Economic Research Southern Africa Activity

April 2023 – March 2024

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Director's Statement

I joined ERSA as Executive Director on 8 February 2024. I am honoured to lead this organisation, which has, since its inception in 2004, striven to be a cornerstone for economic research. I am committed to our vision: A Southern Africa where high-quality economic research informs policies that contribute to economic growth.

Despite some signs of post-pandemic recovery, Southern Africa continues to face significant economic challenges. Persistent inflation has kept policy rates high, fiscal balances continue to deteriorate, and various structural issues hinder economic productivity. The region needs robust economic growth, and at ERSA, we believe that rigorous economic research is key to finding solutions to these complex challenges.

During 2023/24, ERSA published five working papers and eight discussion documents, organised or co-organised 11 events — including four training sessions and seven conferences or seminars — and proudly awarded top student prizes to 91 graduates across seven universities.

Having joined ERSA towards the end of this period, my focus is on future initiatives. Moving forward, we are committed to enhancing ERSA's research output, fostering greater engagement among researchers, and strengthening the interaction between the academic and policy communities. Our goal is to ensure a seamless exchange where policy questions inform academic inquiry and scholarly insights effectively shape policy.

Economic research can inform and shape public policy, bridging the gap between academia and practical applications. We remain dedicated to supporting research by fostering an environment where economists can address critical policy questions. Our mission is to drive the volume, quality, and relevance of economic research to effectively shape public policy.

Our central priorities for 2024/25 are as follows:

1. Identifying the critical research questions within each of ERSA's newly defined research programmes:

    a. Fiscal and Monetary Policy
    b. Trade, Industrial and Competition Policy
    c. Human Capital Policy
    d. Environmental Policy

2. Establish a fellowship programme with convenors contracted for each research programme.

3. Increase the utilisation and output of the working paper series.

    a. Install a web-based journal management system.
    b. Offer stipends for working paper reviews.
    c. Utilise the fellowship's network to expand ERSA's reviewer database.

4. Strengthening the relationship between ERSA and South African universities

5. Increasing the interaction between university researchers and policymakers through policy roundtables, seminars and conferences

I believe ERSA can play a crucial role in shaping the economic policy landscape in southern Africa. Through rigorous research, collaborative partnerships, and accessible communication, we aim to contribute meaningfully to the economic growth and development of our region.

Fouché Venter
Executive Director

Income and Expenditure Statement

Economic Research Southern Africa (NPC)

(Registration number: 2010/002225/08)
Financial Statements for the year ended 31 March 2024

Detailed Income Statement

Figures in Rand	Note(s)	2024	2023
Operating expenses			
Accounting fees		186 863	166 578
Advertising		-	10 000
Auditors remuneration		69 000	63 763
Bank charges		20 721	26 430
Board Stipend		36 700	53 850
Board meetings		63 300	59 254
Cleaning		-	10 341
Conferences and workshops		800 823	914 785
Department of labour compensation		18 851	13 027
Depreciation, amortisation and impairments		22 160	13 696
Development and research fees		425 892	1 696 680
ERSA Instituition of Economic Policy Studies		1 100 527	1 033 750
ERSA Prizes		65 650	71 723
Employee costs		5 310 423	5 928 852
Entertainment		5 997	16 053
HR - Labournet & Consulting		13 567	12 842
IT expenses		267 487	363 038
Insurance		45 733	38 899
Lease rentals on operating lease		308 718	625 559
Legal expenses		11 178	-
Loss on sale of assets		10 910	-
Office Expenses		19 204	28 352
Postage		737	18 036
Printing and stationery		2 398	-
Promotions		25 478	14 651
Provision for discussion paper series		750 000	-
Research costs		-	762 865
SAMNET expenses		728 397	850 174
Secretarial fees		2 000	2 000
Small assets written off		-	3 178
Staff welfare		7 391	8 459
Storage fees		23 960	49 026
Subscriptions		45 886	21 271
Sundry		-	17 051
Telephone and fax		51 198	76 551
Training		1 112 736	213 572
Travel - local		9 334	88 135
Workshop materials		7 753	-
		11 570 972	**13 272 441**

Policy Research Program

Policy Associate: Lucas Mariani

I joined ERSA in June 2021 to manage and conduct independent policy-related research and spend time interacting with academics and potential partners to ERSA's projects. I am also involved with developing ERSA's training in empirical methods courses and other research workshops.

As part of the Graduate Training programme, I organized, developed, and taught one course in hybrid form last year. This course was aimed to equip policymakers, Ph.D. Students, academics, and policymakers with modern techniques in causal analysis using topics in corporate finance, applied macroeconomics, and development economics. The course comprised one month of classes via Zoom and one week in person at the University of Cape Town. The course received more than 120 applications, of which around 20 participants were selected from both the academic and policy worlds. Given the high interest and positive feedback from participants, I plan to organize a similar course this year if it is part of the current mission of ERSA.

As part of the research workshops, I organized the ERSA Workshop on Financial Technology and Development with Lukasz Grzybowski, held at the Devon Valley Hotel in Stellenbosch. This event marked another successful addition to the series of workshops supported by ERSA. The workshop aimed to foster discussions on Financial Technology (FinTech) and its implications for development while facilitating valuable networking opportunities among researchers, economists, and practitioners from various institutions. We are pleased to highlight critical aspects of the workshop and its outcomes: the workshop featured engaging sessions, keynote speakers, and insightful discussions with scholars from the region and abroad; participants' feedback was overwhelmingly positive, praising the quality of presentations, the depth of discussions, and the networking opportunities; moreover, we met the goals in terms of funding, and the expenses were below the expected costs.

As part of the research output, I produced 3 working papers at the ERSA WP series in the past year in which I would like to highlight two projects using data from the SARS firm-level panel on issues related to the effects of firm dynamics on aggregate productivity, structural transformation, and development. In the first working paper, we analyze the impact of South African Government Bonds inclusion on the Citigroup World Government Bond Index (WGBI) firms' resource allocation and their effects on aggregate productivity. Recent literature shows that foreign capital inflows can reduce resource misallocation and improve aggregate productivity in emerging economies. Our project leverages South African inclusion in the index and rich firm-level tax data from South Africa to analyze the effects of sovereign debt demand upsurges on firm-level and aggregate productivity.

In the second working paper, I will analyze the effects of the Southern African Development Community Integrated Regional Electronic Settlement System (SADC-RTGS) on South African exports and importers. The system has been in operation since July 2013. An automated interbank settlement system settles payment obligations between participating banks in real-time. The system decreased transaction costs and the time it took to settle transactions between firms in the region, which could potentially increase trade integration in southern African economies. I will shed some light on these effects by exploiting SARS data on all customs data from all South African firms and check if SADC-RTGS spurred economic integration.

Besides these projects using SARS data, I have also been involved in other research projects in the South African context, analyzing fiscal policy, housing markets, and the costs of load shedding, which will be developed this year and submitted to our working paper series during this year. Furthermore, I would like to highlight the invitation to present a paper at the ESSA Biennial Conference, the most renowned economic organization in the country. It organizes the South African Journal of Economics, the best academic journal focused on economic research in the country. Hence, it was great to participate in the conference to increase my research network in South Africa and get new opportunities for future work with researchers and research institutions attending the meeting.

This last year has been essential to my becoming more acquainted with the opportunities and context of Southern Africa. It has also been productive in terms of research. I look forward to continuing to collaborate closely with ERSA in the following year.

The Events Program

Eleven (11) events took place during the 2023 – 2024 period, which are listed in the table below:

Start	End	Event	Theme	# Delegates
10 July 2023	21 July 2023	Advanced Panel Data Econometrics	Training	20
19 July 2023	20 July 2023	UP PhD Workshop 2023	PhD Workshop	30
19 July 2023	19 July 2023	Trade Policy and Inflation Effects (Online Seminar)	Trade, Industrial & Competition Policy	99
14 August 2023	14 August 2023	Non-Parametric in R Workshop	Training	36
04 September 2023	07 September 2023	Advanced Empirical Methods	Training	19
08 September 2023	09 September 2023	Financial Technology Workshop	Trade, Industrial & Competition Policy	21
12 September 2023	14 September 2023	ESSA 2023 Biennial Conference		3
05 October 2023	06 October 2023	16th African Economic History Network Conference (AEHN)	Monetary & Fiscal Policy	71
13 November 2023	08 December 2023	Skills Development Training – Panel Data Econometrics: Cohorts 7 & 8	Training	52
25 January 2024	26 January 2024	2nd ERSA/CEPR Workshop on Macroeconomic Policy in Emerging Markets (SAMNet)	Monetary & Fiscal Policy	43
29 January 2024	23 February 2024	Skills Development Training – Cross-Sectional Analysis: Cohorts 9 & 10	Training	26

For the event reports, please refer to Appendix I

The Publication Series

Statement by the Chair of the ERSA Editorial Committee

The Board
ERSA
Dear Sirs/Madams

ERSA Working Paper Series – April 2023 to March 2024

On behalf of the editorial committee, I would like to provide a brief report on the state of the ERSA Working Paper Series (hereafter "The WPS") for the period from April 2023 to March 2024.

Between April 2023 and March 2024, ERSA received 14 new submissions. During this reporting period, 5 working papers were published, bringing the total number of papers published since the inception of the WPS initiative in 2005 to 889.

Additionally, ERSA published 8 discussion documents during this period.

Submissions for the current year have been processed via the ERSA website and managed by the Chief Editor, with assistance from Yoemna Mosaval.

Yours truly,

Guangling Liu
Editor

Economics Prizes

To promote excellence in economics, ERSA has reinstated its recognition program for outstanding student performance in the field.

Each year, ERSA awards monetary prizes to the top two economics students in South Africa across all universities for every year of study. Though the amounts are modest, the prizes enable universities to honour their highest achievers and encourage continued dedication to the study of economics.

The prizes are R1,500 for the top student and R1,000 for the runner-up.

This year, seven institutions participated in the program. Although the University of Fort Hare (UFH) has two campuses, only one submitted winners, and they are counted as a single institution. A total of 91 prizes were awarded.

The following universities are receiving the awards for their top students, with details of the prize winners provided in the table below.

Institution	Placing	First Year	Second Year	Third Year	Honours	Masters	PhD
U Cape Town	First				M. Hoffman	S. Pan	E. Whitelaw
	Second				E. Musselwhite	N. Pillay	L. Taylor
Nelson Mandela University	First	K. Baloyi	A. Gabuza	A. Mangaliso	S. Mkandawire	L. Erasmus	S. Mvelamva
		I. Vilana	K. Ndlovu	M. Daka	E. Jara		
		M. Doyle	A. Shongwe				
		C. Dames	S. Mabuza				
		M. Gamela	N. Putela-Sidlayiwa				
	Second	A. Ntengento	A. Solomon	C. Mashayamombe	W. Muula	N. Vuba	O. Moloyi
		L. Venter	J. Lowo	T. Masepa	I. Ndengu		
		A. Majeni	S. Matthews		T. Simwaka		
U Fort Hare (East London Campus)	First	S. Zulu	N. Tuli	Z. Bota	Z. Mhlana		
		S. Mayiji	A. Vayisi				
	Second	J. Dlamini	X. Mbanjwa	N. Mboyana	E.I. Ntshobane		
		N. Songca	Y.N. Somi				
			Z. Sifumba				
U Free State	First	T. Grobbelaar	A. Hope	K. Panyane	M. Skosana	M. Ramats'bane	B. Katuka
						L. Moepi	
	Second	M. Lukho	C. Bridgens	L. Mokopoi		L. Moepi	
			L. Magodielo				
U Limpopo	First	D. Moloto	R.P. Musiamo	V.P. Mboweni	O.M. Majadiboni		
	Second	S.R. Raphunga	I.N. Serakwane	M. Nakedi Prisley	M.P. Mosese		
U Stellenbosch	First	Penzhorn	J. Grobbelaar	L.R. Bester	T.J. Janisch	CD Pengelly	
	Second	L.A. Rossouw	B. Roelofse	J.A. Gray	S.M. Dachs	C. De Swardt	
					A.L. le Roux		
					S. Rossouw		
U Western Cape	First	C. Matji	R. Hendricks	G. Fisher	A. Ratya	C. Anthony	
		X. Mtyhalwa					
		L.H. Phillip					
	Second		S. Bistol	O. Nkontso	M. Mpana	J. Botha	
				C. Wyngaard			

Skills Development Program

Report: ERSA Skills Development Workshop - Panel Data Econometrics

Cohort 7 (13 – 24 November 2023) and
Cohort 8 (27 November 2023 – 8 December 2023)

Presented by the University of Pretoria, Department of Economics
Instructor: Reneé van Eyden

Introduction
This document provides a brief account of the virtual offering of the Panel Data Econometrics workshop of the ERSA-sponsored Skills Development programme.

Participants
A total of 25 participants (cohort 7) and 28 participants (cohort 8) attended the third workshop in the series during November and December of 2023 (refer to Appendix A for participants' details and affiliations).

Scheduling and presentation
Instead of having a weeklong face-to-face training in a computer lab on campus, we scheduled both courses over two weeks, from 13 to 24 November 2023 (cohort 7) and from 27 November to 8 December 2023 (cohort 8) respectively, i.e., 10 days of training per course.

All material was made available on Google Drive, with separate folders for daily announcements and meeting recordings, lecture material, practical applications, textbook references, etc. Daily announcements of topics covered (theoretical and practical) were posted on the shared drive and communicated in email as necessary.

A total of 10 Zoom sessions per course were scheduled, each lasting between two and two and a half hours. Some sections of the material were covered during the live session, with the remainder consisting of video recordings accompanying written material.
In addition to live group sessions, individual sessions were scheduled as requested by participants, which opportunity allowed for more effective communication and targeted discussion and clarification.
Instead of a formal assessment opportunity, full worked examples with suggested solutions were made available for participants to work through in their own time.

Refer to Appendix B (Cohort 7) and Appendix C (Cohort 8) for the topic outline and course schedule communicated to participants for the respective courses.

Positive aspects
ERSA purchased a six-month Stata software license for each delegate to support the ongoing use of the software.
Participants can refer to Zoom class recordings and other narrated material at a later stage.
Individual sessions are probably the single most valuable aspect of a virtual course, as they help clarify many uncertainties that exist after engaging with the material.

Negative aspects
We do not have a formal attendance register, and there was not full attendance at all times, probably because the Zoom recordings were made available. It is sometimes also difficult to judge the extent to which participants engage with the material. Whereas some were active in discussion and asked questions, some were quiet and did not contribute much, but this is probably not very different to a normal class situation.

