# Albert Duodu

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## Education

PhD in Economics

Lund University, Sweden

MSc. Economics

Lund University, Sweden

Lund University, Sweden

B.A. Economics

2017 – 2019

2010 – 2014

University of Ghana, Legon, Ghana

# Visits

University of Oxford September, 2023

Host: Niclas Moneke

University of Warwick February, 2023 – July 2023

Host: Ludovica Gazze and Christian Soegaard

London School of Economics March 2023

Warwick-CFM-Vienna Workshop: Maarten De Ridder

University of Copenhagen August 2022

Summer School: Arne Henningsen

#### Research Fields

International Trade, Environmental Economics, Applied Microeconomics

## References

Maria Persson	Associate Professor
Department of Economics, Lund University	maria.persson@nek.lu.se
Joakim Gullstrand	Professor and Head of Department
Department of Economics, Lund University	joakim.gullstrand@nek.lu.se
Ludovica Gazze	Associate Professor
Department of Economics, University of Warwick	Ludovica. Gazze@warwick. ac. uk
Zouheir El-Sahli	Associate Professor
School of Business and Law, Frederik University	bus.ez@frederick.ac.cy
Fredrik N G Andersson	Associate Professor
Department of Economics, Lund University	$fredrik\_n\_g.andersson@nek.lu.se$

# Teaching and Supervision

Masters and Bachelor Level Supervision	2022 - present
Lund University	
Main Lecturer – International Trade Theory: 3rd year BSc.	2021 - present
Lund University	
Main Lecturer – International Economics: 2nd year BSc.	2021 - present
Lund University	

Teaching Assistant - Advanced Trade Theory, MSc.	2021 -present
Lund University	
Data Science Support	2023 - present
Lambda Data Science Society, Lund University	
Erasmus+ Teaching Staff Mobility	2022
University of Ghana	
Teaching Assistant – Econometrics and International Trade: 4th year B.A.	2015 - 2017
University of Ghana	

#### Presentations

**2023**: Seminar, Norwegian School of Economics,  $3^{rd}$  PhD Conference on Sustainable Development, Lund University; NOITS Annual Workshop 2023 on International Economics, Seminar; University of Oxford; Swedish Network for European Studies in Economics and Business; University of Warwick, Macro Workshop; Warwick-CFM-Vienna Global Macro Workshop **2022**: Swedish Network for European Studies in Economics and Business; Lund University Seminar

**2021**: Swedish Network for European Studies in Economics and Business

#### Service

Part of conference organization team: Swedish Network for European Studies in Economics and Business (2021 - 2023)

**Referee:** Journal Empirical Economics, Journal of Productivity Analysis, African Review of Economic and Finance.

Committee: PhD Admission Committee Member, Department of Economics, Lund University, Governing Body Representative, Lund's Doctoral Student Union

**Design Editor :** African Review of Economic and Finance, Ghanaian Journal of Economics, Journal of African Political Economy and Development, Journal of Construction and Built Environment, Journal of Indigenous and Shamanic Studies

#### Grants & Awards

Jan Wallander and Tom Hedelius Scholarship for international research	
SEK250,000	2023
Erasmus + International Credit Mobility	
<i>€3,500</i>	2022
Arne Ryde Foundation scholarship	
SEK40,000	2021
Finalist	
World Econometric Game Championship, Amsterdam	2019
Swedish Institute (SI) Study Scholarship	
Ministry of Foreign Affairs of Sweden	2017
Prof. Kwadwo Asenso-Okyere's Prize for Best Student in Economics	
University of Ghana	2015

Production in manufacturing firms in high income countries is generally becoming cleaner. Some of this trend has been shown to be due to adoption of new technologies, but carbon offshoring – i.e. when dirty production at home is replaced with imports of carbon-intensive products from abroad - may be an additional factor. If so, this is concerning, since it risks undermining climate policies by simply moving emissions to countries with laxer regulations. This is the focus of this paper. Leveraging rich product-level data encompassing production, trade, and emissions from Swedish manufacturing firms, the paper examines how firms adjust their production decisions in response to supply shocks within their trading partner markets. Employing a combination of shift-share instrumental variables and a difference-in-difference estimation approach, the analysis reveals that carbon offshoring activities leads to a substantial reduction in average production-based emission intensity. In fact, a 10% increase in the import of energy-intensive goods can result in firms' production processes becoming 5% cleaner. This suggests that carbon leakage is a valid policy concern. However, my results also show that the positive effect on production-based emissions is partly counteracted by a negative effect through increased transportation emissions, and it is not clear what the overall effect on emissions will be. Further, the effect of offshoring on production emissions also depends on the type of offshoring. For instance, offshoring in the form of FDI has a much larger emissions-reducing effect than offshoring in the form of imports of inputs not produced in-firm.

### **Energy Cost and Competitiveness Risk**

While raising the carbon price is an effective tool for decreasing reliance on carbon-intensive production sources, it has also raised substantial concerns among policymakers that higher energy cost will render manufacturing firms less competitive and potentially lead to increased consumer prices. In this paper, I examined the impact of energy prices on manufacturing firms by using a shift-share instrument and an event-style difference-in-difference approaches that isolate the exogenous variation in firm-specific energy prices. The analysis reveals a dual impact of energy price inflation. On one hand, energy price shock contributes to positive environmental outcomes by reducing energy consumption and  $CO_2$  emissions. On the other hand, it exerts detrimental effects on firms' productivity, employment, and the risk of potential carbon leakage. Furthermore, firms demonstrate a propensity to shift the cost burdens to consumers, exacerbating general inflation in the economy. The results show varying levels of heterogeneity across manufacturing sectors, including energy-intensive and EU-ETS firms, as well as across different occupations. Overall, the findings suggest a trade-off between environmental and economic goals due to increasing energy taxes.

# Green Manufacturing Transitioning - The Role of Localized Import Competition Joint with Z. El-Sahli

There is evidence that increased import competition can lead to a reduction in domestic emissions, as domestic producers may adopt more efficient production processes in order to remain competitive with imported goods. However, this effect may not always be present, especially when nationwide import competition is assumed. We contribute to the literature by investigating whether the distance between producers and importers, within a country, matters for import competition effects on firm's environmental performance. Using detailed geographical information about the location of all manufacturing firms in Sweden during the period 2005-2014, we find evidence that

domestic production becomes more energy efficient when imports increase. However, if producers are in close proximity with polluting firms, the impact of import exposure falls. In addition to the importance of the geographical pattern within a country, our findings show that the average effect of import competition masks significant variations across firms and products. Highly productive firms respond to import competition by improving environmental performance. These firms are also more likely to reduce production of (dirty) products while continuing to produce core ones

Environmental Neglect or Cost Reduction? Impact of Carbon Offshoring on Firms' Pollution Abatement Joint with Z. El-Sahli

# Policy Papers

Moonlighting Behavior among Migrants: Determinants and Implications for Wellbeing in South Africa

Joint with E. Quarshie, I. Alagidede, E.T.Tosi

How Free is Movement in Africa? – Assessing the Ease of Travel in Anticipation of the AfCTA

Joint with E. Quarshie, D. A. Puplampu

Aid Fragmentation and Aid Effectiveness in Sub-Saharan Africa Joint with B. Senadza, R. Addison

Skills

Programming Languages: Stata, Python, R, Matlab

Web Development: HTML, CSS+, Java

Languages: Akan(native), English (fluent), Swedish (intermediate)