spanning its transition from an agricultural to an early industrialized society (1800–1909). We identify fathers and sons for whom we have complete information on occupational attainment. We follow a two-generation discrete approach to measure changes in both absolute and relative mobility over time. Consistent with qualitative evidence of a shift away from agriculture as the economy's dominant sector, we see the farming class shrinking and the skilled and professional classes growing. Controlling for changes in the structure of the labor market over time, we find increasing upward social mobility, becoming significant following the discovery of minerals in 1868. We find this mobility particularly for semi-skilled workers but virtually no improved mobility for sons of farmers. We also test hypotheses related to the mobility prospects for first-born sons and sons of immigrants.

Working paper 618

Title: Social Rate of Return to R&D on Various Energy Technologies: Where should We Invest More? A Study of G7 Countries

Author(s): Roula Inglesi-Lotz

Publication date: June 2016

Classification-JEL: G7

Keywords: R&D; Energy; Energy fuels; return

Abstract: The severity of investment in Research and Development (R&D) in the energy sector is undisputable especially considering the benefits of new technologies to sustainability, security and environmental protection. However, the nature and potential of various energy technologies that are capable to improve the energy and environmental conditions globally is a challenging task for governments and policy makers that have to make decisions on the allocation of funds in R&D. To do so, the optimal resource allocation to R&D should be determined by estimating the social rate of return for R&D investments. This paper aims to estimate the social rate of

return of R&D on various energy applications and technologies such as energy efficiency, fossil fuels, renewable energy sources, and nuclear for the G7 countries. The results show that primarily R&D investment on Energy Efficiency technologies and Nuclear are the ones that yield high social benefits for all G7 countries while exactly the opposite holds for Fossil fuels.

Working paper 619

Title: South Africa's real business cycles: The cycle is the trend

Author(s): Hilary Patroba and Leroi Raputsoane

Publication date: July 2016

Classification-JEL: E31, E32, F41, F44

Keywords: Small open economy, real business cycle, permanent shock, transitory shock, financial frictions, Bayesian

Abstract: This paper tests the 'cycle is the trend' hypothesis. We investigate how far permanent and transitory productivity shocks can account for the dynamics observed in the South African business cycle over the period 1946-2014. By estimating a standard small open economy real business cycle model and its financial frictions augmented counterpart, we show that permanent productivity shocks are more important than transitory ones in explaining this country's business cycle fluctuations. This finding supports the 'cycle is the trend' hypothesis in the South African business cycle. The model with financial frictions successfully mimics the downward-sloping high autocorrelation of trade balance to output ratio observed in the data, whereas the benchmark model produces a flat autocorrelation function. Financial frictions such as country risk premium shocks help to explain the fluctuations in investment and in the trade balance to output ratio.

Working paper 620

Title: The Fertility Transition: Panel Evidence from sub-Saharan Africa

Author(s): Caroyln Chisadza and Manoel Bittencourt

Publication date: July 2016

Classification-JEL: I25, J13, O55

Keywords: Fertility, Sub-Saharan Africa

Abstract: We investigate the effects of different socioeconomic indicators on fertility rates in 48 sub-Saharan African countries between 1970 and 2012. The results, based on panel analysis with fixed effects and instrumental variables, show that initially income per capita and infant mortality explain a significant part of the fertility decline in the region. However, the introduction of technology as an instrument augments the effect of education in reducing fertility. The results also provide significant evidence for fertility declines through increased female education. These results support empirical evidence of the unified growth theory which emphasises the role of technology in raising the demand for education and bringing about a demographic transition during the Post-Malthusian period. Prompted by the theoretical ambiguity in the relationships between tax rates and tax evasion, this study investigates the relationship between tariff (tax) rates and tax evasion using highly disaggregated trade data for Zimbabwe and South Africa. The study uses cross-sectional data analysis for three periods; pre-crisis (1980 to 1999), crisis (2000-2008) and post-crisis (2009-2014). The results show different responses of tax evasion to tariff changes in the three periods. During both the pre-crisis and post-crisis periods, a decrease in tariff rates is associated with a reduction in tax evasion, while during the crisis period, a decrease in tariff rates is associated with an increase in tax evasion. The results suggest that tariff reduction during an economic

crisis is not always associated with a decrease in tax evasion. Further disaggregating products using Rauch and UNCTAD product classification show that tariff changes have a positive impact on tax evasion for consumer goods and differentiated products.

Working paper 621

Title: Birth Order Effects on Educational Attainment and Child Labour: Evidence from Lesotho

Author(s): Ramaele Moshoeshoe

Publication date: July 2016

Classification-JEL: D13, I21, J1, O12

Keywords: Educational attainment, Child labour, Birth Order

Abstract: This paper examines the effect of birth order on educational attainment and child labour in Lesotho. Using family fixed effects models, I find robust negative birth order effects on educational attainment and child labour. The birth order effects on educational attainment are in sharp contrast with the evidence from many other developing countries such as Ecuador and Kenya, but are consistent with the evidence from developed countries. I further find that these birth order effects are pronounced in large families, and families with first-born girls, which suggests presence of girls' education bias. Turning to potential pathways of these effects, I find that they are not propagated through family wealth, but mainly through birth-spacing. These results are robust to different sample restrictions.

Working paper 622

Title: Construction, Institutions and Economic Growth in Sub-Saharan Africa

Author(s): Paul Alagidede and Jones Odei Mensah

Publication date: July 2016

Classification-JEL: C51, N6, O6, P48

Keywords: Construction; Output growth; Institutions; Endogeneity

Abstract: The construction sector in developing countries has propelled economic growth in the most recent period, yet analysis of growth performance has failed to take this into account. This article is a comparative analysis of the relationship between the construction sector and aggregate output for a panel of sub-Saharan African (SSA) countries using a panel generalized methods of moments (GMM). After accounting for the effects of institutional set up, cross sectional heterogeneity and non-linearity, our results revealed that the construction sector affects growth positively and most importantly, developing the right institutions could further enhance this impact. The intrinsically non-linear relationship between construction and output growth is very mute in our sample, suggesting that, SSA countries have not yet reached the stage of development where construction growth becomes trivial. We further show that East Africa experienced a robust impact of construction on economic growth compared to West and Southern Africa.

Working paper 623

Title: Why local context matters: de jure and de facto property rights in colonial South Africa

Author(s): Christie Swanepoel and Johan Fourie

Publication date: July 2016

Classification-JEL: G21, D23, P14, N27, N37

Keywords: Property rights, informal credit markets, institutions, Africa

Abstract: For economic transactions, including debt transactions, to occur in a market system, property rights are essential. The literature has focussed on finding empirical proof of the effect of property right regimes, noting differences between de jure and de facto property rights. Yet most of these studies focus on macroeconomic outcomes, like economic growth and public expenditure. We propose, instead, to use individual debt transactions and property ownership available in probate inventories from early colonial South Africa to investigate the effects of property right regimes on economic outcomes at the individual level. At the Cape, de jure property rights between freehold and loan farms differed. Historians, however, suggest that de facto property rights between these two property types were the same. We exploit the random variation of birth order, specifically being the oldest son, to estimate whether the type of farm, and therefore the type of property rights, matter for economic activity, in our case, debt transactions. Our results suggest that historians were correct: loan farms were as secure in their de facto property rights, despite differences in de jure property rights. Our results confirm that the local context in which property right regimes are embedded are at least as important as the property right regime itself.

Working paper 624

Title: How are Africa's emerging stock markets related to advanced markets? Evidence from Copulas

Author(s): Jones Odei Mensah and Paul Alagidede

Publication date: July 2016

Classification-JEL: C32, F36, F37, G10, G11, G15

Keywords: Coupla, Quantile, Tail, dependence, Co-movement, African Stock Markets, Spillover

Abstract: This paper examines the dependence structure between two developed and four emerging African stock markets in a copula framework. Using daily data from January 2000 to April 2014, our empirical results show that dependence structure between African and international stocks varies overtime, but generally weak. There is asymmetric and weak tail dependence for all the countries, implying stock return co-movement varies in bearish and bullish markets and that the dependence is generally not strong in extreme market conditions. We also find that extreme downward stock price movements in the advanced markets do not have significant spillover effects on Africa's emerging stock markets.