Appendix A

Cohort 7 participants

Name	Surname	Affiliation	E-mail address
Rochelle	Beukes	U of the Western Cape	rgbeukes@uwc.ac.za
Celeste	Campher	U of the Free State	camphercelestе@gmail.com
Daniel	Dlamini	U of Eswatini	dan@uniswa.sz
Dorah	Dubihlela	Walter Sisulu University	kinsibanda@wsu.ac.za
Asanda	Fotoyi	Nelson Mandela Metropolitan University	asanda.fotoyi@mandela.ac.za
Innocentia Nothando	Hlongwane	Tshwane University of Technology	HlongwaneIN@tut.ac.za
Kholofelo	Hlungwani	Nelson Mandela Metropolitan University	kholohlungwani@gmail.com
Maggie	Kgomo	U of Limpopo	Maggiekholo@live.co.za
Keoagile Clement Seane	Kobedi	Tshwane University of Technology	KobediKCS@tut.ac.za
Nwabisa	Malimba	Rhodes University	n.malimba@ru.ac.za
Kholiswa	Malinidini	U of the Witwatersrand	kholiswa.malindini@wits.ac.za
Juniours	Marire	Rhodes University	j.marire@ru.ac.za
Kesaobaka	Mmelesi	U of Johannesburg	kmmelesi@uj.ac.za
Leonard Sello	Mmofsoa	Tshwane University of Technology	MmofsoaLS@tut.ac.za
Calvin	Mudzingiri	U of the Free State	mudzingiric@ufs.ac.za
Eric	Mungatana	U of Stellenbosch	emungatana@sun.ac.za
Angelique	Nindi	U of Eswatini	nindiangie@gmail.com; agnindi@uniswa.sz
Nomusa Yolanda	Nkomo	U of Johannesburg	nomsaynkomo@gmail.com
Phindile	Nkosi	U of Johannesburg	phindilen@uj.ac.za
Thobekile	Qabhobho	Nelson Mandela Metropolitan University	Thobekile.qabhobho@mandela.ac.za
Ombeswa	Ralarala	U of Limpopo	ombeswa.ralarala@ul.ac.za
Ndivhuho	Ratombo	U of Limpopo	ndivhuho.ratombo@ul.ac.za; ratombo.ne@gmail.com
Coster	Ruzengwe	Rhodes University	cruzengwe@gmail.com
Ivan	van der Merwe	U of the Free State	vdmerwei@ufs.ac.za
Arno Johan	Van Niekerk	U of the Free State	niekerka@ufs.ac.za

Cohort 8 participants

Name	Surname	Affiliation	e-mail address
Qoko	Alungile	Walter Sisulu University	alungileqoko52@gmail.com
Sandisiwe Abongile	Bom	U of Fort Hare	abongilebom@gmail.com
Celeste	Campher	U of the Free State	camphercs@ufs.ac.za
Ruth	Castel Branco	U of the Witwatersrand	ruthcastelbranco@gmail.com
Lydia	Chikumbi	U of Cape Town	lydiachikumbi@gmail.com
Regina	Conselho Mwiinga	U of Johannesburg	reginafj@yahoo.com
Unathi	Dingiswayo	Walter Sisulu University	unathidingiswayo1@gmail.com
Dorah	Dubihlela	Walter Sisulu University	ddubihlela@wsu.ac.za
Assegid	Hellebo	U of Cape Town	assegid2013@gmail.com
Pavan	Hiramoney	U of KwaZulu-Natal	215063232@stu.ukzn.ac.za
Tshembani Mackson	Hlongwane	U of the Western Cape	tshembanihlongwane@gmail.com
Mbalenhle Precious	Jeza	U of Zululand	mbalipjeza@gmail.com; jezam@unizulu.ac.za
Frederich	Kirsten	U of Johannesburg	fkirsten@uj.ac.za
Tafadzwa	Lukwa	U of Cape Town	tafadzwalukwa@gmail.com
Queen	Mabe	U of Johannesburg	magadim@uj.ac.za
Gildas	Magbonde	U of Cape Town	gildasmagbonde@gmail.com
Khukanyile	Mali	U of the Western Cape	3558441@myuwc.ac.za
Shingiriria	Mashura	U of the Western Cape	mashursa@yahoo.com
Sipokazi	Mayekiso	U of Fort Hare	smayekiso@ufh.ac.za
Ottet	Mpungose	U of Zululand	mpungoseottet@yahoo.com
Khayakazi	Mswephu	U of Fort Hare	mswephu@gmail.com
Xola	Ntshuntshe	Walter Sisulu University	kinsibanda@wsu.ac.za
Bothwell	Nyajena	U of Stellenbosch Business School	B.Nyajena@AFDB.org
Marshall	Petersen	U of the Western Cape	marshall.petersen@live.com
Antonie	Pool	U of the Free State	poolan@ufs.ac.za
Kgabo	Rammutla	Northwest University	rammutlak@gmail.com
Sanele	Skeyi	U of Cape Town	SKYSAN001@myuct.ac.za
Simbarashe	Tendengu	U of KwaZulu-Natal	215063232@stu.ukzn.ac.za

Appendix B

ERSA Skills Development Workshop Panel Data Econometrics
Presented by the University of Pretoria
13 – 24 November 2023

Welcome to the final session in the series of three workshops! In this workshop, we will be focusing on Panel Data Econometrics. We trust that you will find the experience enriching and helpful for your own research, teaching and supervision.

In this document we communicate important information logistical information regarding contact details of your instructor, course material, scope of material and daily programme.

Your instructor:
Prof. Reneé van Eyden, renee.vaneyden@up.ac.za

Communication and medium of instruction:
You will receive an invitation and link to attend the daily Zoom meetings. The link will be forwarded to you separately.

Course material:
Course materials, schedules, daily communication and recording were made available on google drive.

Software:
You will receive a course license for Stata to install on your own computer. The link will be forwarded to you separately.

Even though we are flexible in what we cover, a suggested outline and programme are provided below. The aim is to acquire the necessary theoretical background but also be exposed to hands-on empirical application, using Stata software.

During the period of 13 to 24 November, you can expect to spend an estimated 40 hours on the course material, working through reading material, recorded lectures and practical assignments. We will have a virtual meeting daily at 9:00 am, which may last between one and two hours. In addition, your instructor will be available at all times should you encounter a problem while working through the material.

We assume the following prior knowledge; basic statistical methods, such as the calculation of means and standard deviations, as well as hypothesis testing, primarily t, z, F and $\chi 2$ distribution-based tests. Furthermore, a fairly good understanding of matrix algebra is necessary for the theory of Panel Data Econometrics. Appendix (B) in the Gujarati & Porter text (available in the Google Drive folder, **Textbook References**) is a good source to revise your skills in matrix algebra, while Appendix (A) is useful for refreshing basic statistical concepts. The Classical Normal Linear Regression model and the OLS estimator, as well as violations of the Classical Assumptions and potential remedies remain important and are extended to the panel case in this workshop. The Baltagi text will be our main textbook reference for this course (supplemented by the Wooldridge text), but as a start, **Chapter 16** in Gujarati & Porter provides a brief and simple introduction to panel data techniques.

Description of course:

In this course "panel data" refers to the pooling of observations on a cross-section of countries, households, firms, individuals, etc., over a number of periods. Panel data often allows for more informative results, more variability, more degrees of freedom and more efficiency. The course covers techniques applicable to both stationary and non-stationary panel data sets and static and dynamic model specifications.

We begin the discussion with the static linear model in a panel data setting. We start with the fixed effects (FE) model and pay attention to the least squares dummy variable (LSDV) estimator and the within transformation (Within estimator). As an alternative way to eliminate the individual effects, we look at the first-difference (FD) estimator and the difference-in-difference estimator. We distinguish between one-way and two-way error component models. Relevant hypothesis testing includes testing for the validity of fixed effects, i.e. pooling of slope and intercept coefficients vs only pooling the slopes (Baltagi, Chapters 1, 2).

We continue the discussion by assuming a case where individual effects can be considered random factors, independently and identically distributed over cross-sections, i.e. the random effects (RE or EGLS) estimator (Baltagi, Chapters 2, 3). We also discuss choosing between FE and RE. Relevant hypothesis testing includes testing the validity of random effects and the Hausman specification (endogeneity) test (Baltagi, Chapter 4). We also consider tests for heteroscedasticity and serial correlation in panel data models; testing for it and the correction thereof (Baltagi, Chapter 5).

The next topic is simultaneous equations with error components: we consider the endogeneity of the regressors; Instrumental variable (IV) estimation (Within 2SLS, Between 2SLS, Error component 2SLS, Generalised 2SLS); Endogeneity occurring through the unobserved individual effects; and the Hausman and Taylor estimator (Wooldridge, Chapters 4, 5, 8, 9).

The above is followed by dynamic panel data models (Baltagi, Chapter 8). We cover dynamic relationships and sources of persistence; Nickell (1981) bias and corrections; Arellano and Bond (1991) DIF-GMM estimator; Arellano and Bover (1995) estimator; Blundell and Bond (1998) SYS-GMM estimator; and Keane and Runkle (1992) estimator.

We next revisit panel heterogeneity, also paying attention to cross-sectional dependence (Lecture Notes). We consider models that extend heterogeneity in intercept coefficients to heterogeneity in slope coefficients, including the Mean Group (MG) estimator of Pesaran and Smith (1995); Pooled Mean Group (PMG) estimator (Pesaran & Smith 1997; Pesaran, Shin & Smit, 1999); Swamy's (1970) Random Coefficient (RC) estimator; and Zellner's (1962) Seemingly Unrelated Regression (SUR) estimator. We also consider cross-section (between-group) dependence: SUR and Pesaran's (2006) Common Correlated Effects (CCE) estimator.

We conclude the course with a discussion on non-stationarity in panels (Baltagi, Ch 12), focusing on panel unit root tests assuming cross-section independence and panel unit root tests assuming cross-sectional dependence. We also discuss the concept of spurious regressions in panel data and panel cointegration tests. We conclude this section with a discussion on estimation and inference in panel cointegration models.

Topic overview of the course:

Stationary panel data

- Introduction
- One-way error component models
- Two-way error component models
- Hypothesis testing

IV and Dynamic panel data

- Instrumental variables
- Dynamic panel data models

Panel heterogeneity revisited

- Heterogeneity in slope coefficients
- Cross-sectional dependence

Non-stationary panel data

- Overview of the issues
- Unit root tests
- Estimation with non-stationary time series
- Cointegration tests

Schedule:

On the calendar on the next page, the times of virtual meetings are scheduled together with planned topic coverage. You will receive daily detailed communication in terms of material to cover for each topic.

I look forward to engage with you!

Reneé van Eyden

November 2023

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10	11	12
13 **9:00-11:00** Intro/Overview; Pooled OLS; One-way FE	14 **9:00-11:00** One-way FE, RE Stata application	15 **9:00-11:00** Two-way FE, RE	16 **9:00-11:00** Hypothesis testing: Poolability Endogeneity	17 **9:00-11:00** Hypothesis testing: Serial correlation Heteroskedasticity	18	19
20 **9:00-11:00** Instrumental Variables	21 **9:00-11:00** Dynamic Panel	22 **9:00-11:00** Slope Heterogeneity Cross-sectional dependence	23 **9:00-11:00** Non-stationary panel	24 **9:00-11:00** Wrap-up session	25	26
27	28	29	30			

Appendix C

ERSA Skills Development Workshop Panel Data Econometrics

Presented by the University of Pretoria

27 November – 8 December 2023

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Description of course:
In this course, "panel data" refers to the pooling of observations on a cross-section of countries, households, firms, individuals, etc., over a number of periods. Panel data often allows for more informative results, more variability, more degrees of freedom and more efficiency. The course covers techniques applicable to both stationary and non-stationary panel data sets and static and dynamic model specifications.

We begin the discussion with the static linear model in a panel data setting. We start with the fixed effects (FE) model and pay attention to the least squares dummy variable (LSDV) estimator and the within transformation (Within estimator). As an alternative way to eliminate the individual effects, we look at the first-difference (FD) estimator and the difference-in-difference estimator. We distinguish between one-way and two-way error component models. Relevant hypothesis testing includes testing for the validity of fixed effects, i.e. pooling of slope and intercept coefficients vs only pooling the slopes (Baltagi, Chapters 1, 2).

We continue the discussion by assuming a case where individual effects can be considered random factors, independently and identically distributed over cross-sections, i.e. the random effects (RE or EGLS) estimator (Baltagi, Chapters 2, 3). We also discuss choosing between FE and RE. Relevant hypothesis testing includes testing the validity of random effects and the Hausman specification (endogeneity) test (Baltagi, Chapter 4). We also consider tests for heteroscedasticity and serial correlation in panel data models; testing for it and the correction thereof (Baltagi, Chapter 5).

The next topic is simultaneous equations with error components: we consider the endogeneity of the regressors; Instrumental variable (IV) estimation (Within 2SLS, Between 2SLS, Error component 2SLS, Generalised 2SLS); Endogeneity occurring through the unobserved individual effects; and the Hausman and Taylor estimator (Wooldridge, Chapters 4, 5, 8, 9).

The above is followed by dynamic panel data models (Baltagi, Chapter 8). We cover dynamic relationships and sources of persistence; Nickell (1981) bias and corrections; Arellano and Bond (1991) DIF-GMM estimator; Arellano and Bover (1995) estimator; Blundell and Bond (1998) SYS- GMM estimator; and Keane and Runkle (1992) estimator.

We next revisit panel heterogeneity, also paying attention to cross-sectional dependence (Lecture Notes). We consider models that extend heterogeneity in intercept coefficients to heterogeneity in slope coefficients, including the Mean Group (MG) estimator of Pesaran and Smith (1995); Pooled Mean Group (PMG) estimator (Pesaran & Smith 1997; Pesaran, Shin & Smit, 1999); Swamy's (1970) Random Coefficient (RC) estimator; and Zellner's (1962) Seemingly Unrelated Regression (SUR) estimator. We also consider cross-section (between-group) dependence: SUR and Pesaran's (2006) Common Correlated Effects (CCE) estimator.

We conclude the course with a discussion on non-stationarity in panels (Baltagi, Ch 12), focussing on panel unit root tests assuming cross-section independence and panel unit root tests assuming cross-sectional dependence. We also discuss the concept of spurious regressions in panel data and panel cointegration tests. We conclude this section with a discussion on estimation and inference in panel cointegration models.

Topic overview of the course:

Stationary panel data
- Introduction
- One-way error component models
- Two-way error component models
- Hypothesis testing

IV and Dynamic panel data
- Instrumental variables
- Dynamic panel data models

Panel heterogeneity revisited
- Heterogeneity in slope coefficients
- Cross-sectional dependence

Non-stationary panel data
- Overview of the issues
- Unit root tests

- Estimation with non-stationary time series
- Cointegration tests

Schedule:

On the calendar on the next page, the times of virtual meetings are scheduled together with planned topic coverage. You will receive daily detailed communication in terms of material to cover for each topic.

I look forward to engage with you!

Reneé van Eyden

November 2023

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27 **9:00-11:00** Intro/Overview; Pooled OLS; One-way FE	28 **9:00-11:00** One-way FE, RE Stata application	29 **9:00-11:00** Two-way FE, RE	30 **9:00-11:00** Hypothesis testing: Poolability Endogeneity			

December 2023

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1 **9:00-11:00** Hypothesis testing: Serial correlation Heteroskedasticity	2	3
4 **9:00-11:00** Instrumental Variables	5 **9:00-11:00** Dynamic Panel	6 **9:00-11:00** Slope Heterogeneity Cross-sectional dependence	7 **9:00-11:00** Non-stationary panel	8 **9:00-11:00** Wrap-up session	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Skills Development Report

Cohorts 9 & 10: 29 Jan 2024 to 23 February 2024

Introduction
This document provides a brief account of the virtual offering of the Time Series Econometrics workshop of the ERSA-sponsored Skills Development programme.

Participants
A total of 15 participants (cohort 9) and 11 participants (cohort 10) attended the first workshop in the series during January and February of 2024 (refer to Appendix A for participants' details and affiliations).

Scheduling and presentation
Instead of having a weeklong face-to-face training in a computer lab on campus, we scheduled the course over a period of two weeks, from 29 January to 9 February 2024 (cohort 9) and from 12 to 23 February 2024 (cohort 10) respectively, i.e., 10 days of training per course.

All material was made available on Google Drive, with separate folders for daily announcements and meeting recordings, lecture material, practical applications, and textbook references. Daily announcements of topics covered (theoretical and practical) were posted and communicated in email as necessary.

A total of 10 Zoom sessions were scheduled, each lasting between two and two and a half hours. Some sections of the material were covered during the live session, with the remainder consisting of video recordings accompanying written material. Examples of using the software were also narrated and made available as mp4 files.

In addition to live group sessions, individual sessions were scheduled as requested by participants, allowing for more effective communication and targeted discussion and clarification.

At the end of each week, a written assignment consisting of discussion questions and a dataset was given, with a solution made available for self-assessment.

Refer to Appendix B (Cohort 9) and Appendix C (Cohort 10) for a topic outline and course schedule communicated to participants for the respective courses.

Positive aspects
ERSA purchased a software license for each delegate that is valid for six months, supporting ongoing use of the software.

Participants can refer to Zoom class recordings and other narrated material at a later stage.

Individual sessions are probably the single most valuable aspect of a virtual course, as they help clarify many uncertainties that exist after engaging with the material.

Negative aspects
We do not have a formal attendance register, and there was no full attendance at all times, probably because the Zoom recordings were made available. It is sometimes also difficult to judge the extent to which participants engage with the material. Whereas some were active in the discussion and asked questions, some were quiet and did not contribute much, which is probably not very different from a regular class situation.

