

## C. FRIEDRICH KREUSER

**Research Topics:** Economic Growth, Industrial Organisation, Labour Economics ([Google Scholar](#))

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### EDUCATION

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- PhD Economics, Trinity College Dublin** *2017–2022*  
Dissertation: *Essays in Productivity*, supervised by Prof. Carol Newman  
Job Market Paper: *Declining Allocative Efficiency, Falling Labour Shares, and Corporate Lobbying in European Manufacturing*
- MSc Economics, (Merit), London School of Economics and Political Science** *2016–2017*  
**MCom Economics, (Cum Laude), Stellenbosch University** *2013–2014*  
with a semester at the University of Zürich
- BCom(Hons) Economics, (Cum Laude), Stellenbosch University** *2012*  
**BCom(with Law Subjects), (Cum Laude), Stellenbosch University** *2009–2011*

### RESEARCH EXPERIENCE

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- Principal Investigator, Market Power and Competition Policy in South Africa** *2022–2023*  
This UNU-WIDER funded project will examine the impact of competition authority activities related to mergers, cartel activity, and abuse of dominance on markups and productivity using firm and worker-level administrative data from South Africa.
- PhD Research Intern, Central Bank of Ireland** *2022–2023*  
Researcher on a project using Irish administrative credit data to examine the role of credit conditions, contract terms, and loan structure on small firm survival over the business cycle and during COVID-19 specifically.
- Researcher for the United Nations University World Institute for Development Economics Research (UNU-WIDER) and South African National Treasury (SA-NT)** *2015–2022*  
Constructed versions 1 and 2, and oversaw the construction of version 4 of the South African Revenue Service and National Treasury database. Management responsibilities include coordination with data teams on cleaning, structuring, and maintenance of data integrity of large-scale administrative tax data including individual, firm, and transaction level components. Please see the publications below for relevant research output and documentation.
- Parameterisation and Estimation, SA-NT and UNU-WIDER** *2015*  
Contracted by UNU-WIDER and the South African National Treasury to estimate parameters for South African macroeconomic models. Please see the publications below for details.
- Researcher for Research on Socio-Economic Policy, Stellenbosch University** *2013–2015*  
Part-time development economics researcher in projects focused on labour, education, and health care.

**Teaching Fellow, Trinity College Dublin**

**ECU44122/44124 - Game Theory**

*2021/2022*

**Language** - English

**ECTS Points** - ECU44122 - 10, ECU44124 - 5, Optional

**Level** - Senior Sophister (Final Year Bachelor's)

**Number of Students** - ECU44122 - 40, ECU44124 - 6

**Teaching Form** - In-person lectures and tutorials with live streaming and recording

**Times taught** - 1, substituting for a member of faculty on leave

**Supervision Responsibilities**

Each student was required to have at least one supervision session on assignments counting toward 30% (ECU44122) and 50% (ECU44124) of their grade.

**General Responsibilities and Course Content**

Responsibilities included presenting lectures, creating and updating teaching materials, and the setting and grading of assignments, essays, and exams. Administrative responsibilities included uploading class materials to Blackboard, timely response to student emails, and submitting grades to the system. Topics covered include simultaneous and sequential move games with perfect, imperfect, and incomplete information, as well as auction theory, signalling, and cheap talk.

**EC7035 - International Macroeconomics**

*2019/2020*

**Language** - English

**ECTS Points** - 5, Optional

**Level** - Master's

**Number of Students** - 12 (Total master's class size - 21)

**Teaching Form** - In-person lectures and tutorials

**Times taught** - 1, constructed new version of this course due to faculty member on sabbatical

**Supervision Responsibilities** - None

**General Responsibilities and Course Content**

Responsibilities included lecturing, creation of new syllabus, creation of new slides and teaching materials, and the setting and grading of exams and problem sets. Administrative responsibilities included uploading class materials to Blackboard, timely response to student emails, and submitting grades to the system. Topics covered include the Small Open Economy Real Business Cycle Model, the Import-Export and Import-Export-Non-Tradables model, and New Open Economy Macroeconomic models.

**EC7006 Part C - Labour Search and Matching in Macroeconomics**

*2018/2019*

**Language** - English

**ECTS Points** - One of three optional topics in 10 credit course

**Level** - Master's

**Number of Students** - 2 (Total master's class size - 8)

**Teaching Form** - In-person lectures and tutorials

**Times Taught** - 1, proposed this course due to a member of faculty being on sabbatical

**Supervision Responsibilities** - None

**General Responsibilities and Course Content**

Responsibilities included lecturing, creation of new syllabus, creation of new slides and teaching materials, and the setting and grading of exams and problem sets. Administrative responsibilities included uploading class materials to Blackboard, timely response to student emails, and submitting grades to the system. Topics covered include NKM with sticky wages, baseline Diamond-Mortensen-Pissarides (DMP) model, and DMP with on-the-job search.