Working paper 625

Title: The Influence of Financial Market Development on Economic Growth in BRICS Countries

Author(s): Charles Wait and Tafadzwa Ruzive

Publication date: July 2016

Classification-JEL: O43

Keywords: Financial Market Development, economic growth, BRICS

Abstract: The debate about the influence of financial market development on economic growth has been ongoing for more than a century. Since Schumpeter (1912) wrote about the happenings on Lombard Street, right up to the economists of today, there is growing interest into how financial market development affects economic activity and hence economic growth. With economic growth gaining prominence in respect of development discourse, inquiry into the finance-growth nexus has grown rapidly. The latest advances of the finance-growth nexus show a positive relationship between financial market development and economic growth. In

this regard, little research has been done globally pertaining to most recent economic developments, especially concerning the BRICS economies. This research investigates the influence of financial market development on emerging economies, BRICS and non-BRICS and to determine whether the openness of financial markets in BRICS economies contributed to higher growth trajectories compared to their non-BRICS counterparts. The research utilises the Generalised Method of Moments and an extended endogenous growth model to estimate the influence of a set of financial market indicators. The study found that higher levels of credit to the private sector and financial depth in the BRICS economies contributed to the higher levels of economic growth experienced in the BRICS compared to non-BRICS emerging economies.

Working paper 626

Title: Qualitative Guidance and Predictability of Monetary Policy in South Africa

Author(s): Alain Kabundi and Ntuthuko Tsokodibane

Publication date: August 2016

Classification-JEL: C14, E43, E52, E58, G14

Keywords: Monetary Policy, Central Bank Communication, Nonparametric Change Point

Abstract: With the adoption of the inflation targeting (IT) regime in 2000, the South African Reserve Bank (SARB) became independent. With the independence of monetary policy comes accountability to the public at large, which in turn leads to transparency in the conduct of monetary policy. The SARB has come a long way in its communication strategy. In 2014 it adds another layer in its communication strategy by announcing explicitly throughout 2014 that monetary policy was on the rising cycle until normalisation is reached. Monetary policy committee (MPC) statements of March and May 2014 refer to normalisation as the return of the policy rate (repo rate) from the historical lowest level of 5 per cent to the normal level in the long run. Like many central banks, the SARB reduced the policy rate from 12 per cent to 5 per cent following the Global Financial Crisis (GFC).

Working paper 627

Title: Financial Innovation and Economic Growth in the SADC

Author(s): Alex Bara, Gift Mugano & Pierre Le Roux

Publication date: August 2016

Classification-JEL: G21, G28, O31, O33

Keywords: Innovation, Financial Innovation, Economic Growth, SADC, Autoregressive Distributed Lag (ARDL)

Abstract: The study empirically establishes the causal relationship between financial innovation and economic growth in SADC. Using an Autoregressive Distributed Lag (ARDL) Model, estimated by Pooled Mean Group and Dynamic Fixed Effects, the study finds that financial innovation has a positive relationship to economic growth in long run for SADC. The long run estimations, however, show existence of a weak relationship. Introducing a direct measure of financial innovation buttresses the role of financial innovation in growth in SADC. Panel Granger causality tests establish that there is no causality, in any direction, between financial innovation and growth both in the short and long run.

Working paper 628

Title: Spatial Externalities, Openness and Financial Development in SADC: Beyond the Multilateral Monetary Agreement

Author(s): Alex Bara, Gift Mugano & Pierre Le Roux

Publication date: August 2016

Classification-JEL: R12, H13, R15, O16, G20

Keywords: Spatial Externalities, Spatiality, financial development, SADC

Abstract: This study empirically evaluates spatial externalities in financial development in SADC in line with spatial proximity theory, which asserts that externalities increase with proximity. Precisely, the study tests if financially less developed economies in SADC benefit from linkages with and proximity to South Africa, a financially developed economy. The Spatial Durbin Model estimated using GMM and Dynamic Panel Estimations, establishes that financial development in the SADC region is sensitive to space and hence not immune to spatial externalities. Results indicate that monetary measures are highly sensitive to geography than credit and that allowing for spatiality, credit from South Africa crowds-out domestic and private credit of other SADC countries. Precisely, proximity to South Africa brings negative externalities in credit but positive externalities in money markets. Implicitly, the spatial variable has a substitution effect in the local credit market and a complementary effect in the money market. Estimations that controlled for effects of monetary union in the model also confirms that financial development is affected by spatiality in the money market and is not responsive to spatial effects in credit. The results also indicated that financial openness is a necessary condition for financial development to take place in the SADC region.

Working paper 629

Title: An Evaluation of the Cost and Revenue Efficiency of the Banking Sector in Zimbabwe

Author(s): Sanderson Abel and Pierre Le Roux

Publication date: August 2016

Classification-JEL: G21, G28, C67

Keywords: Cost Efficiency, Revenue Efficiency, data development analysis, Tobit, multicurrency, Zimbabwe

Abstract: The study was meant to evaluate the cost and revenue efficiency of the Zimbabwean banking sector during the period 2009-2014. The study employed the Data Envelopment Analysis and the Tobit Regression methods. The estimation of cost and revenue efficiency shows that revenue and cost efficiency increased during the period 2009-2012. This coincided with high positive growth rates and economic stability. Efficiency declined in 2013-14 as a result of government controls on banking sector pricing and general decline in economic activity. The study found that private banks were more revenue and cost efficient compared to public banks. Domestic banks were relatively cost and revenue efficient compared to foreign banks supporting the home field advantage hypothesis. The study further found that commercial banks were cost and revenue efficient than building societies. Cost and revenue efficiency is determined by cost income ratio, capital adequacy, macroeconomic growth, and inflation. The results shows that credit risk is significant in explaining cost efficiency. The study recommends that the Zimbabwean government should improve the macroeconomic operating environment and desist from tampering with the smooth flow of market forces. The government should refrain from imposing anticompetitive measures as they negatively affect banking

sector efficiency. Financial sector reforms which improve competition should be adopted to enhance efficiency.

Working paper 630

Title: Economic Assessment of Bioethanol Production from Sugar Cane: The Case of South Africa

Author(s): Marcel Kohler

Publication date: August 2016

Classification-JEL: Q42

Keywords: Biofuels, Costing, South Africa

Abstract: The destabilising economic impact of South Africa's dependence on imported crude oil is a key motivation behind the country's drive to develop a biofuel industry. Much concern has been raised over the impact of biofuels production on price of food for the country's poor. It is this concern that has seen the prohibition of maize and the favouring of sugar cane as a feedstock in South Africa's Biofuels Industrial Strategy. This paper sets out to analyse the economic feasibility of producing bioethanol from sugar based on the industry's efforts to diversify its market base. The study suggests that bioethanol production is financially viable at an average US\$102/bbl for the period 2005-2015, based on estimates that producers typically pay the equivalent of US\$67/bbl for sugar cane feedstock, incur approximately US\$20/bbl in operating & maintenance costs and require the equivalent of US\$15/bbl to recoup capital investments. To kick-start the commercial production of fuel grade ethanol in South Africa, producers require mandated subsidisation. State support for bioethanol producers in the form of a guaranteed minimum selling price for bioethanol of 95 percent of the basic fuel price, exemption from fuel taxes in addition to specific capital investment allowances are required.

Working paper 631

Title: The Sectoral Employment Intensity of Growth in South Africa

Author(s): Njabulo Mkhize

Publication date: September 2016

Classification-JEL: E24, J21, J23, O17, O55

Keywords: Sectoral output growth, Employment, employment intensity

Abstract: Concerns have been expressed recently about the inability of the South African economy to provide adequate employment for the increasing number of job seekers. The rate of unemployment remains stubbornly high in spite of vastly improved macroeconomic fundamentals since the 1990s. This paper investigates how the sectoral employment intensity of output growth in the eight non-agricultural sectors of the South African economy has evolved in the period 2000:01-2012:04, with a view to identifying key growth sectors that are employment intensive. Empirical findings of the study suggest that total non-agricultural employment and GDP do not move together in the long run, implying that jobless growth occurred in South Africa during the period under review. This supports the view that South Africa has become less labour-intensive and more capital-intensive, and that this in turn has facilitated a structural adjustment that has led to the weakening employment-growth relationship. Results of a sectoral division confirm a long-run relationship between employment and growth in the finance and business services, manufacturing, transport and utilities sectors. In particular, the results suggest that sectors within the tertiary sector are the best performing sectors in terms of employment intensity of output growth, reflecting the changing structure of the economy and the nature of employment shifting away from the primary towards the

tertiary sector. Investment in the tertiary sector is necessary to foster new employment opportunities and can assist in improving the overall employment intensity in South Africa.