Prepared by Reneé van Eyden
Department of Economics
University of Pretoria
2024-06-20

Appendix A

Cohort 9 participants

	Name	Surname	Affiliation	Email
1	Nolwazi	Biyela	UKZN	biyelan1@ukzn.ac.za
2	Paidamoyo	Bodzo	UCT	bodzo.panashe@gmail.com
3	Abigail	Chari	US	abiechari@gmail.com
4	Andiswa	Jiza	UFH	andiswajiza@gmail.com
5	Amos	Kubeka	UNISA	kubekas@unisa.ac.za
6	Priscah	Kyalo	Wits	2377629@students.wits.ac.za
7	Realeboga	Mahapa	NWU	realeboga.Mahapa@nwu.ac.za
8	Mphumzi	Makeleni	UWC	mphumzimm@gmail.com
9	Priscilla	Makukula	UJ	priscilla.makukula@gmail.com
10	Qaqambile	Mathentamo	UFH	ngangolwandlekazamkhaya@gmail.com
11	Bahle	Mgxekwa	UFH	bahlegeorge@gmail.com
12	Nathan	Mugumisi	UKZN	mugumisin@gmail.com; 222125080@stu.ukzn.ac.za
13	Amahle	Ninana	UFH	aaninana@gmail.com
14	Kelechi	Nnene	UCT	nnnkel002@myuct.ac.za
15	Thembalethu	Seti	CPUT	setit@cput.ac.za

Cohort 10 participants

	Name	Surname	Affiliation	Email
1	Kayla	Bennett	UWC	3120684@myuwc.ac.za
2	Douglas	Chikabwi	UKZN	dougiechikabwi@gmail.com
3	Mutsawashe	Chitando	UCT	chtmut001@myuct.ac.za
4	Luqman	Jama	UCT	jmxluq001@myuct.ac.za
5	Valentine	Madzudzo	US	veemadzudzo@gmail.com
6	Leseko	Makhetha	National U of Lesotho	lesekomakhetha@gmail.com
7	Panashe Paul	Mazungunye	US	17564700@sun.ac.za
8	Talent	Ndlovu	UFS	nndabenhle@gmail.com
9	Denis	Okova	UCT	denisokova@gmail.com
10	Mercyline	Rotich	Rhodes U	mercylinerotich50@yahoo.com
11	Lovemore	Taonezvi	BaIsago University	lovemore.t.taonezvi@gmail.com

Appendix B

ERSA Skills Development Workshop Time Series Econometrics Cohort 9
Presented by the University of Pretoria
29 January – 9 February 2024

Welcome to the first in a series of three workshops focusing on Time Series, Cross Section, Panel Data Econometrics, respectively. The Time Series course also extends to cover computation and DSGE models. All courses are presented remotely. We trust that you will find the virtual learning experience enriching and helpful for your research, teaching and supervision.

Your instructors for Time Series Econometrics:
Prof Reneé van Eyden, renee.vaneyden@up.ac.za
Prof Ruthira Naraidoo, ruthira.naraidoo@up.ac.za

Even though we are flexible in what we cover, a suggested outline and programme are provided below. The aim is to acquire the necessary theoretical background but also be exposed to hands-on empirical application, using software like EViews, Stata, R and Matlab and toolboxes such as Dynare and RISE for the computation and estimation of DSGE models. For this course in Time Series Econometrics, we will focus on EViews and Matlab, with some applications in R.

During the period between 29 January and 9 February (and beyond), you can expect to spend an estimated 40 to 50 hours on the course material, working through reading material, recorded lectures and practical assignments. Roughly half to two-thirds of the estimated time will be spent on online discussion using Zoom. In addition, your instructors will be available at all times should you encounter a problem while working through the material.

We assume the following prior knowledge; basic statistical methods, such as the calculation of means and standard deviations, as well as hypothesis testing, primarily t, z, F and x^2 distribution-based tests, Markov processes, Bayesian econometrics and an understanding of micro-founded macroeconomics. Furthermore, a modest understanding of matrix algebra is assumed, implying that you can, for example, interpret the solution to the OLS problem, as well as follow the explanation of the concept of vector autoregression and multivariate cointegration. Some coding language, such as in Matlab is warranted. References will be provided should you feel that you need a refresher in basic statistics, hypothesis testing, the Classical Normal Linear Regression model and the OLS estimator, as well as violations of the Classical Assumptions and potential remedies. Some knowledge of Markov processes and Bayesian econometrics are highly appreciated.

The focus of the first workshop is on modelling techniques for time series data when unit roots are present in the data. An overview of the technical characteristics of time series data and the concept of non-stationarity is provided; and the econometric techniques of cointegration and error correction modelling in single equations (residual-based cointegration) are discussed, with emphasis on empirical application. This is followed by the theory and application of vector autoregression and multivariate cointegration. The focus on VAR models concentrates on shocks. First, the relevant shocks are identified, and the response of the system to shocks is described by analysing impulse responses (the propagation mechanism of the shocks), forecasting error variance decomposition, and historical decomposition. Time-permitting, the course also includes a brief discussion on the application of volatility models.

Communication and course material
You will receive an invitation and link to attend Zoom meetings in advance. The link for Monday's meeting (29 January) will be forwarded to you on Friday, 26 January.

Course material:
Course materials, schedules, daily communication and recording were made available on google drive.

It is advised that you bookmark these links for easy access during the course.

On the next pages, we present the topic outline and schedule for the workshop.

We look forward to engaging with you!
Reneé and Ruthira

Planned topics to cover during the Time Series Econometrics workshop

PART 1

1. Research Orientation and the Econometric Approach to Analysis (mostly assumed prior knowledge)
   a. Research orientation
   b. The nature of the econometric approach
   c. Purposes of econometrics
   d. Introduction to the simple linear regression model
   e. OLS Estimator, properties
   f. The Classical Normal Linear Regression Model (CNLRM)
   g. Goodness of fit
   h. Hypothesis testing
   i. Example in EViews: Model Specification, Estimation, Evaluation and Interpretation

2. Time Series Econometrics
   a. Underlying data-generating process and concepts of stationarity and non-stationarity
   b. Unit root tests (ADF, PP, DF-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 response characteristics (time permitting)
   h. Introduction to Vector autoregressive (VAR) model
   i. Lag-length test and determination of VAR order
   j. Multivariate cointegration technique (Johansen Maximum Likelihood method)
   k. Block causality and exogeneity test
   l. Weak exogeneity tests and model identification
   m. ARDL/Bounds testing approach (Pesaran et al.) to cointegration
   n. Practical examples and Exercise in EViews and Matlab/R

3. Volatility Models (Introduction and demonstration) (time permitting)
   a. Properties and theoretical and empirical Issues
   b. ARCH processes
   c. ARCH, GARCH and GARCH-M models
   d. Estimation and prediction
   e. Interpretation and evaluation of results

PART 2

4. Vector Autoregression (VAR) models
   a. Constant-parameter VARs:
   b. Introduction, applications, specification and classical inference
   c. Impulse response, forecast error variance decomposition and historical decomposition.
   d. Relationship between reduced form VARs and structural econometric models (SVARs). Sign restrictions. Identification and IRFs. Granger causality and exogeneity
   e. Bayesian analysis
   f. Structural VAR for regime switching

5. DSGE modelling, computation and estimation
    a. Real Business Cycle model and Basic New Keynesian model for monetary policy analysis
    b. Computation of Steady State, Log linearization, Introduction to RISE toolbox; calibration, model solution computation and estimation of DSGE models using maximum likelihood and Bayesian approach

Below, a suggested timeline is proposed. Reneé will be the principal instructor from 29 January to 2 February (Part 1), while Ruthira will facilitate the workshop from 4 to 9 February (Part 2).

Suggested timeline for workshop, first week 29 January – 2 February (PART 1):

Monday, 29 January	Tuesday, 30 January	Wednesday, 31 January	Thursday, 1 February	Friday, 2 February
09:00-12:00 Zoom meeting □ Meet fellow workshop participants and your instructor for this week, Prof Reneé van Eyden □ Introduction to course material □ Overview of techniques covered in the course	09:00-12:00 Zoom meeting □ Questions on the previous day's material □ Time series concepts □ Stationarity vs. non-stationarity □ Data generating process (DGP) □ Unit root testing	09:00-12:00 Zoom meeting □ Questions on the previous day's material □ Engle-Granger (E-G) cointegration method □ Long-run cointegration □ E-G (residual-based) cointegration test □ Engle-Granger (E-G) Error correction model □ Derivation of ECM from ARDL model	09:00-12:00 Zoom meeting □ Questions on the previous day's material □ Construction of ECM □ Diagnostic testing □ Introduction to vector autoregression (VAR) model specification □ Lag-length test and determining the order of the VAR	9:00-12:00 Zoom meeting □ Questions on the previous day's material □ Johansen multivariate cointegration and vector error correction model □ Comparison of three methods of cointegration, including Engle-Granger, Pesaran's ARDL (Bounds testing), and Johansen multivariate approach □
In your own time: **Optional refresher:** □ Basic statistics (mean, standard deviation, variance, etc.) □ Hypothesis testing □ CLRM and OLS □ Classical Assumptions of CLRM and violations	**Material to revise on your own:** □ Time series concepts □ Stationarity and non-stationarity □ Unit root testing (Watch narration of Stationarity and URT)	**Material to revise on your own:** □ E-G cointegration test	**Material to revise on your own:** □ Construction of ECM □ Diagnostic testing □ VAR example	**Material to revise on your own:** □ Cointegration 3-ways
Practical application in EViews: □ Work through Example 1 (South African Export demand) Software support: EViews online tutorials on www.eviews.com Download EViews Illustrated from eviews.com under Learning Resources	**Practical application in EViews:** □ Work through Example 2, Pract 1 (South African rand-US dollar exchange rate – unit root testing)	**Practical application in EViews:** □ Work through Example 2, Pract 2 (South African rand- US dollar exchange rate – long-run cointegration relationship)	**Practical application in EViews:** □ Work through Example 2, Pract 3 (South African rand- US dollar exchange rate – ECM and diagnostic testing) □ VAR example	**Practical application in EViews:** □ Pract: Multivariate cointegration example (applied to South African money demand) □ Pract: Cointegration 3-ways (Applied to South African exports)

Suggested timeline for workshop, second week, 5 – 9 February (PART 2):

Monday, 5 February	Tuesday, 6 February	Wednesday, 7 February	Thursday, 8 February	Thursday, 9 February
09:00-12:00 □ Meet your instructor, Prof Ruthira Naraidoo □ Introduction to course material □ Vector Autoregression □ Impulse response functions, forecast error variance decomposition and historical decomposition	09:00-12:00 □ Questions on previous day's material □ Vector autoregression □ Classical Inference (Maximum Likelihood and OLS estimation)	09:00-12:00 □ Questions on previous day's material □ Vector autoregression □ Reduced form and Structural VARs, Granger Causality and Exogeneity	09:00-12:00 □ Questions on previous day's material □ Bayesian Inference □ SVAR for regime switching	09:00-12:00 □ Questions on previous day's material □ DSGE models, computation and estimation
Material to revise on your own: □ Basic matrix algebra and basic coding in Matlab □ Enders: chap 5, Kilian and Lutkephol first few chap, Hamilton: chap 10-11 □ VAR model □ -Practical: work through the 'Learning_MatLab' folder	**Material to revise on your own:** □ OLS estimator, Maximum Likelihood □ Impulse response function and Variance decomposition	**Material to revise on your own:** □ VARs and Structural econometric models	**Material to revise on your own:** □ Bayesian econometrics □ Markov processes and regime switching VARs	**Material to revise on your own:** □ Micro-founded macroeconomics
Practical application in Matlab: □ Coding an unrestricted VAR as in Kilian textbook Chap 2 equation (2.3.1) Software support: Matlab and RISE toolbox	**Practical application in EViews:** □ Work through VAR example in Matlab and RISE Familiarise yourself with other toolboxes such as Cesa-Bianchi VAR toolbox	**Practical application in EViews:** □ Work through VAR example in Matlab and RISE	**Practical application in EViews:** □ Work through VAR example in Matlab and RISE	**Practical application in EViews:** □ Work through VAR example in Matlab and RISE ** Complete your assignment.

Appendix C

ERSA Skills Development Workshop Time Series Econometrics, Cohort 10
Presented by the University of Pretoria
12 – 23 February 2024

Welcome to the first in a series of three workshops, focusing on Time Series, Cross Section, Panel Data Econometrics, respectively. The Time Series course also extends to cover computation and DSGE models. All courses are presented remotely. We trust that you will find the virtual learning experience enriching and helpful for your research, teaching and supervision.

Your instructors for Time Series Econometrics:
Prof Reneé van Eyden, renee.vaneyden@up.ac.za
Prof Ruthira Naraidoo, ruthira.naraidoo@up.ac.za

Even though we are flexible in what we cover, a suggested outline and programme are provided below. The aim is to acquire the necessary theoretical background but also be exposed to hands-on empirical application, using software like EViews, Stata, R and Matlab and toolboxes such as Dynare and RISE for the computation and estimation of DSGE models. For this course in Time Series Econometrics, we will focus on EViews and Matlab, with some applications in R.

During the period between 29 January and 9 February (and beyond), you can expect to spend an estimated 40 to 50 hours on the course material, working through reading material, recorded lectures and practical assignments. Roughly half to two-thirds of the estimated time will be spent on online discussion using Zoom. In addition, your instructors will be available at all times should you encounter a problem while working through the material.

We assume the following prior knowledge; basic statistical methods, such as the calculation of means and standard deviations, as well as hypothesis testing, primarily t, z, F and x^2 distribution-based tests, Markov processes, Bayesian econometrics and an understanding of micro-founded macroeconomics. Furthermore, a modest understanding of matrix algebra is assumed, implying that you can, for example, interpret the solution to the OLS problem, as well as follow the explanation of the concept of vector autoregression and multivariate cointegration. Some coding language, such as in Matlab, is warranted. References will be provided should you feel that you need a refresher in basic statistics, hypothesis testing, the Classical Normal Linear Regression model and the OLS estimator, as well as violations of the Classical Assumptions and potential remedies. Some knowledge of Markov processes and Bayesian econometrics are highly appreciated.

The focus of the first workshop is on modelling techniques for time series data when unit roots are present in the data. An overview of the technical characteristics of time series data and the concept of non-stationarity is provided; and the econometric techniques of cointegration and error correction modelling in single equations (residual-based cointegration) are discussed, with emphasis on empirical application. This is followed by the theory and application of vector autoregression and multivariate cointegration. The focus on VAR models concentrates on shocks. First, the relevant shocks are identified, and the response of the system to shocks is described by analysing impulse responses (the propagation mechanism of the shocks), forecasting error variance decomposition, and historical decomposition. Time-permitting, the course also includes a brief discussion on the application of volatility models.

Communication and course material
You will receive an invitation and link to attend Zoom meetings in advance. The link for Monday's meeting (29 January) will be forwarded to you on Friday, 26 January.

Course material:
Course materials, schedules, daily communication and recording were made available on google drive.

It is advised that you bookmark these links for easy access during the course.

On the next pages, we present the topic outline and schedule for the workshop.

We look forward to engaging with you!
Reneé and Ruthira

Planned topics to cover during the Time Series Econometrics workshop

PART 1

1. Research Orientation and the Econometric Approach to Analysis (mostly assumed prior knowledge)
   a. Research orientation
   b. The nature of the econometric approach
   c. Purposes of econometrics
   d. Introduction to the simple linear regression model
   e. OLS Estimator, properties
   f. The Classical Normal Linear Regression Model (CNLRM)
   g. Goodness of fit
   h. Hypothesis testing
   i. Example in EViews: Model Specification, Estimation, Evaluation and Interpretation

2. Time Series Econometrics
   a. Underlying data-generating process and concepts of stationarity and non-stationarity
   b. Unit root tests (ADF, PP, DF-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 response characteristics (time permitting)
   h. Introduction to Vector autoregressive (VAR) model
   i. Lag-length test and determination of VAR order
   j. Multivariate cointegration technique (Johansen Maximum Likelihood method)
   k. Block causality and exogeneity test
   l. Weak exogeneity tests and model identification
   m. ARDL/Bounds testing approach (Pesaran et al.) to cointegration
   n. Practical examples and Exercise in EViews and Matlab/R

3. Volatility Models (Introduction and demonstration) (time permitting)
   a. Properties and theoretical and empirical Issues
   b. ARCH processes
   c. ARCH, GARCH and GARCH-M models
   d. Estimation and prediction
   e. Interpretation and evaluation of results

PART 2

4. Vector Autoregression (VAR) models
   a. Constant-parameter VARs:
   b. Introduction, applications, specification and classical inference
   c. Impulse response, forecast error variance decomposition and historical decomposition.
   d. Relationship between reduced form VARs and structural econometric models (SVARs). Sign restrictions. Identification and IRFs. Granger causality and exogeneity
   e. Bayesian analysis
   f. Structural VAR for regime switching

5. DSGE modelling, computation and estimation
    a. Real Business Cycle model and Basic New Keynesian model for monetary policy analysis
    b. Computation of Steady State, Log linearization, Introduction to RISE toolbox; calibration, model solution computation and estimation of DSGE models using maximum likelihood and Bayesian approach

Below, a suggested timeline is proposed. Reneé will be the principal instructor from 12 to 16 February (Part 1), while Ruthira will facilitate the workshop from 19 to 23 February (Part 2).