## Teaching Assistant, Trinity College Dublin

### **All Master's Macroeconomics Modules**

2018–2022

Responsibilities included presenting master's level macroeconomics tutorials weekly, setting up slides and materials, and grading problem-sets. Courses taught include Introduction to Macroeconomics, Growth Theory, Monetary Economics, International Economics, and Labour Search and Matching in Macroeconomics.

### **Junior Fresh Mathematics and Statistics**

2017

Responsibilities included presenting mathematics and statistics concepts to first-year students and grading exams. Topics covered include linear matrix algebra, differentiation, optimisation, constrained and unconstrained optimisation, and basic integration. Statistical topics include probability theory, discrete and continuous random variables, sampling, confidence intervals, and hypothesis testing.

## Teaching Assistant, Stellenbosch University

### **Honours Econometrics**

2015

Responsibilities included the setting up of syllabus and teaching of practical sessions for honours econometrics students. Topics include OLS, discrete choice models, heteroscedasticity, qualitative data, instrumental variables, specification testing, stationarity, autoregressive processes, cointegration and error correction models.

### **Empirical Research Support to Post-Graduate Students**

2014

Responsibilities included assisting post-graduate economics students with research issues relating to software, identification strategy, data, appropriate estimators, and interpretation.

### **Honours and Masters Microeconomics**

2013–2014

Responsibilities included the presenting and grading of master's microeconomics tutorials. Topics include consumer and producer theory, partial equilibrium theory, static and dynamic games of incomplete information, evolutionary game theory, choice under uncertainty, discounted utility, adverse selection, moral hazard, and general equilibrium theory.

## PUBLICATIONS

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Kreuser, C. F. & Newman, C. (2018). Total Factor Productivity in South African Manufacturing Firms. *South African Journal of Economics*, 86(S1), 40–78. <https://doi.org/10.1111/saje.12179>

Pieterse, D., Gavin, E., & Kreuser, C. F. (2018). Introduction to the South African Revenue Service and National Treasury Firm-Level Panel. *South African Journal of Economics*, 86(S1), 6–39. <https://doi.org/10.1111/saje.12156>

Meisser, L. & Kreuser, C. F. (2017). An Agent-Based Simulation of the Stolper–Samuelson Effect. *Computational Economics*, 50(4), 533–547. <https://doi.org/10.1007/s10614-016-9616-x>

Burger, R. P., Coetzee, L. C., Kreuser, C. F., & Rankin, N. A. (2017). Income and Price Elasticities of Demand in South Africa: an Application of the Linear Expenditure System. *South African Journal of Economics*, 85(4), 491–514. <https://doi.org/https://doi.org/10.1111/saje.12167>

## WORKING PAPERS

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- Ebrahim, A., Kreuser, C. F., & Kilumelume, M. (2021). The guide to the CIT-IRP5 panel version 4.0. *WIDER Working Paper*, (2021/173). <https://doi.org/10.35188/UNU-WIDER/2021/113-6>
- Kreuser, C. F. & Brink, D. (2021). Total Factor Productivity in South African Manufacturing Firms 2010–17. *WIDER Technical Note*, (20/2021). <https://doi.org/10.35188/UNU-WIDER/WTN/2021-20>
- Hlatshwayo, A., Kreuser, C. F., Newman, C., & Rand, J. (2019). Worker Mobility and Productivity Spillovers: an Emerging Market Perspective. *WIDER Working Paper*, 2019/114. <https://doi.org/10.35188/UNU-WIDER/2019/750-7>
- Kreuser, C. F. & Rankin, N. A. (2017). Capital and Labour Substitutability in South Africa. *Research Project on Employment, Income Distribution and Inclusive Growth REDI3x3 Working Paper*, 36
- Burger, R. P. & Kreuser, C. F. (2017). Unequal Partners: The Determinants and Consequences of Latent Female Household Bargaining Power. *Research Project on Employment, Income Distribution and Inclusive Growth REDI3x3 Working Paper*, 44
- Kreuser, C. F., Burger, R. P., & Rankin, N. A. (2015). The Elasticity of Substitution and Labour-Displacing Technical Change in Post-Apartheid South Africa. *WIDER Working Paper*, 2015/101. <https://doi.org/10.35188/UNU-WIDER/2015/990-9>

## LANGUAGES AND NATIONALITY

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**Languages** English, Afrikaans  
**Nationality** South Africa

## SCHOLARSHIPS

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<b>Grattan Scholarship</b> for PhD in Economics at Trinity College Dublin	2017–2021
<b>Commonwealth Scholarship</b> for MSc in Economics at the London School of Economics and Political Science	2016–2017
<b>Economic Research Southern Africa Scholarship</b> for MCom in Economics at Stellenbosch University	2014
<b>Heyning-Roelli Stiftung Scholarship</b> for a semester of study at the University of Zürich	2014

## SOFTWARE

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### **Stata** (Expert)

All standard regression techniques for cross-section, time series and panel data. Extensive experience with non-linear seemingly unrelated regression analysis, instrumental variable techniques, ordered and multinomial response models, regression discontinuity design, matching models, sample selection models, and non-parametric estimation. Experience with spatial models and sentiment analysis. Advanced programming experience in MATA. Experience with SQL, SDMX, and JSON data sources.