Working paper 632

Title: Sources of Dualism in Modern Rationalist Thought: Implications for Islamic Economics

Author(s): Abdulkader Cassim Mahomedy

Publication date: September 2016

Classification-JEL: E42

Keywords: Epistemology, intellectualism, empiricism, Economics, Islamic economics

Abstract: This paper follows on from the previous one in this series on the incursion of rationalist thought into Christendom. In this paper, I show how the sequence of socio-political events in Europe at the turn of the 16th century provided an opportunistic environment for rationalism to supplant religion as the dominant paradigm for human thought. It gave birth to the Scientific Revolution, the Enlightenment, and their nemesis, the Romantic Movement. All of them sought to assert the primacy of human agency in the process of knowledge generation. But from inception, scientific thought itself was split between the competing claims of both intellectualism and empiricism. After discussing the key features of each episteme, I show how despite considerable efforts in the occidental world to reconcile this bifurcation, none has produced a satisfying synthesis. This dichotomy now abides not only within the individual psyche but also across the entirety of the socio-scientific enterprise and all of its institutions and artefacts. Its implications have been previously described as a watershed in the history of humankind, instituting an intellectual crisis of great import. More importantly for this study, I then juxtapose some of these outcomes vis-à-vis the agenda of Islamic economics and finance, to demonstrate the inherent dissonance between the two systems of thought. Lastly, I introduce the reader to the third and last part of this study, to appear in another edition of this series, where I demonstrate that when mainstream economics fell under the grip of rationalist philosophy, it suffered, as a result, the same fate of atomisation and methodological individualism.

Working paper 633

Title: Credit market heterogeneity, balance sheet (in) dependence, financial shocks

Author(s): Chris Garbers and Guangling Liu

Publication date: September 2016

Classification-JEL: E32, E43, E44, E51, E52, E20

Keywords: Credit Market, Business Cycle, Financial Inter-mediation, Operational Diversification, heterogeneity, DSGE

Abstract: This paper presents a real business cycle model with financial frictions and two credit markets to investigate the qualitative and quantitative relevance of credit market heterogeneity. To address this line of inquiry we contrast the transmission of financial shocks in an economy where loans are the only form of credit to one in which both loans and bonds exist. We estimate the model using Bayesian methods over the sample period 1985Q1 {2015Q1 for the U.S. economy. We find that credit market heterogeneity plays an important role in attenuating the impact of financial shocks by allowing borrowers to substitute away from the affected credit market. The shock attenuation property of credit market heterogeneity works through asset prices and substitution toward alternative credit types. Bank balance sheet linkages reduce the shock attenuation effect associated with heterogeneous credit markets.

The origination of financial shocks can influence both the size and the persistence of their impact.

Working paper 634

Title: Globalisation and Conflict: Evidence from sub-Saharan Africa

Author(s): Carolyn Chisadza and Manoel Bittencourt

Publication date: September 2016

Classification-JEL: O10, O55, J62, D63, C23

Keywords: Globalisation, Conflict, Sub-Saharan Africa

Abstract: Stephen Pinker (2011) advances that various forms of violence such as homicide, rape, torture and conflict have decreased over time because of the following historical shifts in society: pacification process, civilising process, humanitarian and rights revolutions, and extended periods of peace. We regard these shifts as processes encompassed in globalisation and investigate the effects of globalisation on conflict, one of the forms of violence Pinker discusses. We use panel data from 46 sub-Saharan African countries dated 1970 to 2013 and find that increased globalisation significantly reduces severity of conflict through increased opportunity costs. Furthermore, we disaggregate globalisation into its three key components (social, political and economic openness) and find that social globalisation drives the results, an indication of the significance of increased migration and dissemination of information in fostering tolerance and empathy. We also disaggregate conflict into intrastate and interstate and find that the severity of intrastate conflict is significantly reduced by the globalisation processes compared to interstate conflict.

Working paper 635

Title: The Impact of the COMESA-EAC-SADC Tripartite Free Trade Agreement on the South African Economy

Author(s): L. Walters, H.R. Bohlmann and M.W. Clance

Publication date: September 2016

Classification-JEL: C68, F13, O55

Keywords: Computable General Equilibrium (CGE) Modelling, Free Trade Agreement, South Africa

Abstract: This paper analyses the effects of the COMESA-EAC-SADC Tripartite Free Trade Agreement (TFTA) on the South African economy using a global Computable General Equilibrium (CGE) model. Simulation results show that South Africa's economy gains from the implementation of the trade agreement with GDP rising by more than 1 per cent relative to the baseline. This win in overall economic activity occurs on the back of a terms of trade increase and a surge in regional trade, which allows for higher levels of both exports and imports. The boost to exports stimulates local industries, whilst relatively cheaper imports lead to welfare gains for local consumers. Increased trade and industry activity causes higher demand for endowments, including skilled and unskilled labour, capital and land, pushing up wages and capital rentals.

Working paper 636

Title: Effects of Wildlife Resources on Community Welfare: Income, Poverty and Inequality

Author(s): Herbert Ntuli and Edwin Muchapondwa

Publication date: October 2015

Classification-JEL: D63, I32, I38, Q22

Keywords: Wildlife, environmental income, poverty, inequality, dependence, Zimbabwe

Abstract: This paper demonstrates the importance of wildlife in the portfolio of environmental income in the livelihoods of poor rural communities living adjacent to a national park. The results show that wealthier households consumed more wildlife products in total than relatively poor households. However, poorer households derive greater benefit from the consumption of wildlife resources than wealthier households. Excluding wildlife compromised the relative contribution of environmental resources while at the same time increasing the relative contribution of farm and wage income. Environmental income had more impact in terms of poverty reduction in the lower income quintiles than in the upper quintiles. Wildlife income alone accounted for about 5.5% reduction in the proportion of people living below the poverty line. Furthermore, wildlife income had an equalizing effect bringing about a 5.4% reduction in measured inequality. Regression analysis suggests that the likelihood of belonging to a wealthier category of income increased with an increase in environmental income. As expected, household wealth significantly and positively affect environmental income generated by households. This seems to suggest that wildlife-based land reform also needs to empower poor households in the area of capital accumulation while imposing restraint on capital investments by well-off households.

Working paper 637

Title: Path Dependence and Interdependence Between Institutions and Development

Author(s): David Fadiran and Mare Sarr

Publication date: October 2016

Classification-JEL: K00, K11, N00, N1, N47, O1, O11

Keywords: institutions, Legislations, Persistence, Economic Growth and Development, Nigeria

Abstract: Path dependence theory, within the institutions context, means that the path of institutions promulgated within a system historically determines the nature of institutions that will ensue within the same system in the present and in the future. The paper makes use of a newly constructed index of institutions quality, and addresses three related questions; the existence of path dependence in institutions, the interdependence and causality between political and economic institutions, and lastly the interdependence between economic development and institutions. In addressing the first question, I use unit root tests to test the hypothesis that institutions promulgated during colonial times still influence institutions promulgated during the post-colonial era. I also test for interdependence between institutions in Nigeria using an error correction model in analysing the extent of interdependence between political and economic institutions. Lastly, I test the critical juncture hypothesis—which argues that better institutions lead to economic development and the modernisation hypotheses—which argues that economic development leads to better institutions. The results show support for early path dependence in both political and economic institutions. I also find evidence in support of interdependence running from economic to political institutions. Lastly, there is evidence of a long-run association between institutions and economic development, with the evidence supporting the critical juncture hypothesis, more than the modernisation hypothesis.

Working paper 638

Title: Are South African consumers arm-chair environmentalists? Implications for renewable energy

Author(s): Nomsa Phindile Nkosi and Johane Dikgang

Publication date: October 2016

Classification-JEL: Q20, Q40, Q50

Keywords: bivariate probit, renewable energy, willingness to pay

Abstract: Discussions between policymakers about renewable energy have gained momentum in recent years, amid growing recognition of the need for more investment in green energy sources. The question is whether households in developing countries like South Africa will support green energy actions if it comes at an additional cost or whether they are simply arm-chair environmentalist. To assess this, we use the contingency valuation method (CVM) to identify the determinants of support for renewable energy. It is vital that households' determinants of the additional cost burden associated with renewable energy are assessed, in an effort to win public acceptance of the introduction of renewable energy. The US\$966 willingness to pay (WTP) for renewable energy represents a significant premium over generation costs, and signals social acceptance of renewable energy. Most importantly, given the wide degree of heterogeneity in WTP models, a clear message to policymakers and stakeholders is that they need to do more to communicate the economic and environmental benefits associated with renewable energy.