Suggested timeline for workshop, first week 1 to 23 February (PART 2):

Monday, 12 February	Tuesday, 13 February	Wednesday, 14 February	Thursday, 15 February	Friday, 16 February
09:00-12:00 Zoom meeting - Meet fellow workshop participants and your instructor for this week, Prof Reneé van Eyden - Introduction to course material - Overview of techniques covered in the course	09:00-12:00 Zoom meeting - Questions on the previous day's material - Time series concepts - Stationarity vs. non-stationarity - Data generating process (DGP) - Unit root testing	09:00-12:00 Zoom meeting - Questions on the previous day's material - Engle-Granger (E-G) cointegration method - Long-run cointegration - E-G (residual-based) cointegration test - Engle-Granger (E-G) Error correction model - Derivation of ECM from ARDL model	09:00-12:00 Zoom meeting - Questions on the previous day's material - Construction of ECM - Diagnostic testing - Introduction to vector autoregression (VAR) model specification - Lag-length test and determining the order of the VAR	9:00-12:00 Zoom meeting - Questions on the previous day's material - Johansen multivariate cointegration and vector error correction model - Comparison of three methods of cointegration, including Engle-Granger, Pesaran's ARDL (Bounds testing), and Johansen multivariate approach
In your own time: **Optional refresher:** - Basic statistics (mean, standard deviation, variance, etc.) - Hypothesis testing - CLRM and OLS - Classical Assumptions of CLRM and violations	**Material to revise on your own:** - Time series concepts - Stationarity and non-stationarity - Unit root testing (Watch narration of Stationarity and URT)	**Material to revise on your own:** - E-G cointegration test	**Material to revise on your own:** - Construction of ECM - Diagnostic testing - VAR example	**Material to revise on your own:** - Cointegration 3-ways
Practical application in EViews: - Work through Example 1 (South African Export demand) Software support: EViews online tutorials on www.eviews.com Download EViews Illustrated from eviews.com under Learning Resources	**Practical application in EViews:** - Work through Example 2, Pract 1 (South African rand-US dollar exchange rate – unit root testing)	**Practical application in EViews:** - Work through Example 2, Pract 2 (South African rand- US dollar exchange rate – long-run cointegration relationship)	**Practical application in EViews:** - Work through Example 2, Pract 3 (South African rand- US dollar exchange rate – ECM and diagnostic testing) - VAR example	**Practical application in EViews:** - Pract: Multivariate cointegration example (applied to South African money demand) - Pract: Cointegration 3-ways (Applied to South African exports)

Suggested timeline for workshop, second week, 5 – 9 February (PART 2):

Monday, 19 February	Tuesday, 20 February	Wednesday, 21 February	Thursday, 22 February	Thursday, 23 February
09:00-12:00 - Meet your instructor, Prof Ruthira Naraidoo - Introduction to course material - Vector Autoregression - Impulse response functions, forecast error variance decomposition and historical decomposition	09:00-12:00 - Questions on previous day's material - Vector autoregression - Classical Inference (Maximum Likelihood and OLS estimation)	09:00-12:00 - Questions on previous day's material - Vector autoregression - Reduced form and Structural VARs, Granger Causality and Exogeneity	09:00-12:00 - Questions on previous day's material - Bayesian Inference - SVAR for regime switching	09:00-12:00 - Questions on previous day's material - DSGE models, computation and estimation
Material to revise on your own: - Basic matrix algebra and basic coding in Matlab - Enders: chap 5, Kilian and Lutkephol first few chap, Hamilton: chap 10-11 - VAR model - -Practical: work through the 'Learning_MatLab' folder	**Material to revise on your own:** - OLS estimator, Maximum Likelihood - Impulse response function and Variance decomposition	**Material to revise on your own:** - VARs and Structural econometric models	**Material to revise on your own:** - Bayesian econometrics - Markov processes and regime switching VARs	**Material to revise on your own:** - Micro-founded macroeconomics
Practical application in Matlab: - Coding an unrestricted VAR as in Kilian textbook Chap 2 equation (2.3.1) Software support: Matlab and RISE toolbox	**Practical application in EViews:** - Work through VAR example in Matlab and RISE Familiarise yourself with other toolboxes such as Cesa-Bianchi VAR toolbox	**Practical application in EViews:** - Work through VAR example in Matlab and RISE	**Practical application in EViews:** - Work through VAR example in Matlab and RISE	**Practical application in EViews:** - Work through VAR example in Matlab and RISE ** Complete your assignment.

Graduate Training Program

The Graduate Training Program equips Southern African scholars with essential skills for rigorous academic and policy analysis. This initiative supports ERSA's mission to enhance the scope and quality of economic research in the region.

In the past financial year, two training programs were conducted. Detailed reports of these events are provided below:

Advanced Panel Data Econometrics Report

10 to 21 July 2023
Instructor: Tomson Ogwang (Brock University – Canada)
Convenor: Neryvia Pillay-Bell

Workshop Overview:
From 10 to 21 July 2023, ERSA hosted an intensive Panel Data Econometrics Workshop at the University of Pretoria led by Professor Tomson Ogwang, a professor in the Department of Economics at Brock University, Canada. This workshop aimed to provide advanced training in panel data econometrics, equipping participants with both theoretical knowledge and practical skills.

Participants:
The workshop garnered significant interest, with 120 applications submitted for only 20 available spots. The selection process was highly competitive, ultimately yielding a group of 20 participants who demonstrated exceptional potential and commitment to advancing their expertise in econometrics.

The final participant cohort was notably diverse, with 78% of attendees identifying as black and 44% as female. This diversity reflects ERSA's dedication to fostering an inclusive environment and providing opportunities to underrepresented groups in the field of economics.

Workshop Content:
Over two weeks, participants engaged in an intensive curriculum that covered a comprehensive range of topics within panel data econometrics. Key areas of focus included seemingly unrelated regressions, random coefficients regressions, the pooled model, the fixed effects model and the random effects model, dynamic panels, pseudo-panels, panel unit roots and panel cointegration, panel vector autoregressions and panel ARDL, panel models for limited dependent variables, and panel models incorporating flexible functional forms, including semiparametric fixed effects models.

Participant Feedback:
Feedback from participants was overwhelmingly positive, highlighting the workshop's success in delivering high-quality, impactful training. Specific comments included:

- "The instruction was extremely knowledgeable and patient to answer all the questions. Great balance of theoretical and practical application of exercises as well as time to include our own data in the training."
- "Facilitator was excellent, able to answer queries and introduce me to software I had not used before."

Participants reported significant gains in their knowledge of panel data techniques and practical experience with data and software, which they anticipated applying immediately in their research and teaching. The hands-on approach and the integration of participants' own data into the training were especially valued for their real-world applicability.

Conclusion:
The ERSA Panel Data Econometrics Workshop was a resounding success. Under the expert guidance of Professor Tomson Ogwang, participants gained valuable insights and skills that will enhance their research capabilities and teaching effectiveness. Overall, this workshop not only advanced participants' understanding of econometrics but also fostered a supportive and dynamic learning environment. The positive feedback and immediate applicability of the skills acquired underscore the workshop's value and impact.

Advanced Empirical Methods in Finance and Economics Course

8 August – 7 September 2023
Convenor and Instructor: Lucas Mariani (ERSA)

This course was advanced in empirical microeconomic methods in finance and financial intermediation, in which I revised the most widely used empirical methods in causal analysis in applied finance and economics. We covered recent developments in empirical research on several topics, including corporate and household bankruptcy and financial distress, relationship lending and loan contract design, credit shocks, borrowing constraints and informational frictions, and financial regulation. The main goal of the course is to enable students to learn the main empirical methods in applied economics and finance so they can use these tools in different environments, such as applied macroeconomics and microeconomics, development economics, and finance.

This advanced course in empirical methods was taught over five weeks (8 August – 7 September 2023) and comprised both lectures and practical sessions. During the first four weeks (starting on 8 August), the course was delivered via Zoom on Tuesdays, Wednesdays, and Thursdays from 5-7 pm (SAST). In the last week of the course (4-7 September), we met in person for the four-day practical sessions at the University of Cape Town.

Funding to attend the in-person portion of the course was provided to students not based in Cape Town. The course attracted 125 applicants, and we were only able to accept 25 highly motivated and capable students due to space constraints. We received applications from more than ten countries in Southern Africa, and the accepted students were a diverse group of researchers in the region, including participants originally from South Africa, Kenya, Zimbabwe, Zambia, Nigeria, Malawi, Lesotho, and Namibia, both based in South Africa and abroad. Moreover, the participants were also a diverse group in terms of professional activity, including Ph.D. Students, Central Bankers, civil servants at National Departments, the National Treasury, and researchers in academic and non-academic institutions.

The feedback was very positive (4.8/5), and the participants considered the course relevant for their future endeavours both in terms of capacity building and the network of researchers in the same field as them.

Social Media and Digital Transition

Introduction:
During 2023, ERSA continued to promote its content using the new website and its social media channels. With the increase in in-person events, relative to the online events during the COVID-19 pandemic, the marketing efforts were aimed at creating a good user experience for participants attending our discussions, courses and workshops. Our marketing strategy focused on growing the website traffic (especially for returning visitors) and the social media following, as well as increasing brand awareness and engagement on both our online platforms and offline material. We targeted policymakers, researchers and academics in the macroeconomics field. This report will look at our audience, reach and engagement for our social media channels and website. Little detail will be given for X followers, as the analytics for this platform have been non-existent since it transitioned from Twitter. Website data is taken from the latest version of Google Analytics 4, as well as internal Dashboards we have created to analyse the effectiveness of our social media and marketing strategies on a campaign-by-campaign basis.

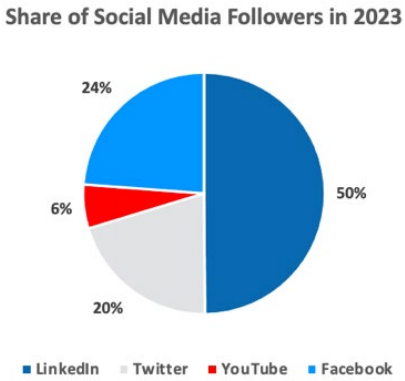
Our audience:
Social Media Overview
During 2023, ERSA focused its social media efforts on LinkedIn and YouTube. This is because policymakers are most active on LinkedIn, and the events we hosted were most conducive to being shared on YouTube (Trade Policy: Clipping SA's Wings and the SAMNet Workshops). With Twitter transitioning to X, no information is available on our 1278 users, and the accessible information to 'Blue' and 'Gold' tick organisations is not only expensive but dominated by bots and, therefore, inaccurate. ERSA must determine whether obtaining a 'Blue' or 'Gold' tick status is worthwhile. Table 1 summarises the change in total followers across all social media platforms.

ERSA increased its total social media following by 31% from 4766 followers in 2022 to 6254 followers in 2023. The largest growth in followers occurred on LinkedIn and YouTube, with the former growing by 1274 followers (69% relative to 2022) and the latter growing by 148 followers (67% relative to 2022).

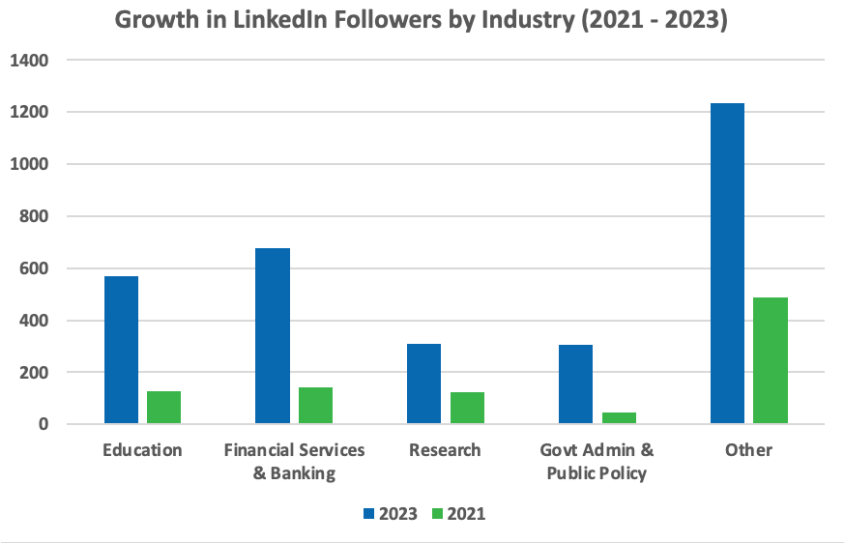
	2020	2021	2022	2023
Linkedin	319	849	1845	3119
Twitter	985	1094	1195	1278
YouTube	99	165	220	368
Facebook	1480	1540	1506	1489
Total	**2883**	**3648**	**4766**	**6254**

Table 1: Total Social Media Followers 2020 - 2023

This means that 50% of ERSA's followers are on LinkedIn, 24% on Facebook, 20% on Twitter and 6% on YouTube, as shown in the graph on the left. Although ERSA's YouTube following is very small, 94% of its YouTube views are from viewers who have not yet subscribed. It is worth encouraging these viewers to subscribe. The largest growth in LinkedIn followers occurred during September, while ERSA was promoting the "Call for Papers: The Role of Cities as Drivers of Growth and Employment' and 'Applications for Skills Development: Time Series' campaigns. The largest growth in YouTube followers occurred at the end of January, during the 2nd CEPR/SAMNet Workshop.



The graph on the right illustrates how the industry to which LinkedIn followers has changed over the past 2 years (this information for 2022 is no longer available). The most growth has occurred in the 'Financial Services and Banking' (533 followers), 'Education' (444 followers) and 'Government Adminisration and Public Policy' (263 followers) Industries. Followers belonging to the 'Research' industry has grown by 186 followers, or 152%. Industries in the 'Other' category include categories that also existed in 2021, such as 'International Trade and Development' and 'IT Services', as well as new categories such as 'Infrastructure', 'Insurance', 'Healthcare', and 'Think Tanks', which did not feature in 2021. Our marketing efforts are therefore reaching our target market



Our social media followers are mostly in Africa, but also from around the world. Our LinkedIn followers are primarily from South Africa, and in Africa we have significant representation from Southern and Eastern Africa, West Africa and Egypt. On other continents, ERSA's LinkedIn followers come from North America, Australia, and from Brazil, Chile, Peru and Colombia, in South America. ERSA's YouTube followers are also primarily from South Africa, with others from the United States, India and the United Kingdom. There is a smaller YouTube following from Russia, Somalia, Nepal, Japan, Germany and Mozambique. ERSA can work towards encouraging viewers form more African countries to subscribe.

Website Overview

ERSA continued to improve the user experience and back-end functionality in both its ERSA and SAMNet websites during 2023. This included improving the search function and fine-tuning the analytics to keep up with Google's updates to GA4. As shown in Table 2, the ERSA website attracted 17 000 new users, and the SAMNet website attracted 3 100 new users during 2023, which together totalled 20 100 users across both sites. Across both sites, 45 % of the users come from South Africa, 12,5% come from the United States and 3% come from the United Kingdom. On the ERSA site, 9% of the users come from Brazil, and 4,9% come from China. Across both websites, the most popular interests amongst the users are 'Banking and Finance', 'Technology' and 'News and Politics'. This is in keeping with our target market, and the largest segment of users are between the ages of 25 and 34 years. Given that the population in South Africa and Africa is skewed towards the youth, this in line with reaching up-and-coming researchers and policymakers.

ERSA Website		SAMNet Website	
Country Origin	**Users**	**Country Origin**	**Users**
South Africa	7 900	South Africa	1 200
United States	1 600	United States	920
Brazil	1 500	United Kingdom	105
China	829	India	88
United Kingdom	520	France	60
Other	4 651	Other	727
Total	**17 000**	**Total**	**3 100**

Table 2: ERSA website following by Country

While ERSA encourages users from across the world, and acknowledges the importance of global collaboration between researchers and policymakers from the West,

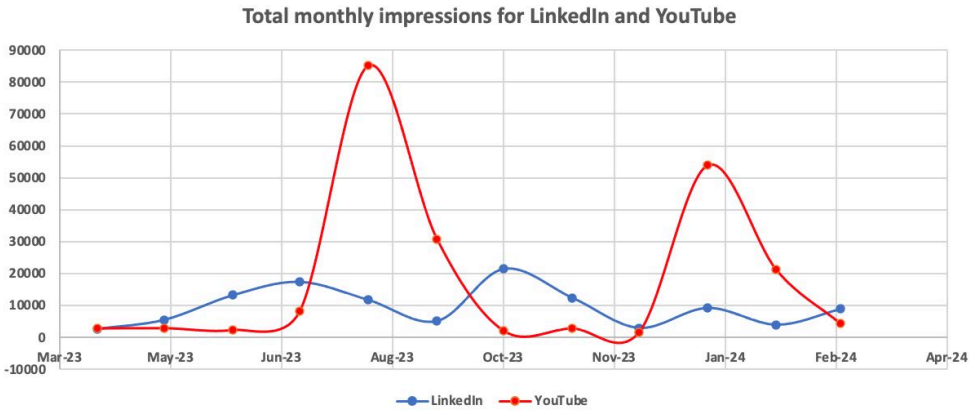
and from BRICS countries, it strives towards generating activity in Sub-Saharan Africa. It will continue to target website users from across the African continent.