### **Matlab/Octave** (Advanced)

Experience with numerical computation including constrained and unconstrained optimisation techniques. Experience with Gauss-Jacobi, Gauss-Seidel, fixed-point, and Newton's methods. Experience with Taylor approximations, numerical integration, and advanced experience with Dynare.

### **Mathematica** (Intermediate)

Experience with symbolic and numerical computation including constrained and unconstrained optimisation techniques. Extensive experience with programming and solving symbolic models including phase diagrams.

### **R** (Intermediate)

Experience with standard regression techniques, unstructured big text data, sentiment analysis, visualisation, classification, and interaction with SQL.

### **Python** (Intermediate)

Experience with standard data analysis packages, standard numerical packages, unstructured big text data, standard machine learning techniques including supervised and unsupervised learning, classification, natural language processing, sentiment analysis, and basic neural networks with TensorFlow and Theano through Keras. Extensive experience in web scraping using Selenium and standard packages.

### **SQL** (Intermediate)

Experience in managing large separate databases for use with Stata, R, and Python. Experience with database management, joining, case statements, time and date data, text data, and standard aggregation and grouping techniques.

## ACTIVE RESEARCH

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### **Declining Allocative Efficiency, Falling Labour Shares, and Corporate Lobbying in European Manufacturing**

Job Market Paper

In recent decades advanced economies have experienced falling labour shares of income and increases in product market concentration. These trends are largely attributed to a shift in activity toward more productive firms with low labour shares. We show that while reallocation-driven productivity and labour share growth are negatively correlated, the relationship is driven by geo-industries with lower rates of negative allocative efficiency growth experiencing lower declines in the reallocation component of their labour share. Matching firm-level data from Orbis to lobbying data from the European Transparency Register, the intensity of lobbying by corporate interests in a geo-industry is shown to predict the coexistence of falling labour shares and declining allocative efficiency. Lobbying appears to work through constructing barriers to entry by first limiting productive shifts of activity and, in the long run, promoting shifts toward high-markup low-labour share firms. These effects are more pronounced in industries with increasing output concentration where lobbying is further related to the long-run exit of more productive firms.

## **Worker Mobility and Productivity Spillovers: an Emerging Market Perspective**

with Ayanda Hlatshwayo, Carol Newman, and John Rand.

This paper uses matched employer-employee data from South Africa to examine the extent to which technology transfers between firms through the hiring of workers. Allowing for differential spillovers based on observable technology differences between sending and receiving firms, we find strong evidence for positive productivity spillovers through worker mobility. In contrast to previous studies set in more advanced economies, our results suggest that negative spillovers can occur. Firms that hire workers from less productive firms experience a decline in productivity in the following year compared with similar firms that do not hire any workers. This, we suggest, may be explained by the high skills deficit in the South African labour market, and an important mechanism for technology transfers in the future may be driven by investments in firm-level training initiatives.

## **Total Factor Productivity in South African Manufacturing Firms 2010–17**

with Daniel Brink.

This paper introduces a new implementation of the control function approach often used to estimate total factor productivity that allows for a more consistent convergence of production function elasticities. Using this approach, we update Kreuser and Newman's (2018) productivity estimates for the South African Manufacturing Sector using Administrative data from 2009-2017. Limited productivity growth is found for the period from 2009-2017, with the majority of variance in sectoral productivity attributable to allocative efficiency. We find that more allocatively efficient industries are generally more capital-intensive and have significantly higher capital elasticities while having only slightly higher labour elasticities.

## **Market Power and Competition Policy in South Africa**

Principal Investigator for UNU-WIDER funded project

with Rulof Burger and Michael Kilumelumbe

This paper will examine the impact of competition authority activity related to mergers, cartel activity, and abuse of dominance on the distribution of markups and productivity in the South African economy. Our preferred identification strategy uses the difference between the time of alleged misconduct and the time of initial investigations between geo-industries in a difference-in-differences specification. Using information on guilty and not guilty verdicts, we aim to identify the causal impact of a change in market structure on the productivity, wage, and markup distributions of local markets.

## REFERENCES

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Prof. Carol Newman,  
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Dublin 2,  
Republic of Ireland.

Prof. John Rand,  
Department of Economics,  
University of Copenhagen,  
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