Working paper 639

Title: Realized correlations, betas and volatility spillover in the commodity market: What has changed?

Author(s): Matteo Bonato

Publication date: October 2016

Keywords: Commodities, Correlation, Beta, Volatility Spillover, Realized Measures

Abstract: This paper adopts the recently proposed realized Beta GARCH model of Hansen et al. (J. Appl. Econ. (2014)) to examine the changes in price and return dynamics that affected the commodity market during the 2007-2008 boom and bust. We provide evidence that, starting from 2006, realized correlations between agricultural commodities within the same group significantly increased. Moreover, the observed increase in correlations between agriculturals and oil was greater still. The dynamics of the volatility spillover across commodities are also investigated. It is found that spillover effects became more evident prior to the commodity price crash. However, this increase in volatility transmission tended to anticipate the increase in correlations. To conclude, it is shown that the size of a short position in oil required to hedge a long agricultural commodity position, given by the realized beta, therefore increased significantly.

Working paper 640

Title: Non-Economic Quality of Life and Population Density in South Africa

Author(s): Talita Greyling and Stephanié Rossouw

Publication date: October 2016

Classification-JEL: O15, O18, O55, R11, R00, C01, C33, C43

Journal: Social Indicators Research

Keywords: quality of life, Population density, Urbanisation, South Africa, Panel data

Abstract: The purpose of this study is to investigate the relationship between population density and non-economic quality of life. Popular opinion has generally

been that population density can be seen as beneficial for economic growth, as it allows for greater productivity, greater incomes and can be translated into higher levels of quality of life. Recently though, growing evidence tends to suggest the exact opposite in that increases in productivity and incomes are not translated into better quality of life. As economic or income variables have always played a significant role in this research, questions regarding the relationship between population density and non-economic quality of life has largely remained unanswered. In this light, the paper utilises a panel data set on the eight metropolitan cities in South Africa for the period 1996 to 2014 to determine the relationship between population density and non-economic quality of life in the South African context. In the analyses we make use of panel estimation techniques which allows us to compare changes in this relationship over time as well as adding a spatial dimension to the results. This paper contributes to the literature by firstly studying the aforementioned relationship over time and secondly conducting the analyses at a sub-national level in a developing country. Our results show that there is a significant and negative relationship between population density and non-economic quality of life. Based on our findings policy measures to encourage urbanisation should not be supported if the ultimate outcome is to increase non-economic quality of life.

Working paper 641

Title: Demand-side determinates of access to healthcare services: Empirical evidence from Africa

Author(s): Wa Ntita Serge Kabongo and Josue Mbonigaba

Publication date: October 2016

Classification-JEL: I11, I15, I18, C23

Keywords: Access to healthcare, Dynamic panel data, Africa

Abstract: This study identifies the key determinants of access to healthcare in Africa and estimates the short-run and long-run effects of these determinants. Panel data from 37 African countries, collected from the World Bank Development Indicators and World Health Organisation databases for the period 1995-2012, were analysed using the pooled mean group estimators. Income appeared the strongest determinant of access in the long run in countries in Africa included in the sample. Access to healthcare was a necessity with the long-run income elasticity for access to healthcare being 0.1149. The short-run effects of income on access were, however, only significant in four of the countries in the sample. The difference in the effects of income in the short run and the long run was generally applicable to other variables. These findings imply that policy makers should focus on income to increase access to healthcare while taking cognisance of country-specific conditions in the short run to mitigate varying levels of shocks.

Working paper 642

Title: Regionalization versus internationalization of African stock markets: A frequency-time domain analysis

Author(s): Gideon Boako and Paul Alagidede

Publication date: October 2016

Classification-JEL: C40, F36, G11, G15

Keywords: wavelet coherency, African stocks, volatilities, Co-movement, exchange rates, diversification

Abstract: This paper examines regional and global co-movement of Africa's stock markets using the three-dimensional continuous Morlet wavelet transform methodology. The analyses which are done in segments investigate co-movements

with global markets; bilateral exchange rates expressed in US dollars and euro; and four regional markets in Africa. First, we find evidence of stronger co-movements broadly narrowed to short-run fluctuations. The co-movements are time-varying and commonly non-homogeneous – *with phase difference arrow vectors implying lead-lag relationships*. The presence of lead-lag effects and stronger co-movements at short-run fluctuations may induce arbitrage and diversification opportunities to both local and international investors with long-term investment horizons. The findings also reveal that some African equity markets are, to a degree, segmented from volatilities of the dollar and euro exchange rates. Thus, inferring that international investors may diversify their portfolio investments across those markets without worrying about the effects of currency price volatility.

Working paper 643

Title: Effects of South African Monetary Policy Implementation on the CMA: A Panel Vector Autoregression Approach

Author(s): Monaheng Seleteng (PhD)

Publication date: October 2016

Classification-JEL: C3, E43, E47, E52, E58, E61

Keywords: Monetary policy, Transmission Mechanism, interest rates, Impulse-Response Functions, PVAR Model, Variance-Decomposition

Abstract: The paper investigates the effects of South African monetary policy implementation on selected macroeconomic variables in the rest of the Common Monetary Area (CMA) looking specifically at the response of a shock to South African key interest rate (repo rate) on macroeconomic variables such as the regional lending rates, interest rate spread, private sector credit, money supply, inflation and economic growth in the rest of the CMA countries. The analysis is conducted using impulse-response functions derived from Panel Vector Autoregression (PVAR) methodology. The estimates are conducted using annual data for a panel of four CMA countries for the period 1980 – 2012. The results show that a positive shock to South African repo rate significantly affects lending rates, inflation and economic growth in the entire CMA countries. South African repo rate has more impact on lending rates in the entire CMA. This is then followed by the impact on inflation and then economic growth.

Working paper 644

Title: The behaviour of the real effective exchange rate of South Africa: is there a misalignment?

Author(s): Melvin M Khomo and Meshach J Aziakpono

Publication date: October 2016

Classification-JEL: F31, F41

Keywords: equilibrium exchange rate, misalignment, cointegration, regime switching

Abstract: The paper uses Behavioural Equilibrium Exchange Rate methodology to estimate the equilibrium real effective exchange rate of the rand and to establish whether the observed exchange rate is misaligned with this level. The exchange rate's misalignment behaviour is further explored using a regime switching method. Results endorse the existence of a co-integrating relationship between the exchange rate and terms of trade, external openness, capital flows and government expenditure. The study confirms that the exchange rate is from time to time misaligned with the Markov regime switching model, correctly capturing the misalignment as alternative shifts between over- and undervaluation episodes.

Working paper 645

Title: The impact of basic and social infrastructure investment on economic growth and social development in South Africa's urban and rural municipalities

Author(s): Henk Gnade, Derick Blaauw and Talita Greyling

Publication date: October 2016

Classification-JEL: I130, I250, I380, O110

Keywords: Basic and social infrastructure, economic growth, Social development, Principal Component Analysis

Abstract: Basic and social infrastructure investment can assist in addressing widespread inequality and divided societies by promoting economic growth and social development. The aim of this study is to determine whether basic and social infrastructures investment differently affect economic growth and social development indicators of urban and rural municipalities. We used a balanced panel dataset containing infrastructure, economic, demographic and social indicators for rural and urban municipalities for the period from 1996 to 2012. Principal component analysis was used to construct synthetic indices of basic and social infrastructure. Restricted within LSDV estimation techniques are used to evaluate the differences between urban and rural municipalities. The elasticities of basic and social infrastructure investment generally are more pronounced for economic growth and social development indicators in rural municipalities. These findings could potentially influence policy decisions in terms of infrastructure investment in favour of rural municipalities to increase economic growth and social development.