Reach and Engagement:

Social Media

Reach is measured by the number of impressions (social media) or pageviews (website) that content receives on each channel and is used as a proxy for brand awareness. This year, due to the lack of information on Twitter (now X), this report focuses on the reach achieved via LinkedIn and YouTube. Across both of these platforms, ERSA received 333 310 impressions (34% from LinkedIn and 66% from YouTube) in 2023. In the past, ERSA's Twitter reach was about the same as that of its LinkedIn reach, so it is worth noting that ERSA's total social media brand awareness is underestimated in this report.

Total monthly impressions on LinkedIn and YouTube change depending on the nature of the content being promoted. As shown in the graph, the impressions on LinkedIn peaked during mid-June 2023, mid-October 2023 and mid-January 2024. During the middle of June, ERSA was accepting applications for the Advanced Empirical Economics Course, the Nonparametric Workshop in R and Skills Development in Time Series. It was also accepting Proposals for the Fintech Workshop. During October, SAMNet opened its Call for Papers, as well as the registration for its conference, which took place at the end of January 2024. These are all training opportunities. On YouTube, there were two significant peaks: the first corresponds with the discussion on Trade Policy: Clipping SA's Wings and the second corresponds with the SAMNet/CEPR Conference at the end of January.



It is useful to consider reach (impressions) and the engagement rate together, as they are usually correlated from the perspective that if people are enjoying the content (high engagement rate), they will share it, and it will have more impressions. The LinkedIn posts that received the highest engagement rate each month are listed in Table 3, and the YouTube engagement metrics are shown in Table 4.

On LinkedIn, during the first quarter, the Time Series Skills Development Call for Applications received the most engagement. This continued in the second quarter but was exceeded by the post promoting the workshop on accelerating economic modelling, which SAMNet offered in collaboration with Opti-Num Solutions. The posts with the most engagement on LinkedIn in the third and fourth quarters were for a podcast by Isaah Mhlanga ahead of the MTBPS, and for thanking the organisers and speakers at the SAMNet/CEPR Workshop, respectively.

Month	Monthly Ave Eng Rate	Post with highest engagement rate
Apr-23	9%	Econometrics Society: Africa Training Workshop Climate Change
May-23	13%	FinTech Workshop: Call for Papers
Jun-23	32%	Skills Development: Call for Applications
Jul-23	45%	Opti-Num Workshop
Aug-23	24%	Skills Development: Call for Applications
Sep-23	6%	Podcast: Waldo
Oct-23	31%	Podcast: MTBPS Isaah Mhlanga
Nov-23	18%	2nd ERSA CEPR Workshop - CFP
Dec-23	4%	Back to Inflation RFP
Jan-24	21%	2nd ERSA CEPR Workshop - Thank You
Feb-24	5%	CEBRA Conference
Mar-24	14%	RISE Workshop

Table 3: LinkedIn posts with the highest engagement rate each month

On YouTube, there was less variance. The discussion entitled 'Trade Policy: Clipping SA's Wings' received the most views and engagement, achieving 112 hours of watch time. The 14 presentations and discussions from the CEPR Workshop were live-streamed, and the video that received the most engagement in this series was the Keynote address by Pierre-Olivier Gourinchas, which received 80 hours of watch time. Interestingly, the SAMNet video from June 2021 by Eric Leeper received a total watch time of 45 hours in 2023. Most video shares happened in January 2024 during the SAMNet Workshop.

Month	Total views	% of views*	Video with most views
Apr-23	221	25%	PE Seminar 5-Can cash transfers aid labour market recovery? Evidence from SA's special COVID19 grant
May-23	266	9%	Monetary Policy Framework in South Africa: Quo Vadis?
Jun-23	193	9%	Session 1: Eric M. Leeper - Understanding Monetary-Fiscal Policy Interactions: Part I
Jul-23	466	52%	Trade Policy: Clipping South Africa's Wings
Aug-23	4384	80%	Trade Policy: Clipping South Africa's Wings
Sep-23	531	50%	Trade Policy: Clipping South Africa's Wings
Oct-23	194	10%	Session 1: Eric M. Leeper - Understanding Monetary-Fiscal Policy Interactions: Part I
Nov-23	249	9%	Session 1: Eric M. Leeper - Understanding Monetary-Fiscal Policy Interactions: Part I
Dec-23	121	17%	Session 1: Eric M. Leeper - Understanding Monetary-Fiscal Policy Interactions: Part I
Jan-24	1409	12%	Keynote: Pierre-Olivier Gourinchas IMF Economic Counsellor and Director of the Research Department
Feb-24	1140	29%	Keynote: Pierre-Olivier Gourinchas IMF Economic Counsellor and Director of the Research Department
Mar-24	447	15%	Keynote: Pierre-Olivier Gourinchas IMF Economic Counsellor and Director of the Research Department

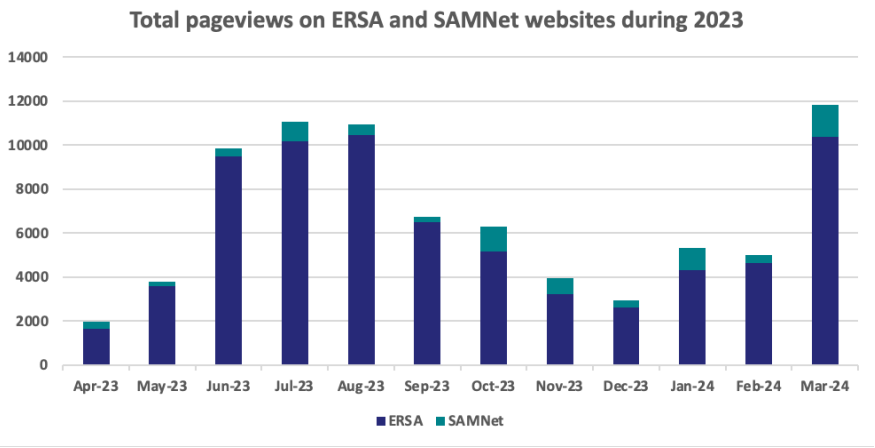
* % of total monthly views attributed to views from video with the most views

Table 4: YouTube video engagement

This shows that the most recent YouTube content may not be the most popular, and if the content is relevant, helpful and useful, it will continue to be popular for years to come. On LinkedIn, the content that receives the most engagement is either related to training opportunities or topical events, for example a discussion about expectations during an upcoming MTBPS in a podcast.

Website Reach:

On the website, reach is measured by page views. Since ERSA has two websites, this must be considered for each. The ERSA website received 72 209 pageviews, and the SAMNet website received 7 437 pageviews, totalling 150 409 pageviews across both websites. 58 % of the ERSA site visitors found the ERSA site via Google SEO, and 7% of them via LinkedIn. 26% of the SAMNet site visitors found the SAMNet site via Google SEO and 32% of the SAMNet visitors found the SAMNet site via the ERSA site or LinkedIn (16% each). Similar to the reach on social media channels, variance exists in the total monthly pageviews, as shown in the graph on the left.



Page views peaked between June and August, slightly in January, and mostly in March 2024. In June, ERSA was accepting applications for the Advanced Empirical Methods Course, the Nonparametric Workshop in R and the Skills Development in Time Series. There was also an open Call for Papers for the Fintech Workshop. During July, ERSA opened registrations for the discussion on Trade Policy: Clipping SA's Wings as well as the Accelerating Economic Modelling Workshop in conjunction with Opti-Num Solutions and hosted the Advanced Panel Data Course. In August, ERSA opened a Request for Proposals for Cities as Drivers for Economic Growth. In January, ERSA hosted the 2nd CEPR Workshop, and in March ERSA and SAMNet opened the call for papers and registration for the 2nd RISE Workshop, which is to be held in July 2024. It can be seen that both the Opti-Num Economic Modelling and ERSA/CEPR Workshops and registration pages drive traffic to the SAMNet site.

There are several metrics that can be used to measure engagement on a website, all of which have shown improvements with the new site. One metric is the proportion of new website visitors that continue to return to the site. In 2021, 10,4% of new users returned to the site. In 2023, this metric improved with 15,3% (2 600 of the 17 000 users) returning to the ERSA site, and 12,7% (393 of the 3 100 users) returning to the SAMNet site. Other useful metrics to consider are the bounce rate, which is the percentage of visitors who enter the site and then leave rather than continuing to view other pages within the same site, and the number of pages viewed per visit. These metrics, along with the average visit duration time are shown in Table 5.

	2020	2021	2023	
			ERSA	SAMNet
Bounce rate	62%	61%	56%	57%
Pages/visit	1,9	1,83	3,02	2,4
Ave visit duration	1:38 mins	1:38 mins	1:06 mins	0:51 mins

Table 5: Website engagement metrics

In 2023, the bounce rates for both the ERSA and SAMNet sites, were lower than the 2021 website, by 5% and 4%, respectively. The pages viewed per visit, increased from 1,83 to 3,02 on the ERSA site (65%), and to 2,4 (31%) on the SAMNet site. The average visit duration has decreased. This may be because people can easily and quickly find the download button for publications but is worth investigating further. Overall, engagement on the ERSA websites have improved considerably.

Having two separate websites allows us to develop a unique user experience for different segments of our target audience. With the engagement metrics increasing, and having the ability

to measure the necessary metrics, ERSA looks forward to fine-tuning this experience even further.

Conclusion:
2023 was a very good year for ERSA in terms of its digital marketing strategy. It succeeded in growing its following on social media, as well as the proportion of returning visitor traffic on its website. It also increased its brand awareness as well as engagement rates on social media platforms and the website. Its marketing efforts are paying off as it is reaching its target market.

Moving into 2024, ERSA can continue this momentum and focus on increasing the amount of YouTube subscribers, especially those from the African continent. It can also consider whether or not to change its Twitter strategy based on the transition from Twitter to X. The website is reaching the appropriate target audience, and marketing efforts should continue to be made to grow the website traffic. Events such as training opportunities and the SAMNet Workshop are important to both the ERSA and SAMNet sites. More content on current affairs will increase engagement on both social media channels and the website. Work done to fine-tune the user experience on the websites must continue, as ERSA heavily depends on its website for customer satisfaction. Feedback on both the online and offline experiences will be absorbed, so please do not hesitate to reach out should you have any concerns in this regard.

Appendix I: Event Reports April 2023 – March 2024

UP PhD workshop 2023: 19 to 20 July 2023

The third annual UP-SU PhD Workshop in Economics was held in Stellenbosch over two days this year (July 19 and 20). We believe the workshop was very successful and achieved the goals stated in our February letter of request for funding, namely

(1) to expose local PhD students and postdocs to the international research frontier;
(2) to encourage the formation of professional networks involving junior researchers and
(3) to give student participants training in presentation and writing skills.

Please see the short article below, which describes some of the activities of the workshop in more detail. We are pleased to report that beyond the academic aspects of the workshop – which we consider very successful – this year's event was well attended by economists and researchers at several private and public-sector institutions such as the National Treasury, Statistics South Africa and the Bureau of Economic Research.

We asked the student participants about their experience at the workshop and received responses from seven of the eight authors. The responses were universally positive, and all emphasised the usefulness of the comments they received from their discussants and peers at the workshop. Several students also mentioned that they valued the networking opportunities provided at the lunch and dinner functions. A majority of the students indicated that they plan to submit their papers to the ERSA working paper series once they have revised them in line with the critical feedback from the workshop. Responses to the question "Which aspects [of the workshop] were least useful?" were idiosyncratic (or "none"). In fact, some of the responses to the "least useful" question appear as other students' responses to the question "Which aspects [of the workshop] were most useful?". Our interpretation of this pattern is that while one or two individual participants might not have found specific aspects of the programme valuable, other participants did; thus, no one activity stands out as an obvious candidate to be cut from future workshops.

Regarding the financial aspects of organising the workshop, no money was explicitly transferred from ERSA to either UP or SU. This is in keeping with our MoU signed on Page 2 of 2 June this year. Thus, we cannot account explicitly for any remaining funds from ERSA. Further, the administrative support provided by ERSA staff is not explicitly priced here, despite it being crucial to the success of the event. We greatly appreciate ERSA's continued support and cooperation - both financial and administrative - of this workshop series.

Attached is the programme of events, a list of attendees, and a document containing the full set of responses from the student participants to our questions.

Jesse Naidoo, University of Pretoria
Mamello Nchake, Stellenbosch University
Marisa von Fintel, Stellenbosch University.

Posted on July 21, 2023

This year's annual Pretoria-Stellenbosch PhD Workshop in Economics was hosted by Stellenbosch University, and took place over two days: July 19-20. This is the third time the workshop has been held; see the report on the 2022 workshop here.

Close to 30 submissions were received this year. Of these, the workshop accepted eight papers by PhD students and postdocs from universities across the country, spanning a range of topics in health economics, macroeconomics, finance, and labour economics. (The programme can be viewed here.)

Thamsanqa Nhlapo (University of Pretoria) presenting his paper "Minerals, Sectoral Linkages and Structural Transformation in a Small Open Economy".

Discussants from universities in the United States, Australia, Germany, and South Africa gave comments and critical feedback to the student participants. Several of the students mentioned that the critique from senior academics outside of their home institutions was especially valuable, and exposed them to new ideas they had not previously considered.

David Atkin (MIT) gave a keynote address on the role of trade in promoting industrial complexity and economic development. His talk was especially well-received, leading the audience to raise several questions about the potential vulnerabilities of protectionism and industrial policy to rent-seeking.

Workshop participants listen to a keynote address by David Atkin (MIT), "Globalization and the Ladder of Development: Pushed to the Top or Held at the Bottom?"

The second keynote was given by Eric Hanushek (Stanford), on the topic of measuring the extent to which the world's children attain basic mathematical skills. He presented work showing that at least two-thirds of the world's children cannot complete basic arithmetic problems involving multiplication by age 15 - a finding that, the audience debated, was either cause for extreme pessimism about education systems or extreme optimism about the potential for future growth.

Student participants at the 2023 workshop.

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Practising economists and researchers from the National Treasury, Statistics South Africa, and the Bureau of Economic Research attended the workshop's lunch and dinner functions, meeting the students and academics that were present.

Letsie Mohatonyane (Wits) explains a subtle point to others at lunch.

Ayanda Hlatshwayo (National Treasury) and Neil Rankin (Stellenbosch University) take notes on a student presentation.

Finally, the students received both group and individual coaching on presentation and writing skills on the second day of the workshop.

Student Authors

Back row: Thamsanqa Nhlapo (UP), Letsie Mohatonyane (Wits), Richard Freund (UCT), Peter Courtney (SU)

Front row: Tim Kohler (UCT), Antoinette van der Merwe (UP), Tsepang Khumalo (SU), Kiru Sichoongwe (UJ)

All Participants

Back row: Craig Lemboe (BER), Calumet Links (SU), Thamsanqa Nhlapo (UP), Letsie Mohatonyane (Wits), Xanthe Hunt (SU), Waleed Jacobs (Statistics SA), Melt van Schoor (SU)

Second from back: Anja Smith (SU), Jesse Naidoo (UP), Peter Courtney (SU)

Middle row: Marius Cronje (Statistics SA), Katrien Smuts (SU/BER), Richard Freund (UCT), Evashnie Govender (Statistics SA), Marisa von Fintel (SU), Tim Kohler (UCT), Servaas van der Berg (SU)

Front row: Antoinette van der Merwe (UP), Susan Godlonton (Williams College), Christie Swanepoel (UWC), Mamello Nchake (SU), Kiru Sichoongwe (UJ)

Trade policy: Clipping South Africa's wings: Seminar Report

19 July 2023

1. RESEARCH PAPERS OVERVIEW

The consumer price effects of specific trade policy restrictions in South Africa.

Authors: Lawrence Edwards, Zaakirah Ismail, Godfrey Kamutando, Simbarashe Mambara, Matthew Stern, Fouche Venter.