Working paper 646

Title: Impact of internal in- migration on income inequality in receiving areas: A district level study of South Africa

Author(s): Umakrishnan Kollamparambil

Publication date: October 2016

Classification-JEL: O15, R23

Keywords: internal migration, In-migration, Income Inequality

Abstract: The impact of internal migration on regional income inequality of the receiving areas has hitherto gone largely unstudied. This dearth of literature is especially surprising because income inequality and in-migration into urban centres of growth are two issues that many developing economies are faced with and tackling these issues effectively involves understanding the interactions between these two related phenomena. This study is therefore a first attempt to analyse the impact of internal in-migration on receiving areas and is placed in the context of South Africa. Based on a conceptual analysis the study argues that In-migration into formal sector of the receiving areas will in general reduce inequality while in-migration into informal or unemployed sector increases inequality. Using individual panel data the study further tests empirically at the district level the impact of in-migration and finds that rising urban inequality in the urban areas can be attributed at least in part to rural-urban migration. This works through both the wage as well as employment channel. The employment channel can be said to have a stronger impact than the wage channel as indicated by the coefficients estimated through our system GMM regression analysis.

Working paper 647

Title: Small-scale farming and food security: the enabling role of cash transfers in South Africa's former homelands

Author(s): Dieter von Fintel and Louw Pienaar

Publication date: November 2016

Classification-JEL: Q12, Q18, Q15, D13, C26

Keywords: Cash transfers, Small-scale farming, Food Security, South Africa, Apartheid homelands, Regression Discontinuity Design

Abstract: Cash transfers successfully alleviate poverty in many developing countries. South Africa is a case in point, implementing one of the largest unconditional cash transfer programmes internationally, and with substantial benefits to household well-being along multiple dimensions. Yet, grants discourage formal labour market attachment, creating dependencies on the fiscus. This study uses a fuzzy regression discontinuity design to establish that state-funded Old Age Pensions encourage non-market economic activity (in the form of small-scale farming), and improve the self-reported food security of rural households that farm, vis-à-vis those that do not. However, only non-farming households increase market food expenditure and consume more diverse diets from market-sourced foods: diet quality improves with greater spending, while food sufficiency remains unaffected. Farmers, on the other hand, do not change food spending patterns, but self-rated food sufficiency improves due to greater levels and diversity in home production. The role of small-scale farming is of broader interest in rural development, given the context of the 1913 and 1936 Land Acts that constrained this form of livelihood in former apartheid homelands. This paper's contribution is two-fold: grants are an effective channel to actively promote rural development through small-scale farming, and they improve food security by non-market mechanisms.

Working paper 648

Title: Financial sector development, economic volatility and shocks in sub-Saharan Africa

Author(s): Muazu Ibrahim and Paul Alagidede

Publication date: November 2016

Classification-JEL: G0, 055

Keywords: volatility, financial development, shocks, Business Cycle

Abstract: The role of financial sector development in economic volatility has been extensively studied albeit without informative results largely on the failure of extant studies to decompose volatility into its various components. By disaggregating volatility, this study examines the effect of financial development on volatility as well as channels through which finance affects volatility components in 23 sub-Saharan African countries over the period 1980–2014 using the newly developed panel cointegration estimation strategy. Our findings reveal that while financial development affects business cycle volatility in a non-linear fashion, its effect on long run fluctuation is imaginary. More specifically, well developed financial sector dampens volatility at the business cycle. However, in the long run, unbridled financial development may magnify fluctuations. Further findings show that while monetary shocks have large magnifying effect on volatility, their effect in the short run is minuscule. The reverse however holds for real shocks. Our main conclusion is that irrespective of the component, volatility caused by monetary shocks is more important and persistent than those caused by real shocks and financial underdevelopment and factors driving fluctuations are largely internal. With regard to channels of manifestation, our evidence shows that whether in the short or long term, financial development dampens (magnifies) the effect of real shocks (monetary shocks) on the components of volatility with the dampening effects consistently larger only in the short run. Strengthening financial sector supervision, including

cross-border oversight as well as adoption of inflation targeting may be very crucial in examining the right levels of finance and price stability necessary to falter economic fluctuations.

Working paper 649

Title: Has the Exchange Rate Pass-Through changed in South Africa?

Author(s): Alain Kabundi and Asi Mbelu

Publication date: November 2016

Classification-JEL: C51, E52, E58

Keywords: Exchange rate pass-through, rolling-window regression, symmetric exchange rate pass-through

Abstract: This paper uses the two-stage exchange rate pass-through (ERPT) framework instead of the direct pass-through (PT) from the exchange rate to consumer inflation to assess the variation in the ERPT for South Africa from 1994 to 2014. The paper uses rolling-window estimation to examine the possibility of change in the ERPT over time. In addition, it investigates the asymmetric behaviour of the ERPT over the business cycle. The results indicate that the ERPT for South Africa is complete in the first stage but incomplete in the second stage. It implies that retailers do not pass all the cost to consumers. The first-stage ERPT has declined slightly since the Global Financial Crisis. Weak domestic demand and possibly the concentration of firms in the manufacturing sector are the main forces behind this low PT. Moreover, there is evidence of asymmetry in the first-stage ERPT in that it tends to rise in the upturn phase of the economy compared to the downturn. The second-stage ERPT shows a considerable decline since the adoption of the inflation-targeting regime. Similar to the first-stage case, the PT is muted in the downturn but rises in the expansionary phase by about 10 per cent.

Working paper 650

Title: National minimum wage in South Africa: A computable General Equilibrium Model analysis

Author(s): Jean Luc Erero

Publication date: November 2016

Classification-JEL: C68, J08, J31

Keywords: national minimum wage, CGE model, South Africa

Abstract: This paper analyses the economy-wide impact of the national minimum wage on the South African economy. The analysis was conducted using a static computable general equilibrium (CGE) model of South Africa, which captured the observed structure of South Africa's economy. The parameters of the CGE equations were calibrated to observed data from a social accounting matrix (SAM) for 2010. One policy option with three scenarios was considered. The results from the policy scenario highlight that an increase in the national minimum wage has a negative and distortive impact on the reported macro-economic variables. This is particularly seen by a decline in GDP, employment and welfare. For instance, in the first scenario the real GDP decreased by 1.8506% when the national minimum wage was set to R3000 across all sectors.

Working paper 651

Title: Is There a SADC Business Cycle? Evidence from a Dynamic Factor Model?

Author(s): Ntokozo Patrick Nzimande and Harold Ngalawa

Publication date: November 2016

Classification-JEL: C11, C32, E32, F02

Keywords: SADC

Abstract: Countries that adopt a common currency automatically relinquish their monetary policy autonomy. Hence, it is imperative for countries wanting to join a currency union to ensure that their business cycles are synchronized in order to ensure symmetric propagation of the effect of monetary policy. Put differently, countries with asynchronous business cycles require country-specific policies to stabilize their economies. Thus, in this study we assess the readiness of the SADC region to adopt a single currency in 2018 as proposed. We rely on a dynamic factor model which assumes that business cycle is driven by two orthogonal factors that is a regional and idiosyncratic factors. In line with existing literature our findings suggest that SADC as whole is not ready to form a monetary union. However, CMA countries appear to be driven by a common factor thus they do not necessarily require country specific policies. Hence, they may consider adopting single currency.

Working paper 652

Title: Impact of Crime on Firm Entry: Evidence from South Africa

Author(s): Godfrey Mahofa, Asha Sundaram and Lawrence Edwards

Publication date: December 2016

Classification-JEL: R12, O18, L11

Keywords: crime, Business Activity, Regional Institutions

Abstract: In this paper, we analyse the relationship between crime and the entry of firms across local municipalities in South Africa. We use data on the incidence of crime, sourced from the South African Police Service, and a unique database of business registrations over the period 2003 to 2011, to show that crime reduces business entry. These results are robust to the use of rainfall shocks as an instrumental variable for crime, in order to control for potential bias arising from the fact that crime might be a consequence, rather than a cause of the entry of firms. This paper highlights the importance of strong local institutions that can lower the costs of doing business for business dynamism. Our study has implications for employment and economic growth at the regional level and hence for dealing with regional inequality.

Working paper 653

Title: Does Infrastructure Really Explain Economic Growth in Sub-Saharan Africa?