This paper examines the implications for consumer prices of three consumer goods – frozen chicken, frozen chips and pasta – that have experienced rising protection from 2010 in the form of general, anti-dumping and safeguard duties. We find that tariffs and other import duties have a powerful impact on import volumes and, in the case of frozen chicken, on consumer prices. Foreign suppliers do not absorb any of the tariff increase by lowering their prices and passing the full tariff increase onto importers. However, the aggregate impact on landed import prices and volumes is reduced by the diversion of imports towards preferential trade partners, most notably the European Union. Using disaggregated product price data at the outlet level, we estimate that tariff increases have contributed to rising domestic consumer prices, but the pass-through depends on how the different tariff measures reinforce each other in restricting imports from preferential trade partners. In the case of frozen chicken products, import-weighted average applied tariffs rose by 40% from 2012 to 2021 and are estimated to have raised consumer prices by 16.2%. The reduction in welfare of rising trade protection on the three products is calculated to be equivalent to 2.1% of food expenditure for households in the lowest consumption decile and 1.1% for households in the top consumption decile. Our results highlight the influence of preferential trade areas in mediating the impact of tariffs on prices and illustrate how aggregate price and welfare impacts are influenced by the sequencing, targeting and ultimate combination of trade measures.

Tariffs on basic foods: evolution and impacts

Author: Neva Makgetla.

South African tariffs on food increased in 2013. By the end of the decade, they exceeded the average tariff on all goods by over 1%. The result was to place a floor on some basic foods – notably wheat and chicken. Because these are wage goods, that, in turn, placed upward pressure on overall consumer price inflation. Why did this trend emerge, especially in light of South Africa's high levels of inequality and poverty? A political-economic analysis finds that the main

mechanism was the decision-making process on tariffs, which magnified the influence of well-resourced commercial farm and food-processing lobbies.

2. SEMINAR OVERVIEW

Since 2010, various trade measures have been imposed to protect South African producers. These measures vary from targeted industry approaches, such as increasing import tariffs in accordance with the Most Favoured Nation standards, to broader and often more severe anti-dumping and safeguarding policies, which redirect trade between preferential trade partners. While the former applies to members of the World Trade Organisation, the latter includes large bodies like the European Union. 12 years later, in the face of high inflation and post-avian flu outbreaks, further anti-dumping policies were imposed on chicken imports from Brazil, Denmark, Ireland and Spain. While these measures focus on stimulating production and supporting South Africa's economy in achieving its industrial policy goals, less attention is given to how these measures impact consumers and domestic prices.

In this seminar, panellists explain the impact that increased tariffs and protection on staple foods have had on consumer prices. Import tariffs have a powerful impact on import volumes and, depending on the nature of the industry, prices. Specific attention will be given to three goods: frozen chicken, frozen chips and pasta, because they are relatively important items in the household food consumption bundle (accounting for a combined 14% of the consumer price index (CPI) weight for food products).

- What are the trade flows and trade policy measures applied to the frozen chicken, pasta and chips industries?
- How do import barriers (such as normal duties, tariff increases, safeguarding measures and anti-dumping measures) affect consumer prices at the retail level? And what does this mean for monetary policy?
- What is the pass-through of the various trade measures to consumer prices at the retail level?
- How is this burden distributed? And what does this mean from a welfare perspective?

The research upon which this discussion is based highlights some key takings for policymakers interested in monetary policy and industrial policy. How does South Africa's participation in a free trade agreement with a large industrial region such as the EU influence the effectiveness of tariffs as an instrument for industrial policy purposes? And how does the interplay between the trading measures and arrangements (such as normal duties, tariff increases, safeguarding measures and anti-dumping measures) by ITAC and MFN influence aggregate price levels? The discussion is based on the following research:

- The consumer price effects of specific trade policy restrictions in South Africa, by Lawrence Edwards, Zaakirah Ismail, Godfrey Kamutando, Simbarashe Mambara, Matthew Stern, Fouche Venter.
- Tariffs on basic foods: Evolution and impacts, by Neva Makgetla.

3. AGENDA & TIME RECAP

Segment	Planned	Actual	Difference	Comments
Introduction	2 Mins	2 Mins	0 Mins	Perfect time management by Margaux
Welcoming	3 Mins	7 mins	4 Mins	Slight overrun by Yash, but nothing worth unpacking, as it's only 4 mins.
Presentations and Q&A	40 Mins			
Prof Edwards presentation	10 mins	22 mins	12 mins	The Q&A section here was left open too long. Too many discussion points and not enough questions. At this stage, we had already reached the time allotted for presentations, with Neva still to present. I would suggest a stronger and less lenient Q&A session and, if need be, cutting people off for the sake of time.
Prof Edwards Q&A	10 mins	17 Mins	7 mins	19 Mins over at this point. (Excluding Yash's overrun)
Neva presentation	10 mins	18 mins	8 mins	This presentation went 8 mins over. At this point, we are 27 mins over
Neva Q&A	10	1 and half minutes	9 and half minute under	No real questions here, which meant we saved 9.5 minutes and could move straight into the discussion
Policy Orientated Discussion	30 Mins	20 mins		
Questions	-	2 mins	2 mins	
Last Comments	-	9 mins	9 mins	
Concluding Remarks	15 Mins	2 mins	13 mins under	
Total Time	90 mins	99 mins	19 mins	All together according to the YouTube and zoom recording the total running time was 1 hr 46 mins. Therefore, we ran 16 mins over. I think to avoid this in the future we should have a timekeeper, or at least have the chair be a very strict timekeeper. The kind of timekeeper we see in academic conferences.

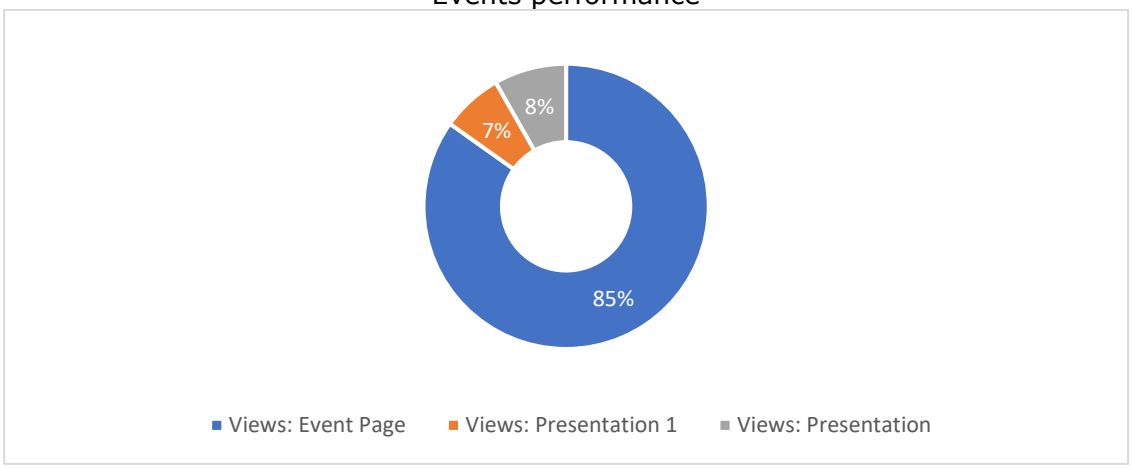
4. Analytics overview

Date	Output	Title	Performance	
2023/07/19	Live Discussion	Trade Policy: Clipping South Africa's Wings	181	Attendees
2023/07/21	YouTube Video	Trade Policy: Clipping South Africa's Wings	405	Views
2023/07/20	Workshop Presentation	The consumer price effects of specific trade policy restrictions in South Africa	19	Downloads
2023/07/20	Workshop Presentation	Tariffs on basic foods: Evolution and impacts	18	Downloads

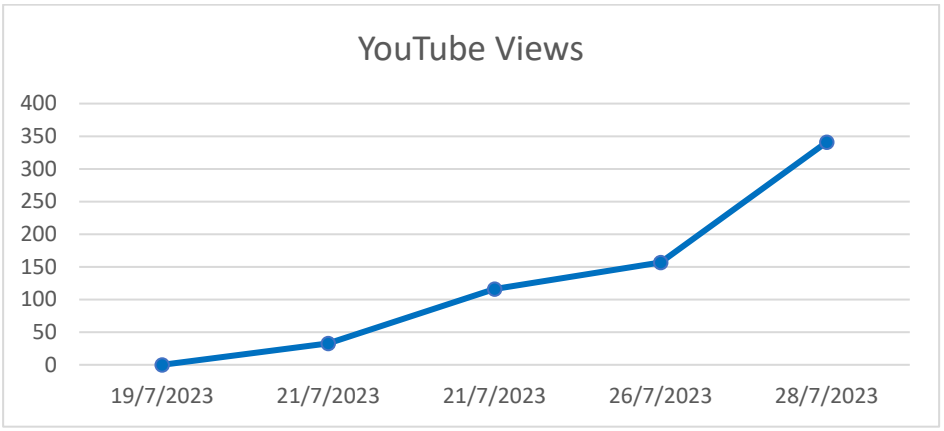
The above table shows a detailed breakdown of the overall performance of the various campaigns which were run throughout the life of this project. The live discussion had an impressive 181 live attendees at its highest point. This number did vary as attendees left the seminar throughout the discussion.

As of 20/07/2023, the downloads of the presentations and overall workshop 19 and 18, respectively. This in an impressive metric and by normal campaign numbers, the downloads show that this topic is highly topical and very relevant to ERSA's respective audience. The accompanying pages will provide a detailed graphical representation of these performances overall.

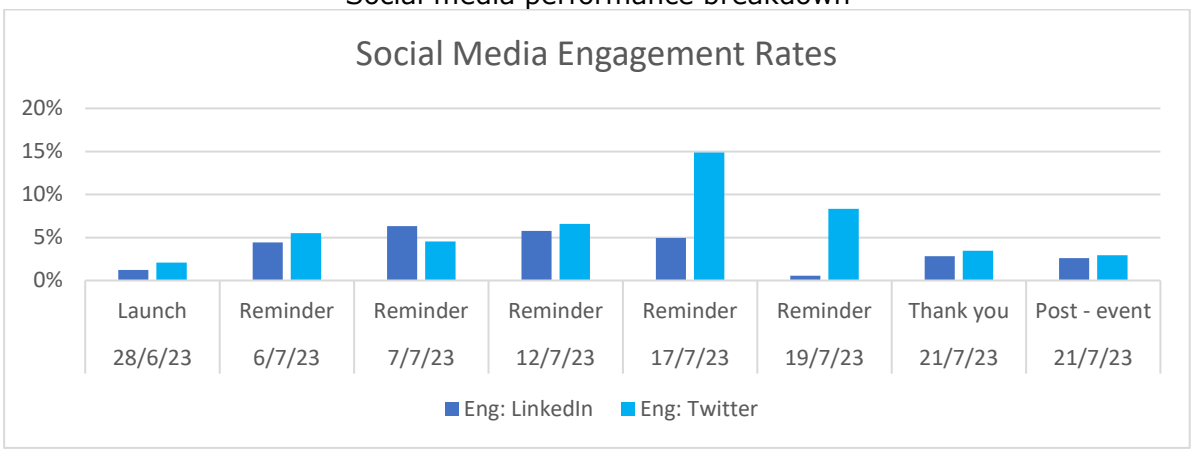
Events performance



YouTube Performance



Social media performance breakdown



5. Feedback from surveys

Once the seminar was concluded, ERSA sent out a survey to engage with the audience and see exactly where issues occurred and, more specifically, where the audience felt the seminar was a success. The answers were kept as anonymous submissions, and a summary of these are below:

Reasons absentees could not attend:

- Something came up, and I can watch the recording.
- The Zoom link would not open to the meeting successfully.
- Had a problem in getting the link.
- Was travelling overseas and got the time difference wrong, apologies!
- Load shedding affected my connection.

What attendees would like more of next time:

- Improve on responding to questions posed in the Q&A chat. My question was not responded to.
- Control speaker timing better.
- I was unfortunately not present for the entire presentation. Would love a recording.

Attendees' biggest takeaways:

- Much still needs to be done on the tariffs imposed, that is, versus the MNFs impact.
- Seemingly, we all aware of the issues and the toxic mix between trade policy and monetary policy, but it is not clear were to from here. Policy coordination? How?
- Good article
- Dis-aggregated consumption expenditure patterns of households.
- I learnt more about the effects of trade policy on consumer prices.
- Combination of tariffs have regressive price effects.

Most enjoyed about the event:

- The points were communicated clearly.
- Quality of speakers and topic
- On the overall every part of the event. Nonetheless, the first presenter with regards to the article presented was of particular interest. While the second presenter kept us up to date with all matter of tariffs. The idea to realise economies of scale through exports, finding ways to promote such remains a critical endeavour - third presenter. The issues around institutional change.
- The content as well as the knowledge of speakers and panellists
- The representation of the presenters and discussants. This helped to gain insight from various perspectives/institutions. Sadly, I didn't hear the responses to the questions that were submitted upon registration.
- All topics
- The depth of research behind the presentations
- Presentation
- Impact of import tariffs on the price of frozen chicken
- The presentation by Dr. Lawrence Edwards
- Good presentation of the research gathered

6. Registrant Sectoral Report

First Name	Last Name	Industry	Job Title	In Attendance
Maggi	Sigg	Other	Head of Development & Digital Strategist	
Pavan	Hiramoney	Accounting		
Kagiso	Mamabolo	Government - Federal	Economist	Y
Daan	Steenkamp		CEO	Y
Gilbert	April	Real Estate	Director	
Elna	Moolman	Banking & Securities	Head of SA macro research	
Akhona	Mili	Government - State & Local	Deputy Director	
Ifeoma	Iwegbunam	Education	Graduate Research Assistant	
Antony	Altbeker	Government - Federal		Y
Thando	Mkhombo	Other	Economist	Y
Jide	Fowowe			
Francois	Fouche	Education	Research Fellow	
Matthew	Stern	Consulting	Director	
Marius	Masoga	Education	Programme Coordinator	
Karabo	Simela	Financial Services - Other	Data	Y
Josea	Kiplangat	Financial Services - Other	Senior Research & Policy Officer	
Tertia	Jacobs	Financial Services - Other	Economist	
Nicola	Wills	Consulting	Analyst	Y
Amanda	Musandiwa			Y
Leseko	Makhetha	Education	Lecturer	Y
Senia	Nhamo	Education	Associate Professor	Y
Abiola	Akande	Education	Researcher	
Previlage	Chidzewere	Consulting	Business Development and Project Management Specialist	Y
Lorrane	Nesongozwi	Education	Lecturer	
Simeon Kiptarus	Nganai	Education	Lecturer/Research Fellow in Economics	Y
Mmalehlohonolo	Sekoaila	Government - Federal	Researcher	Y
Michael	Meyer	Education	Lecturer and Researcher: Macroeconomics	
Nthabiseng	Molotsi	Government - State & Local	Programme Support	
Pieter	Janse van Vuuren		Senior Associate	
Nwabisa	Malimba	Education	Lecturer	Y
Lauralyn	Kaziboni	Consulting	Senior Manager	Y
Libuseng	Malephane	Consulting	Project Manager	Y
Hilary	Joffe	Other	Editor at Large	

Muhammed	Lokhat	Other	INTERN	
Makhanana	Malungane	Government - State & Local	Economic Statistician	
Zuki	Gilimani	Government - State & Local	Researcher	
Anthony	Julies	Financial Services - Other	PHD student	
Dr LC	Muchopa	Agriculture	Senior Lecturer	
Mahlatse	Nkosi	Financial Services - Other	Research Intern (Macroeconomics)	Y
Tshiamo	Modiba	Government - State & Local	Economics Graduate Trainee	
Zizipho	Magula	Government - State & Local	Research intern	
Nompumelelo	Hlela	Government - State & Local	Deputy Director	Y
Ashor	Sarupen	Government - Federal	Member of Parliament	Y
Sanele	Gumede			
Strike	Mbulawa	Education	Asst Professor	Y
Tebogo	Phasha	Government - Federal	Trade Advisor	
Lungelo	Cele			Y
Sodiq Olaide	Bisiriyu	Education	PhD Research Scholar	Y
Dimakatso	Mkwanazi	Government - State & Local	Senior Policy Analyst	
Arnold	Khoza	Banking & Securities	Economist	Y
Paul	Matthew	Other	Chief Executive Officer	Y
Etienne	Naude	Agriculture	Compliance and Information Officer	Y
Thulisile	Radebe	Government - Federal	Economist	Y
Izaak	Breitenbach	Agriculture	General Manager SAPA	Y
Kasnath	Kavezeri	Education	Postgraduate student	Y
Panashe	Paul	Agriculture	Student	Y
themba	hlengani	Advertising/Marketing/PR	Manager	
Rethabile	Masenyetse	Banking & Securities	Executive Advisor	Y
Charlie	Morris	Government - Federal	Head of Trade Policy	Y
Megan	Friday	Consulting	Junior Economist	
Thabo	Chauke	Energy, Chemical, Utilities	Advisor	Y
Walter	de Wet	Financial Services - Other	Analyst	
Rachel	Jafta	Education	Professor in Economics	Y
Lukman	Oyelami	Education	Lecturing	
Nwabisa Florence	Ndzama	Banking & Securities	Economist	Y
Sehludi	Molele	Education	Senior Lecturer	Y
Sanisha	Packirisamy	Financial Services - Other	Economist	
mohlala	Tabudi	Government - Federal	Analyst	
Benedicte	Baduel	Other	Senior Economist	Y
Bhekani	Zondo	Agriculture	Agricultural Economist	Y

Tshiamo	Masike	Other	Economic analyst	Y
Tshepo Makgoro	Makgoro	Banking & Securities	Trade Economist	Y
Katleho	Tsotetsi	Other	Student	
Phocenah	Nyatanga	Agriculture	Professor	Y
Mohamed	Rahim			Y
Ndumiso	Mazibuko	Agriculture	Chief Economist	Y
Elias	Masilela SOB	Financial Services - Other	Director	
Emma	Smith			Y
Gray	Tembo			Y
John	Khumalo	Education	Lecturer	
Thabile	Nkunjana	Agriculture	Economist	Y
Siyabonga	Tshabalala			Y
Itumeleng	Mokoena	Consulting		Y
Bheki	Dlamini	Government - State & Local	Deputy Director: Economic Researcher	
Tshisikhawe Victor	Munyama	Government - Federal	Economist	
Valentine	Madzudzo	Education	PhD Economics student	
Nyiko	Mabunda	Government - Federal	Snr Specialist	
Lwazi Senzo	Ntshangase	Government - State & Local	Research Intern	Y
Thanda	Sithole	Financial Services – Other	Economist	Y
Dev	Tewari	Education	Prof	
Strike	Mbulawa	Education	Professor	
Petro	van Eck	Financial Services - Other	Economist	Y
David	Botchway	Education	Researcher	Y
Khaya	Mswephu	Education	Research	
Mongalo	Makhatho	Financial Services - Other	Junior investment analyst	
Buhlebemvelo	Dube	Government - State & Local	Graduate Economist	
Sumaiya	Sidat	Other	Economist	Y
Koketso	Mochaki	Government - Federal	Economist	
Natalie	van Reenen	Government - Federal	Economist	Y
Michael	Pasara	Consulting	Dr	
Luca	Martelengo	Consulting	Project Manager/Business Analyst	
Thabiso	Poswa	Insurance	Economist	
Phumlani	Mavuma			Y
Takalani	Rathiyaya	Government - State & Local	Head: Economic Development Programmes	
A. Basil	Chukwu	Education	Senior Lecturer	Y
Asanda	Koyo	Government - State & Local	Trade and investment coordination	Y
Kingsley	Oserei	Agriculture	Research Scientist	
Simba	Mambara	Consulting	Research assistant	Y

George	Baffour Awuah	Education	Researcher	Y
Alexander	de Coning	Advertising/Marketing/PR	Consultant	Y
Mpho	Mokhantso	Other	Student	
Sarah	Pogrund	Other	Research Officer	
Motshidisi	Mokoena			
Tim	Zeelie	Advertising/Marketing/PR	Director	Y
Johannes	Chipunza	Other	Verification Manager	Y
Sihle	Khanyile	Consulting	Statistician	
Mahfouz	Raffee	Other	Research Analyst	Y
Thandeka	Sikhakhane	Other	Assistant Director financial operations manager	Y
Baneng	Naape	Government - State & Local	Economist	Y
Seutame	Maimele	Other	Economist	
Siphosethu	Sandi	Education	Administrative Officer	
Justine	Burns	Education		Y
Matthew	Kensett	Agriculture	Business Intelligence Manager	Y
Hilary	Joffe	Other	Editor at Large	
Thabane	Nhlengethwa	Government - Federal	Political and Economic Specialist	
Lilitha	Swakamisa	Energy, Chemical, Utilities	Mobility - Marketing Intern	
Awonke	Baba	Government - State & Local	LLM candidate	Y
Luthando	Zondi	Other	Researcher	
Coster	Ruzengwe	Consulting		
Khanyisa	Phika	Financial Services - Other	Economist	
Syabonga	Msweli	Government - Federal	Economic Affairs Specialist	
Angelique	Nindi	Education	Lecturer	Y
David	Fadiran	Education		
Niki	Cattaneo	Education	Senior Lecturer	Y
Avhasei	Khomunala	Financial Services - Other	Reporting and Research Manager	
Roula	Inglesi-Lotz	Education	Professor	Y
Chumisa	Sokupe	Education	Student	Y
Musa	Zwane	Financial Services – Other	Client Service Consultant	Y
Darryn	Allan	Government - Federal		
Rapula	Diale	Other	Economist	
Ann	Bernstein	Other	Executive Director	
Justin	Snelling	Manufacturing	Associate Management Consultant	
Chris	Hattingh	Other	Head of Policy Analysis	
DUMISANI	CHAUKE	Government - State & Local	DEPUTY DIRECTOR: ENTERPRISE DEVELOPMENT	
Lavisa	Tala	Education	Senior Lecturer	Y

Raisibe	Gololo	Other		Y
Nicolene	Hamman	Government - State & Local	Economist	Y
Andiphe	Ndlebe	Government - Federal	Market Research Analyst	
Kabelo	Kwakwa	Agriculture	Director	
Tania	Els	Financial Services - Other	Financial Manager	Y
Daniel	Thwala	Government - State & Local	Sector Specialist: Manufacturing	Y
Ongezwa	Ngotana	Government - State & Local	Intern	
Khomotso	Ditsela	Consulting	Research intern	
Donald	MacKay	Consulting	CEO	Y
Nisaar	Mahomed	Government - Federal	Sector Manager: Green Economy and Knowledge Economy	Y
Surita	preller	Consulting	Legal Trade Analyst	Y
David	Faulkner	Banking & Securities	Economist	
Janet	Wilhelm	Consulting	Communications Consultant	Y
Godfrey	Kamutando	Other		Y
Clive	Vinti	Education	Lecturer	Y
Jim	Fairburn	Education		Y
Anneke	Jansen van Vuuren	Consulting		
Richard	von Seidel	Agriculture		Y
Monique	Petersen	Government - State & Local	economist	Y
Fouche	Venter	Consulting	Economist	Y
Tafadzwa Luke	Mupingasahto	Education	PhD Student	Y
Waldo	Krugell	Education	Lecturer	Y
Wendy	Nyakabawo	Other	Economist	Y
Dilshaad	Gallie	Government - State & Local	Economist	
Sithembiso	Mtanga			Y
Melt	Van Schoor	Education	Lecturer	Y
Lesego	Moshikaro			Y
Brandon	Meyer	Education	Tutor	Y
koketso	masetle	Government - State & Local	Assistant Director Economic research	Y
Kayalethu	Sotsha	Agriculture	Senior Economist	Y
M	T			Y
Pamela	Vorster	Other	Researcher	Y
Sifiso	Ntombela	Agriculture	Economist	Y
David	Fadiran	Education	Research Fellow	
Bheki	Dlamini	Government - State & Local	Economic Researcher	
Haydn	Penhale	Financial Services - Other	Founder	Y

Report: Non-Parametric in R Workshop

14 to 18 August 2023

Background

Jeff Racine is a renowned Econometrician, with expertise in nonparametric econometrics. He has written extensive computer code in support of that. He has nearly 13 000 citations in this field and an h-index of 43, based on textbooks, as well as publications in some of the top economics and econometrics journals.

In August 2023, he visited South Africa, spending some time in the Department of Economics, and, fortunately, we were able to get some support from ERSA for him to present a four-day module on nonparametric econometrics. The module covered nearly everything he has developed over the last 30 years.

He spent time chatting with most of the participants who showed an interest, and, at least at the University of Pretoria, I managed to get four students to write very short papers using some of the methods, comparing them to more standard methods used. He also gave a separate research seminar – nearly all participants attended that – focused on newish developments in nonparametric methods for functional data (which is an idea none of us had ever seen or heard before). I do believe that some of the attendees spoke with Jeff about a willingness to

Selection of participants

We received more than 100 applications to attend, including many based in other countries, hoping the workshop would be online. We also included a query related to whether or not attendees would be interested in attending a post-workshop event to discuss some research that was developed using nonparametric methods. To date, we have not attempted to follow that up, although we certainly can try to do so.

In total, there were 36 attendees:

Name	Gender	Pop Group	Institution
Xolani Sibande	Male	Black	SA Reserve Bank
Olumide Olaoye	Male	Black	Tswhane University of Technology
Sonali Das	Female	Indian	University of Pretoria
Xianming Ye	Male	Asian	University of Pretoria
Ngonidzashe wellington mugombi	Male	African	University of pretoria
Kasnath Kavezeri	Female	Black	University of Pretoria
Vandudzai Mbanda	Female	Black	HSRC, Pretoria
Sibongile Zulu	Female	Black	University of Pretoria
Amanda Musandiwa	Female	Black	National Gambling Board
Bulagil	Male	Black	Tshwane University of Technology
Simbarashe Magaisa	Male	Black	Dubarn University of Technology
Hanlie Roux	Female	White	Stadio
Baneng Naape	Male	Black	University of the Witwatersrand
Dambala Gelo Kutela	Male	Black	University of The Witwatersrand
Mthokozisi Mlilo	Male	Black	Wits University
Kalebe Kalebe	Male	Black	Witwatersrand University and National University of Lesotho
Yuxiang Ye	Female	Asian	University of the Witwatersrand
Shakirudeen Taiwo	Male	Black	University of Johannesburg
Sodiq Arogundade	Male	Black	University of Johannesburg
Eddie Kodisang	Male	Black	University of Johannesburg
Thandeka Nyathi	Female	Black	Wits
Tendai Gwatidzo	Male	Black	Wits University
Godfrey Ndlovu	Male	Black	University of Cape Town
Michael Meyer	Male	Coloured	Stellenbosch University
Sanele Gumede	Male	Black	University of KwaZulu-Natal
Marvellous Ngundu	Male	Black	University of KwaZulu-Natal
Warren Brettenny	Male	White	Nelson Mandela University
Albert Antwi	Male	Black	Sol Plaatje University
GISELE MAH	Female	Black	NORTH-WEST UNIVERSITY
Chiedza L. Muchopa	Female	Black	University of Limpopo
Kim Ingle	Female	White	University of Cape Town
Noreen Kajugusi	Female	Black	UNU - WIDER / UCT
Oladipo Olalekan David	Male	Black	North-West University
Lindokuhle Talent Zungu	Male	Black	University of Zululand
TICHAONA WILBERT MAPUWEI	Male	Black	UNIVERSITY OF KWAZULU-NATAL
Regret Sunge	Male	Black	University of Free State, Afromontane Research Unit

Format and timing of delivery of the programme

The workshop was conducted in person, with Jeff also presenting practical sessions as part of the module. The start time was 9:00 am every morning and ended at 1530 each afternoon, with the exception of the last day that ended at 1200, just before lunch. There were lunch and coffee breaks during the day.

Slides with references, practical exercises and codes were made available in full via GitHub. Time was divided between theoretical discussions and practical applications.

Topics covered during the workshop

The actual coverage was loosely the following, as per our advertisement. Often, lab material was moved around to relate directly to the discussion.

Day 1:
- AM Introduction to R, data types, parametric and nonparametric kernel density estimation
- PM Hands on lab, R and exercises

Day 2:
- AM Introduction nonparametric kernel regression, estimation, inference, interpretation
- PM Hands on lab, R and exercises

Day 3:
- AM Introduction to univariate kernel time-series methods, kernel fixed effect panel data methods, forecasting
- PM Hands on lab, R and exercises

Day 4:
- AM Introduction to semiparametric kernel methods and categorical regression spline methods
- PM Hands on lab, R and exercises

Day 5:
- AM Lab and lecture, focused on Quarto and reproducible research.

Feedback from participants and our impressions

The delegates that I spoke to were extremely pleased to have the opportunity to talk to Jeff, learn about the technical aspects of nonparametric regression, and, most importantly, be exposed to the relevant tools and code to actually do so. As noted, I did get students at UP to work further with the methods as part of one of the modules I teach, so at least some students used the methods. And, despite having to do some extra work, they actually appreciated working with the methods. At least, that is what they told me.

Convenor: Steve Koch – University of Pretoria

Financial Technology Workshop

8 to 9 September 2023

We are delighted to report on the recent ERSA Workshop on Financial Technology and Development, held at the Devon Valley Hotel in Stellenbosch on September 8-9, 2023.
This event marked another successful addition to the series of workshops supported by ERSA.

The workshop's overarching objectives were to foster discussions on Financial Technology (FinTech) and its implications for development while facilitating valuable networking opportunities among researchers, economists, and practitioners from various institutions in South Africa and other researchers based abroad. The attendees at the conference were diverse both in terms of ethnicity (50% of coloured and African researchers), gender (27% woman), location (33% of international participants) and seniority levels (44% of students and lecturers).

We are pleased to highlight key aspects of the workshop and its outcomes:

Session Highlights: The workshop featured engaging sessions, a keynote speaker, and insightful discussions with scholars from the region and abroad, which led to productive outcomes and knowledge sharing.

Participant Feedback: We gathered feedback from participants, and it is overwhelmingly positive (4.57/5). Attendees praised the quality of presentations, the depth of discussions, and the networking opportunities offered during lunch and dinner functions. Many expressed their interest in getting to know our activities at ERSA and indicated the workshop's value in enhancing their research and network.

Financial Aspects: We met the goals in terms of funding, and the expenses were below the expected costs. The administrative support provided by ERSA staff, although not explicitly priced, played a pivotal role in the success of the event.

Appreciation: We would like to extend our sincere appreciation for ERSA's continued support and cooperation, both financially and administratively, in organizing this workshop. Without your backing, events like these would not be possible.

We look forward to future collaborations and the continuation of successful workshops in the field of economics and finance.

Best Regards,

Convenors:
Lucas Argentieri Mariani, ERSA and University of Milano Bicocca
Lukasz Grzybowski, University of Cape Town

16th Annual Meeting of the African Economic History Network (AEHN)

5 to 6 October 2023

The 16th Annual Meeting of the African Economic History Network (AEHN) took place on 5 and 6 October 2023 at Future Africa, University of Pretoria, South Africa. The local organising committee consisted of Dr Carolyn Chisadza (Department of Economics, University of Pretoria), Prof Tinashe Nyamunde (Department of History, University of Pretoria) and Prof Christie Swanepoel (Department of Economics, University of the Western Cape).

1. Proposals

The first call for papers was sent out in November 2022 and a second call followed in January of 2023. We accepted abstracts until 15 March 2023. By this date, we received 106 paper proposals. Of the 106 paper proposals and abstracts, we rejected only 4 papers that either did not have a topic related to economics or economic history.

In mid-April, the acceptance letters were sent to participants as well as a preliminary program. Participants were asked to register and indicate whether they would require financial assistance to attend.

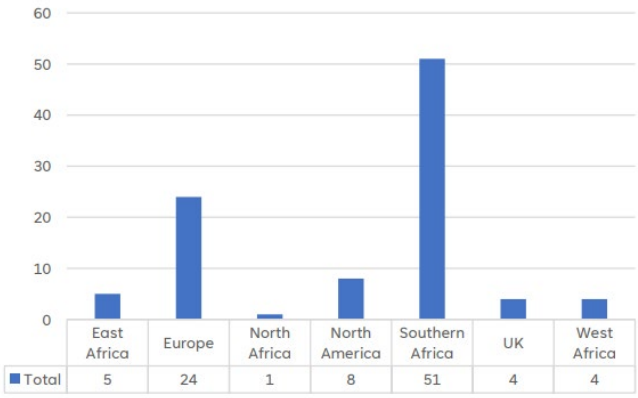
2. Programme

The programme included 71 papers in 22 parallel sessions over two days, two keynote speakers, one book launch and a soccer match. Following previous years, we scheduled one keynote, Prof Alois Mlambo, to open the meeting and Prof John Turner to close the meeting. We distributed papers according to theme, with some themes divided over 2 parallel sessions. The sessions had either 3 or 4 presenters and were 90 minutes in length. As in 2022, the Young Scholars Initiative (YSI) arranged a pre-meeting workshop where they funded and arranged 10 scholars to present. This was arranged on the Wednesday (4 October 2023) before the AEHN meeting. These students were also invited to attend the main AEHN conference on Thursday and Friday.