Author(s): Odongo Kodongo and Kalu Ojah

Publication date: December 2016

Classification-JEL: H54, O11, O40, O55

Keywords: Infrastructure access, infrastructure stock and quality, economic growth, Sub-Saharan Africa, System GMM

Abstract: In the light of Africa's palpable deficit in public infrastructure, we use System GMM to estimate a model of economic growth augmented by an infrastructure variable, for a panel of 45 Sub-Saharan African countries, over the period 2000-2011. We find that it is the spending on infrastructure and increments in the access to infrastructure that influence economic growth and development in Sub-Saharan Africa. Interestingly, these significant associations, especially those of infrastructure spending, are more important for lesser developed economies of the region than for the relatively more developed economies, which uncommonly have better than near-zero access to infrastructure. In addition to these robust direct links between the target variables, we find importantly that infrastructure access, and quality, also relate to economic growth indirectly via export diversification (trade

competitiveness), and cross-border capital flows and export diversification, respectively. Among other important policy derivatives of our findings, we emphasize that efforts aimed at reversing Africa's pervasive infrastructure deficit, in ways that enable economic growth and development, must be carefully nuanced.

Working paper 654

Title: Perturbed Utility and General Equilibrium Analysis

Author(s): Wei Ma

Publication date: January 2017

Keywords: general equilibrium, Stochastic choice, Regular economy

Abstract: We study general equilibrium theory of complete markets in an otherwise standard economy with each household having an additive perturbed utility function. Since this function represents a type of stochastic choice theory, the equilibrium of the corresponding economy is defined to be a price vector that makes its mean expected demand equal its mean endowment. We begin with a study of the economic meaning of this notion, by showing that at any given price vector, there always exists an economy with deterministic utilities whose mean demand is just the mean expected demand of our economy with additive perturbed utilities. We then show the existence of equilibrium, its Pareto inefficiency, and the upper hemi-continuity of the equilibrium set correspondence. Specializing to the case of regular economies, we finally demonstrate that almost every economy is regular and the equilibrium set correspondence in this regular case is continuous and locally constant.

Working paper 655

Title: Aid Volatility and Structural Economic Transformation in sub-Saharan Africa

Author(s): Emmanuel Kumi, Muazu Ibrahim & Thomas Yeboah

Publication date: January 2017

Classification-JEL: F35, O10, O14, O47, O55

Keywords: Aid, Sectoral growth, Sub-Saharan Africa, volatility

Abstract: This paper departs from the traditional aid-economic growth studies through its examination of the impact of aid and its volatility on sectoral growth by relying on panel dataset of 37 sub-Saharan African (SSA) countries for the period 1980–2014. Findings from our system generalised methods of moments (GMM) show that, while foreign aid significantly drives economic transformation, aid volatility deteriorates sectoral value additions with huge impact on the non-tradable sector and a no apparent effect on the agricultural sector. However, the deleterious effect of aid volatility on structural economic transformation in SSA is weakened by a well-developed financial system with a large dampening impact on the tradable sector. Our evidence therefore provides unequivocal support for the notion that development of domestic financial markets enhances aid effectiveness.

Working paper 656

Title: Exploring nexus of electricity supply and economic growth in South Africa

Author(s): Hlalefang Khobai, Gift Mugano and Pierre Le Roux

Publication date: January 2017

Keywords: electricity supply, economic growth, South Africa, causality

Abstract: This paper investigates the causal relationship between electricity supply and economic growth in South Africa using annual data covering the period between 1985 and 2014. This paper used a multivariate framework which included trade

openness, electricity price, capital and employment as intermittent variables. The ARDL bound testing was employed to establish the long run relationship between these variables. The Vector Error Correction Model (VECM) was estimated to carry out the test of causality. The results support the existence of co-integration among the variables. The VECM established a bidirectional causality flowing between electricity supply and economic growth. This shows that the policy makers should prioritise building capacity additions and infrastructure development of the South African electricity supply industry, as this will stimulate economic growth and increase electricity in the country. The findings further show that electricity prices, trade openness, employment and capital Granger-cause economic growth and electricity supply. This result means that increased economic growth and electricity supply is dependent on the degree of trade openness, employment levels in the country and the amount of investment.

Working paper 657

Title: Using minigames to explain imperfect outcomes in the ultimatum Game

Author(s): Melt van Schoor

Publication date: January 2017

Classification-JEL: C72, C73

Keywords: evolution, evolutionary game theory, ultimatum game, minigames, conditional frequencies

Abstract: In evolutionary game theory, “minigames” with reduced strategy sets are sometimes analysed in lieu of more complex models with many strategies. Are these simplified versions up to the task of explaining pertinent dynamic features of the larger models? This paper looks at the ultimatum game, in which it is known that a noisy evolutionary model leads to stable dynamic equilibriums that are far away from the game’s unique subgame perfect solution. It is argued that a naive approach is unsatisfactory and that the minigame analysis is more useful when related to the full game explicitly. A constellation of embedded minigames is identified in the full game, one for each imperfect equilibrium of the full game, with each playing out on its own conditional frequency space. It is shown that the conditional frequency dynamics applicable to these minigames have the same form as a full game’s dynamics with a reduced strategy set. While the minigames thus identified are still not two-dimensional, it is shown that two critical variables in each can be treated separately from the others, and these indeed behave like the variables in a two-dimensional standalone minigame. A graphical analysis based on selection-mutation equilibrium loci allows a clear understanding of why stable imperfect equilibriums exist and which factors tend to stabilize particular equilibriums. For example, lower-offer equilibriums are easier to stabilize, because a) proposers have more to lose by deviating from them and b) responder mutation aims at a higher target for the relevant conditional frequency.

Working paper 658

Title: The impact of home and host country institutions in the internationalization of an African multinational enterprise

Author(s): John M. Luiz, Dustin Stringfellow and Anthea Jefthas

Publication date: January 2017

Classification-JEL: F23, M16, L66

Keywords: Emerging multinational enterprises, institutional voids, African multinational, firm and country specific advantages, institutional leverage capability

Abstract: We demonstrate that firms can exploit their knowledge of 'weak' institutional settings and turn it into a source of advantage as they internationalize into locations with similar institutional 'weaknesses.' Using the case of one Africa's most successful multinational enterprises we illustrate the value gained from initially capitalizing upon institutional complementarity (utilizing the comparative advantage linked to institutional know-how) by exploiting the experience of the home country's environment into similar settings. Over time and through learning-by-doing, pressure arose to diversify the risk linked with over-exposure to institutional uncertainty and country risk, and this was associated with the process of institutional substitution into more advanced countries. We see an emerging multinational learning and building its capabilities by leveraging off its understanding of its home country institutional environment.

Working paper 659

Title: The impact of micro hydroelectricity on household welfare indicators

Author(s): Mary Karumba & Edwin Muchapondwa

Publication date: January 2017

Classification-JEL: C21, Q01, Q42

Keywords: Micro hydro; rural electrification; impact; Kenya

Abstract: The use of small scale off-grid renewable energy for rural electrification is now seen as part of the sustainable energy solutions. The expectations from such small scale investment is that it can meet basic energy needs of a household and subsequently improve some aspects of the household welfare. However, these stated benefits remain largely hypothetical because there is data and methodological challenges in existing literature attempting to isolate such impact. This paper uses field data from micro hydro schemes in Kenya, and propensity score matching technique to demonstrate such an impact. The study finds that households connected to micro hydroelectricity consume 1.5 litres less of kerosene per month compared to households without any such electricity connection. Also, non-connected households spend 0.92 USD more for re-charging their cell phone batteries per month in comparison to those who were using micro hydroelectricity service. Finally, school children from households that are connected to micro hydroelectricity were found to devote 43 minutes less on evening studies compared to those in non-connected households. The findings provide interesting insights to some of the claims made for or against use of off grid renewable energy for rural electrification.

Working paper 660

Title: Postliberation Politics: Evidence from Demographic Determinants of South Africa Voting Behaviour in the 2009 National Election

Author(s): Johannes W. Fedderke and Margaux Giannaros

Publication date: January 2017

Abstract: In this paper, we examine demographic drivers of South African voting behavior in the 2009 national election. We use a novel data set, which combines census and voting data at the ward level, representing the highest level of disaggregation of South African elections to date. Unsurprisingly, blacks are more likely to vote for the ANC, whites more likely to vote for the DA, and rising incomes and greater security in the labor market predict a switch in allegiance from the ANC to the DA. Allowing for an interaction between income and race reduces the impact of racial identity for the major parties. A striking finding is that DA voter support is disproportionately strong amongst poor black (and other race group) voters - a

result that is present for every province. The result is consistent for the findings we report for the impact of income and the nature of labor force participation.