The local organising committee planned for about 100 participants. A total of 76 authors indicated their attendance to the conference. This was supplemented with the two keynote speakers, two local organizers, and nine students from YSI. With five student assistants for registration, the final number of expected participants was 94 people.

Unfortunately, by August 2023, it was clear that the funding for bursaries would be restricted and 15 participants who requested funding withdrew from the program. Other participants also withdrew mainly due to health and funding issues, such that the final number of participants was 71.

The chart below shows the breakdown of countries that participants came from. Participants came from 30 countries. Southern Africa dominated, with 51 participants from the region. Thirteen of 51 come from South Africa, 19 from Zimbabwe, 5 from Lesotho and others from Zambia and Kenya. One paper from Mozambique was received and accepted but the authors withdrew due to funding. This is followed by 24 from Europe, 28 if the United Kingdom is included. The European contingent is dominated by Sweden and the Netherlands, with some participants from Italy and Spain. We also note the increase in participants from North America which includes the United States and Mexico. West African countries include Nigeria and Ghana, while the East African countries include Ethiopia, Malawi, and Tanzania.



3. Bursaries

The expectation was that few students would be able to be supported for bursaries given the restrictions on funding and the costs of the venue. However, we were able to provide seven students with support for a total amount of R5000 to use toward accommodation and travel. These students mainly came either from South Africa or neighbouring countries.

The beneficiaries of these allowances were:

1. Eric Makombe (University of Zimbabwe)
2. Bernard Kusena (University of Zimbabwe)
3. Faith Damon (University of the Western Cape)
4. Kereeditse Tsokodiba (Stellenbosch University)
5. Moffat Chiba (University of Pretoria)
6. Stephen Hahlani (University of Pretoria)

The students who were sponsored by YSI were:

1. Relebohile Sefefo (National University of Lesotho)
2. Monts'eng Mapepesa (National University of Lesotho)
3. Jabulani Shaba (Stellenbosch University)
4. Simbai Masikinye (Cambridge University)
5. William Musamba (Makerere University)
6. Valentine Madzudzo (Stellenbosch University)
7. Mellisa Chipo Kaliofasi (University of Basel)
8. Meisie Alphinah Rasakanya (University of Pretoria)
9. Matanga Sarah Yeukai (Zimbabwe Open University)

4. Budget

We received contributions from various sources, including Economic Research Southern Africa (ERSA), the Economic History Society of Southern Africa (EHSSA), both hosting departments (faculty of Economic and Management Sciences: Department of Economics and Faculty of Humanities: Department of Historical and Heritage Studies) and the National Research Foundation (NRF).

The expenditures of the revenue included one keynote speaker's flight, ground transport, and accommodation; the venue costs and catering from Future Africa; bursaries; stationary and a shuttle to the soccer venue. The table below shows the breakdown of income and expenses.

Table 1: Budget

Expenses		Paid by	Total contributions		
Keynote costs: John Turner					
- Accommodation and ground transport	R 11 234,00	ERSA	ERSA	R112 645,64	
- Flight	R101 411,64	ERSA	EHSSA	R 42 400,00	
			UP: Faculty of Humanities	R 20 000,00	
Venue: Future Africa			UP: Faculty of EMS	R 25 000,00	
- Auditorium	R 10 100,00	EHSSA	NRF	R100 000,00	
- Conference Room 1	R 2 200,00	EHSSA			
- Conference Room 2	R 2 600,00	EHSSA			
- Breakaway Room 1	R 3 000,00	EMS			
- Conference package (tea, coffee, lunch)	R 82 000,00	NRF			
- Cocktail function	R 24 500,00	EHSSA			
- Photography	R 6 500,00	UP: Faculty of Humanities			
- Student assist	R2 700	UP: Faculty of Humanities			
Delegate Packages					
- Stationary	R 16 700,00	NRF			
Jay Jay soccer match					
- Shuttle (2 Quantums)	R 4 800,00	UP: Faculty of EMS			
- Field	R1 400,00	NRF/UP: Faculty of EMS			
Student Bursary					
Eric Makombe (University of Zimbabwe)	R 5 000,00	UP: Faculty of EMS			
Bernard Kusena (University of Zimbabwe)	R 5 000,00	UP: Faculty of EMS			
Faith Damon (University of the Western Cape)	R 5 000,00	UP: Faculty of EMS			
Stephen Hahlani (University of Pretoria)	R 5 000,00	UP: Faculty of EMS			
Moffat Chiba (University of Pretoria)	R 5 000,00	UP: Faculty of Humanities			
Kereeditse Tsokodiba (Stellenbosch University)	R 5 000,00	UP: Faculty of Humanities			
Total	**R299 145,64**		**Total**	**R300 045,64**	R 900,00

2nd ERSA/CEPR Workshop on Macroeconomic Policy in Emerging Markets (SAMNet)

25 to 26 January 2024

On the 25th and 26th of January 2024 the Second ERSA/CEPR workshop on Macroeconomic Policy in Emerging Markets was held at the Future Africa Campus of the University of Pretoria. The workshop is part of the SAMNET program to build a global forum of researchers and policymakers to discuss and develop advanced research on macroeconomic policy in Emerging Markets.

This year, the network was expanded to include the organizing committee representative of the Central Bank of Chile and of the Asian School of Business in Kuala Lumpur, who will take over the organization for the 2025 Workshop, while the Central Bank of Chile will organize the 2026 appointment. ERSA then becomes a central node of a South-South research collaboration, where the CEPR provides organizing coordination and global visibility.

The keynote speaker was the IMF Economic Counsellor and Director of the Research Department, Prof. Pierre-Olivier Gourinchas, who gave a comprehensive analysis of the policy challenges facing emerging markets and presented the latest IMF research in this regard.

Eleven papers were presented at the workshop, giving a wide view of current research. Presenters and discussants came from policy institutions (Bank of Chile, SARB, IMF, World Bank, Bank of England, Bank of Canada, ECB and the Federal Reserve Board), from academic institutions in South Africa (UP, UCT and University of Stellenbosch) and from academic institutions around the world, (UC Berkley, London School of Economics, Universidad des Los Andes, University of Warwick, Ecole Polytecnique, Bilkent University, University of Namur and the Asian School of Business).

Overall, the workshop was attended by 43 people.

In 2025, the 3rd Workshop on Macroeconomic Policy in Emerging Markets will be held at Kuala Lumpur on the 16th and 17th of January. ERSA will facilitate the participation of South African PhD students and young researchers in this global event.

Regards,
Nicola Viegi, University of Pretoria

Appendix II: Working Papers and Discussion Documents

April 2023 - March 2024

Working paper 885

Title: A review of the strategies adopted between 2015 and 2022 towards two South African local government water supply crises
Author: Marius van der Merwe, Stephen G. Hosking
JEL codes: L95, Q25
Keywords: Water supply crises, Municipalities, Cape Town, Nelson Mandela Bay, Government, Public Goods, South Africa, Water Management

This paper reviews combined local and national government water service policies to manage two local short-run water supply crises and lessons learned from them. The respective water supply crises are those of the City of Cape Town (CoCT) 2015 to 2018 and the Nelson Mandela Bay (NMB) 2015 to 2022. It identifies the strategies that were used to address the respective crises and deduces that a trade-off exists between water demand suppression and water supply augmentation. It concludes that the efficient trade-off between these two strategies can only be determined through a proper costing analysis. It recommends that future such crises be addressed only after the respective costs of the two strategies have been evaluated and compared because only on that basis can an efficient mix of short-run strategies be determined.

Working paper 886

Title: Possible Welfare Benefits of a Basic Income Support: Evidence from a benefit incidence analysis in South Africa
Authors: Nicky Nicholls, Kehinde O. Omotoso, Eleni Yitbarek, Ramos Mabugu, Margaret Chitiga-Mabugu, Carolyn Chisadza
JEL codes: E62, H20, H22, H31
Keywords: Capital inflows, Sovereign Debt, International Lending Channel, Misallocation, Employment, Inequality, Poverty, Social Welfare, Universal Basic Income, Welfare

The study investigates the potential welfare effect of basic income support in reducing poverty and inequality in South Africa. Using the 2017 labour force survey and a benefit incidence analysis, we consider three basic income support scenarios:

i) universal income support for those aged between 18 and 59;
ii) only those who are unemployed receive the benefit; and
iii) only unemployed individuals in extremely poor households defined by the food poverty line receive the benefit.

Results show that basic income support can reduce poverty and inequality. However, the specific effects of the basic income support will depend on the targeting scenario considered. The universal basic income support is more costly and has higher leakage, with more benefits going to the non-poor. However, this universal support has the biggest overall impact on poverty and inequality reduction because more South Africans receive income support under this scenario. Meanwhile, targeting only the unemployed and the impoverished makes the basic income support more pro-poor and progressive, as well as mitigating the leakage of the benefit to the non-poor. This scenario would however require that an appropriate targeting mechanism is in place.

Working paper 887

Title: International Lending Channel, Bank Heterogeneity and Capital Inflows (Mis)Allocation
Author: Silvia Marchesi, Lucas A Mariani
JEL codes: F21, F36, G21
Keywords: Basic income support; benefit incidence analysis; poverty; inequality, Capital, Capital Market, Central Bank, Financial Accounting, Financial Markets

This paper explores the role of banks' heterogeneity in international lending and its impacts on capital inflows allocation across firms by exploiting the inclusion of South Africa into the Citi Group's World Government Bond Index (WGBI). Using bank-level data, we provide evidence that banks holding sovereign bonds before the inclusion increase credit supply to non-financial firms after the shock. Moreover, less capitalized banks drive these effects. Using firm-level data in South Africa, we then show that credit is allocated to less financially constrained and less productive firms. Consistent with zombie-firms behavior, we find no evidence of a significant improvement in real outcomes after the increase of credit supply to those firms. Our paper adds to the literature by analyzing the interplay between banks' heterogeneity, capital inflows shocks and capital misallocation.

Working paper 888

Title: Banks' Physical Footprint and Financial Technology Adoption
Authors: Bernardo Ricca, Lucas A. Mariani, José Renato H. Ornelas
JEL Code: E42, E51, G20, O33
Keywords: Banking, Technology adoption, Payment methods, Banking Regulation, Infrastructure, Technological Innovation

Do physical bank branches moderate the diffusion of digital payment technologies? Does the diffusion of an efficient and inclusive digital payment technology allow fintechs to increase their presence? To answer these questions, we leverage bank heists that use explosives and render branches temporarily inoperable. We provide evidence that these attacks are not associated with local crime trends and that they deplete the branches' cash inventory. Moreover, we show that they lead to persistent increases in digital payments usage and that a smaller cash dependence boosts digital institutions' growth not only in payments but also in credit markets.

Working paper 889

Title: Tax effort and capacity in developing countries: Unravelling the impact of the informal economy
Author: Ezekiel Lengaram
JEL Code: C23, C51, H0, H2, H21
Keywords: Tax effort, tax capacity, tax frontier, informal economy, inefficiency. Development, Development Economics, Policy, Taxation

This study focuses on estimating the tax effort in 25 selected African countries and its implications for economic development. The findings aim to assess the level to which a country's tax mobilisation is constrained by its inability to utilize available tax capacity for funding public spending. Additionally, comparing the tax effort among countries offers insight into appropriate tax mixes for addressing budgetary imbalances and debt management strategies. Analysing taxable capacity and tax capacity using panel data from the year 2000 to 2021, the paper employs stochastic frontier techniques (SF) for estimation. Due to data limitations and covariates challenges, it employs OLS, FE and dynamic GMM techniques for robust check. Key results show that per capita income trade openness, remittances, FDI, and manufacturing positively influence tax revenue, while agriculture, informal economy, population, corruption control and voice accountability have a negative and significant impact on tax effort. The findings highlight the significance of governance improvements and economic structural reforms for revenue

mobilization in African countries. The study offers insights into fiscal behaviour patterns in African economies and recommends necessary reforms for fiscal responsibility.

Discussion document 9

Title: Crime: A Policy-oriented survey
Author (s): Sebatian Galiani
Publication date: May 2023

Abstract: South Africa has a reputation for having high levels of crime, and a strained capacity to implement effective law enforcement. The repercussions of high crime rates are significant in an economy. If citizens are fearful of theft or working and travelling at night, activity is inhibited, consumers may buy less, and production and employment may be forced to scale back. The spatial nature of crime and people's access to security can impact where people choose to buy houses and influence the value of properties.

Discussion document 10

Title: What luminosity data can and cannot reveal about South Africa's urban economies
Author (s): Takwanisa Machemedze
Publication date: May 2023

Abstract: As novel types of data are becoming available, they can be incorporated into tracking economies' progress towards achieving their goals. This paper provides an in-depth analysis of how nighttime light data can be used to analyse the dynamics of economic activity in South Africa. These lights leave a footprint of human activity on the Earth's surface, which can be mapped with census data to determine how the urban extent develops, whether the level of urbanisation grows, and how this is related to changes in socio-economic indicators such as poverty, inequality and access to electricity.

Discussion document 11

Title: Place-based economic policies: international lessons for South Africa
Author (s): Harris Selod and Claus Rabe
Publication date: May 2023

Abstract: Place-based policies are designed to support targeted sub-sectors in an economy, either bounded by a specific geographic area, or belonging to a specific industry requiring incentives to redirect private-sector-led economic growth. This research surveys international literature on place-based policies in urban settings and discusses evidence on whether these policies generate net growth or alter distributional outcomes, especially in cities in developing countries.

Discussion document 12

Title: Cities, productivity and Jobs in SA: Problems and potential
Author (s): Ivan Turok and Justin Visagie
Publication date: May 2023

Abstract: Cities contribute to national prosperity because of their role in sharing information, generating ideas and fostering innovation. Having a densely populated ecosystem where people and firms are drawn together fosters an environment of competition, collaboration and knowledge creation. South African cities, however, have not been doing well and could do better.

Discussion document 13

Title: Monitoring South Africa's metropolitan economies: A survey of the data landscape
Author (s): Dieter von Fintel
Publication date: May 2023

Abstract: Disparities in data across different metropoles in South Africa continue to pose challenges for policymakers and officials. Lagging regions do not have the same data generation capacity, adding a constraint to their ability to plan and monitor local development initiatives. Understanding how these local economies develop is essential for interpreting aggregate trends and for contextualising changing patterns of spatial inequality between urban and rural areas. The demand for regional and metropolitan data is growing.

Discussion document 14

Title: South Africa's future will be decided in our cities
Author (s): Dieter von Fintel, Justin Visagie, Ivan Turok, Takwanisa Machemedze, Claus Rabe, Sebastian Galiani, Edward Glaeser
Publication date: June 2023

Abstract: This Discussion Document is the final paper of the Research Project and is based on the previous five papers commissioned from leading local and international economists. It is not a summary of the five commissioned papers; rather, it is a reflection on what we know about South Africa's cities, the challenges they face, and the potential they offer. It identifies some of the areas in which policymakers should act immediately and suggests a range of issues about which more focused work is urgently needed.

Discussion document 15

Title: The South African sovereign term premium and its drivers
Author (s): Ruan Erasmus and Daan Steenkamp
Publication date: November 2023

Abstract: South Africa's sovereign yield curve is one of the steepest among large emerging markets. Our estimates suggest that this can be explained by an increase in the term premium embedded in long rates. We argue that a higher term premium reflects a deterioration in market perceptions of South African credit risk and South Africa's relatively high macroeconomic volatility. A higher term premium implies that interest rates in South Africa have been less reactive to domestic monetary policy than they might have been if South Africa had a stronger fiscal position, a lower inflation target or lower macroeconomic volatility overall.

Discussion document 16

Title: Assessing the Impact of Environmental Policies on South African Trade
Author (s): Gracelin Baskaran
Publication date: January 2024

Abstract: South Africa's economy is highly reliant on the export of goods and services. In the last few years, there has been a wave of trade policies to supplement domestic efforts to reduce emissions by incentivizing trading partners to reduce greenhouse gas (GHG) emissions. South Africa will be amongst the most affected by these policies. This is because it is one of the most emissions-intensive economies in the world, and after Laos, it has the second highest carbon intensity embedded gross exports in the world.