Working paper 661

Title: Human capital inequality and electoral outcomes in South Africa

Author(s): Biniam Bedasso and Nonoso Obikili

Publication date: February 2017

Classification-JEL: D63, I24, D72

Keywords: inequality, Political Competition, Voting Behaviour, South Africa

Abstract: This paper examines the nature and evolution of horizontal and vertical human capital inequality in South Africa since the end of apartheid. Using census data from 1996, 2001, and 2011, we use different measures of years of schooling to examine the dynamics both across and within racial, linguistic, gender and geographic groups. We find that on average inequality has been falling in South Africa although with significant variation across the country. Finally, we examine the relationship between changing inequality over time and electoral outcomes. We find that higher vertical inequality is very strongly associated with lower electoral competition.

Working paper 662

Title: The impact of Telecommunication Regulatory Policy on Mobile Retail Price in Sub-Saharan African Countries

Author(s): Onkokame Mothobi

Publication date: February 2017

Classification-JEL: L31, L43, L52, L96

Keywords: mobile telephony, Regulation, market conduct

Abstract: This paper examines the effect of regulatory policies on mobile retail prices. Using quarterly data for 8 African countries for the period 2010:Q4 to 2014:Q4 we estimate structural demand and supply equations. We find that mobile termination rates (MTR) have significant positive impact on mobile retail prices. A decline in average MTR of 10% decreases average mobile retail prices by 2.5%. On the other hand, mobile number portability (MNP) has an insignificant effect on price and subscriptions in selected African countries. This may be due to inadequate implementation of MNP and consecutively low demand for porting numbers. The average market conduct in mobile telecommunications industry for selected African countries can be approximated by Cournot Nash equilibrium, while price elasticity of demand is on average -0.27.

Working paper 663

Title: Has South Africa's Investment in Public Health Care Improved Health Outcomes?

Author(s): Mr. Lucas Bidzha, Dr. Talita Greyling and Mr. Jugal Mahabir

Publication date: February 2017

Classification-JEL: I12, I18, H51

Keywords: Health Outcomes, Health Production Function, Public Health Expenditures, Effectiveness, Under-five Mortality Rate, Life Expectancy

Abstract: South Africa's total expenditure on health equates to almost 9% of its gross domestic product, which is above the average of other countries classified as middle-income countries. Notwithstanding this investment, indicators of health

outcomes remain relatively lower when compared to the same countries. The aim of this paper is to investigate the effectiveness of public health expenditure in improving health outcomes in South Africa. Panel estimations techniques were used using data for the country's nine provinces over the period 2005 to 2014. Results have shown that, on average, an increase in public health expenditure per capita leads to improvement in the under-five mortality rate. With regards to life expectancy at birth, public health expenditure was found to be statistically not significant. Control variables such as real GDP per capita, female literacy rate, immunisation coverage ratio, access to formal housing and HIV/Aids prevalence were also found to be important determinants of health outcomes in the country. The key policy implications of these findings are that government should continue to prioritise greater resource allocation to public health spending, including towards improving access to formal housing, immunisation coverage, women education and increase targeted interventions on HIV/Aids

Working paper 664

Title: Push factors of emerging multinational corporations: evidence from South Africa and Egypt

Author(s): Mustafa Sakr and Andre Jordaan

Publication date: February 2017

Classification-JEL: P45, F21

Keywords: South African MNCs, Egyptian MNCs, emerging African MNCs, Emerging MNCs, push factor determinants of OFDI

Abstract: As literature remains sparse regarding emerging African multinational corporations (EAMNCs), this article focuses on examining the key push factors (i.e. home country macroeconomic specifications) influencing the outward foreign direct investment flow from South Africa and Egypt. Based on dynamic panel data model estimation, the empirical research proves that trade openness, patent and the gross domestic product (GDP) and the GDP growth rate of South Africa and Egypt are dominant drivers of their outward foreign direct investment. In contrast, the number of investment treaties and inward foreign direct investment rate do not significantly influence outbound investment decisions of South African and Egyptian corporations.

Working paper 665

Title: Measurement and Analysis of the Evolution of Institutions in Nigeria

Author(s): David O. Fadiran, Mare Sarr, Johannes W. Fedderke

Publication date: February 2017

Classification-JEL: K00, K11, N00, N1, N47, O1, O11

Keywords: institutions, Legislations, Persistence, Economic Growth and Development

Abstract: "Institutions matter" has become a generally accepted premise in development economics. The growth and development problems in Nigeria are also common knowledge. To better understand these problems a proper characterization of institutions in Nigeria is essential. Conducting empirical test of the role of institutions in Nigeria's growth and development can prove challenging due to lack of institutional data set that span over a long time. In the event that short span data set is available, Glaeser et al. (2004) highlight the many flaws implicit in such measures constructed by political scientists in literature. In this paper, we construct an index of institution quality for the period 1862 through to 2011 for Nigeria, in doing so, we adopt a new method of measuring institutions, which makes use of pre-existing (de jure) legislations, ordinances and constitutions in constructing three

institutional indicators; civil and political liberties, freehold property rights, and non-freehold (customary) property rights. These constructed indicators provide a platform for characterization and comprehensive analysis of how institutions have evolved in Nigeria.

Working paper 666

Title: Diversification measures and the optimal number of Stocks in a portfolio: An information theoretic explanation

Author(s): Adeola Oyenubi

Publication date: February 2017

Keywords: Information Theory, Diversification, Genetic Algorithm, Portfolio optimization, Principal Component Analysis, Simulation methods, Maximum Diversification Index

Abstract: This paper provides a plausible explanation for why the optimum number of stocks in a portfolio is elusive, and suggests a way to determine this optimal number. Diversification is dependent on the number of stocks in a portfolio and the correlation structure. Adding stocks to a portfolio increases the level of diversification, and consequently leads to risk reduction. However, the risk reduction effect dissipates after a certain number of stocks, beyond which additional stocks do not contribute to risk reduction. To explain this phenomenon, this paper investigates the relationship between portfolio diversification and concentration using a genetic algorithm.

To quantify diversification, we use the Portfolio Diversification Index (PDI). In the case of concentration, we introduce a new quantification method. Concentration is quantified as complexity of the correlation matrix. The proposed method quantifies the level of dependency (or redundancy) between stocks in a portfolio. By contrasting the two methods it is shown that the optimal number of stocks that optimizes diversification depends on both number of stocks and average correlation. Our result shows that, for a given universe, there is a set of Pareto optimal portfolios each containing a different number of stocks that simultaneously maximizes diversification and minimizes concentration. The preferred portfolio among the Pareto set will depend on the preference of the investor. Our result also suggests that an ideal condition for the optimal number of stocks is when the variance reduction as a result of adding a stock is off-set by the the variance contribution of complexity.

Working paper 667

Title: Labour market impact of internal in-migration: A district level analysis of South Africa

Author(s): Umakrishnan Kollamparambil

Publication date: February 2017

Classification-JEL: J61, O17, R23

Keywords: internal migration, labour markets, unemployment, informal sector, Self-employment

Abstract: Despite the lack of clarity in literature with regards to the question of whether internal in-migration is a desirable phenomenon for the labor market outcomes, in-migration is often resisted under the premise that it leads to tighter job markets for the locals. This study therefore attempts an empirical verification of the impact of in-migration on labour market outcomes in South Africa. The results of dynamic system GMM regression analysis indicate that in-migration decreases the labour market participation rate of the migrant receiving districts, highlighting migration for non-economic purposes as well as discouraged migrants not seeking

work post-migration. While In-migration is not found to alter significantly the employment rate of the receiving areas, indications are that the employment rate is maintained through an expansion of the informal wage employment. There is evidence of non-linear relationship between in-migration and the labour markets of the receiving areas. While initial migration results in the expansion of the formal sector employment, sustained increase in in-migration leads to informalisation of the labour markets. There is hence little evidence of positive self-selection among internal migrants in South Africa. Our results corroborate the Harris-Todaro model's prediction that in-migration leads to increased informal sector share of the labour markets

Working paper 668

Title: Can bank capital adequacy changes amplify the business cycle in South Africa?

Author(s): Foluso Akinsola and Sylvanus Ikhide

Publication date: February 2017

Classification-JEL: G21, E32, G28

Keywords: bank capital, Procyclicality, Business Cycle, Basel accord

Abstract: Financial globalisation and financial innovation have increased most banks' appetite for risk and therefore engendered financial fragility in the financial system. This paper examines the relationship between regulatory bank capital adequacy and the business cycle in South Africa using Vector error correction model (VECM). This paper employed quarterly data from South Africa Reserve Bank (SARB) for the period 1990 to 2013. The Johansen Cointegration approach was used to ascertain whether there is indeed a long-run co-movement between capital adequacy and the business cycle. Results from the tests and VECM model show that there are significant linkages among the variables, especially between capital adequacy and the business cycle. The impulse analysis result shows that the response of the business cycle to one standard deviation shock of capital adequacy is negative and persistent for over 25 quarters before stabilizing. This shows the procyclicality effect of the business cycle. In other words, the imposition of a capital adequacy requirement can amplify the business cycle in South Africa. The result shows that fluctuation in the business cycle can be amplified by the bank capital adequacy requirements in South Africa.

Working paper 669

Title: Will Technological Change Save the World: The Rebound Effect in International Transfers of Technology

Author(s): Mare Sarr and Tim Swanson

Publication date: February 2017

Classification-JEL: O33, O39, O44, Q55, Q56

Keywords: Technological change, Rebound Effect, Development Path

Abstract: Technological change and its transfer to developing countries is often portrayed by policy-makers as a critical part of the solution to a resource problem such as climate change, based on the assumption that the transfer of resource-conserving technologies to developing countries will result in reduced use of natural capital by those countries. We demonstrate here, in a capital conversion based model of development, that the free transfer of resource-conserving technologies to developing countries will increase the options available to those countries, but that the way that they expend these options need not be in the direction of conserving resources. This is another example of the potential for a rebound effect to determine ultimate outcomes, here in the context of international technology transfer policy.

The transfer of technologies is as likely to simply move developing countries more rapidly down the same development path as it is to alter the choices they make along that path. For this reason, the transfer of resource conserving technologies, without incentives provided to alter development priorities, may not result in any resource-conservation at all.

Working paper 670

Title: Black living standards in South Africa before democracy: New evidence from heights

Author(s): Bokang Mpeti, Johan Fourie and Kris Inwood

Publication date: February 2017

Keywords: apartheid, living standards, South Africa, heights, anthropometric, twentieth century

Abstract: Very little income or wage data was systematically recorded on the living standards of South Africa's black majority during much of the twentieth century. Between 1911 and 1996, for example, only fragmentary evidence of black living standards remain in mining reports and manufacturing censuses, often at a too generalised level or of too short time-span to render any meaningful unbiased, long-run interpretations of living standards. This paper uses three new datasets to document, for the first time, the stature of black South Africans over the course of the twentieth century. The data allow us to disaggregate by ethnicity within the black population group, revealing levels of inequality within race group that has been neglected in the literature.

Working paper 671

Title: Capital controls and foreign currency denomination

Author(s): Fernando Garcia-Barragan and Guangling Liu

Publication date: February 2017

Classification-JEL: E32, E44, E58, F38, F41

Keywords: Capital control, Foreign currency denomination, Open economy macroeconomics, Financial friction, Welfare analysis, DSGE

Abstract: This paper studies the effectiveness of capital controls with foreign currency denomination and its welfare implications. To do this, we develop a general equilibrium model with financial frictions and banking, in which assets and liabilities are denominated in both domestic and foreign currencies. We propose a non-pecuniary capital-control policy that limits the gap between foreign-currency denominated loans and deposits to the amount of foreign funds that bankers can borrow from the international credit market. We show that capital controls have a critical impact on the dynamics of assets and liabilities that are denominated in foreign currency. This critical impact works through the capital control constraint on quantitative financial variables directly, not through the spreads. The non-pecuniary capital controls help to stabilize the financial sector and, hence, reduces the negative spill overs to the real economy. A more restrictive capital-control policy significantly attenuates the welfare effect of the foreign monetary policy and exchange rate shocks.

Working paper 672

Title: Do monetary policy announcements affect foreign exchange returns and volatility? Some evidence from high-frequency intra-day South African data

Author(s): Cyril May, Greg Farrell and Jannie Rossouw

Publication date: March 2017

Classification-JEL: C22, E52, E58, F31, F41, G14, G15

Keywords: Exchange rate, expectations, monetary policy surprises, repo rate, returns, volatility

Abstract: This paper examines the temporal effect of domestic monetary policy surprises on both the levels and volatility of the South African rand/United States dollar exchange rate. The analysis in this 'event study' proceeds using intra-day minute-by-minute exchange rate data, repo rate data from the South African Reserve Bank's scheduled monetary policy announcements, and Bloomberg market consensus repo rate forecasts. We find statistically and economically significant responses in intra-day high-frequency exchange rate returns and volatility to domestic interest rate surprises, but anticipated changes have no bearing on the rand. Our results suggest that monetary policy news is an important determinant of the exchange rate for approximately 5 to 40 minutes after the estimated time of the pronouncement – suggesting a relatively high degree of market 'efficiency' in its mechanical sense (and not 'efficient' market in the deeper economic-informational sense) in processing this information.

Working paper 673

Title: The Nexus between Infrastructure (Quantity and Quality) and Economic Growth

Author(s): Chengete Chakamera and Paul Alagidede

Publication date: March 2017

Keywords: Infrastructure stock, Infrastructure quality, economic growth, Nexus, causality

Abstract: This paper examines the growth effects of infrastructure stock and quality in Sub Saharan Africa (SSA). While previous studies established that the poor state of infrastructure in SSA slows economic growth, there is little evidence on infrastructure quality and a robust analysis on the causal links between infrastructure and economic growth. Using principal components analysis to cluster different infrastructure measures and examining the infrastructure-growth nexus in a Generalized Method of Moments while accounting for heterogeneity in a panel setting, our results reveal strong evidence of a positive effect of infrastructure development on economic growth with most contribution coming from infrastructure stock. The quality-growth effect is weak, thus giving credence to the combined effects of infrastructure stock and quality on growth, especially in regions with moderately high quality, and smaller in those with poorer quality. Among the disaggregated infrastructure components, electricity supply exerted the greatest downward pressure on growth in SSA. Lastly, we find evidence for a unidirectional causality from aggregate infrastructure to growth. A number of policy implications are discussed.

Working paper 674

Title: The Interdependence between the Saving Rate and Technology across Regimes: Evidence from South Africa

Author(s): Kevin S. Nell and Maria M. De Mello

Publication date: March 2017

Classification-JEL: C22, O11, O41, O47, O55

Keywords: Growth transitions, Investment rate, Learning-by-doing, Multiple regimes, Saving rate, Solow model, South Africa, Technological progress, Time-series econometrics

Abstract: This paper hypothesises that the saving rate and technological progress are interdependently determined by a common exogenous source, so that an exogenous shock to the saving rate determines long-run growth transitions. In an open economy, the saving rate measures the quality of capital investment. The evidence shows that the down-break across South Africa's 'faster-growing' regime (1952-1976) and 'slower-growing' regime (1977-2003) was caused by a negative exogenous shock to the saving rate that simultaneously led to a slowdown in the growth rate of technology through a structural decrease in the learning-by-doing parameter. The down-break results suggest that the saving rate is potentially an important policy variable to engineer a sustainable up-break. To assess this prediction with real data, the analysis looks at the post-2003 period (2004-2012). The results show that the up-break in the fixed investment rate was not matched by the saving rate, which implies that capital investment did not generate a faster rate of technological progress. The stylised facts suggest that a sustained increase in the total investment rate, which includes infrastructure investment, machinery and equipment investment and complementary foreign direct investment, may be an effective investment-led strategy to raise the economy's growth rate on a sustainable basis.

Working paper 675

Title: What's in a Name? Reputation and Monitoring in the Audit Market

Author(s): Somdutta Basu and Suraj Shekhar

Publication date: March 2017

Classification-JEL: L14, L51, M42

Keywords: PCAOB, Audit, Disclosure, Collective Reputation, Engagement partner, Reputation, Monitoring

Abstract: We demonstrate a tension between monitoring and reputation incentives when moving from collective reputation environments to individual reputation environments by analyzing a new rule. After January 2017, the name of the engagement partner has to be disclosed in all audit reports issued in the USA. We study the resulting change in auditor incentives and show that while the consequent higher reputation incentives can improve audit quality, partners have a lower incentive to monitor other partners when names are disclosed. This may lead to a fall in audit quality when the rule is implemented. We present several solutions to this problem.