

# STUDENT ECONOMIC REVIEW 2023



UNIVERSITY OF DUBLIN

TRINITY COLLEGE

## PATRONS

PROFESSOR RONAN LYONS

PROFESSOR MICHAEL WYCHERLEY

## HONOURARY PATRONS

PROFESSOR JOHN O'HAGAN

DEPARTMENT OF ECONOMICS, TRINITY COLLEGE DUBLIN

Published by the Student Economic Review,  
c/ o Department of Economics, Trinity College, Dublin 2  
Republic of Ireland

All rights reserved  
Copyright © Contributors to the Student Economic Review 2023

All views expressed herein are those of the authors and do not necessarily reflect the  
views of the editors or the sponsors.

This journal claims no special rights or privileges.  
All correspondence or complaints should be addressed to:

The Editor,  
Student Economic Review,  
c/ o Department of Economics,  
Trinity College,  
Dublin 2,  
Republic of Ireland

Printed by Print Run Ltd

Cover by Séamus O'Beirne

The Student Economic Review is also available online at:  
<https://www.tcd.ie/Economics/SER/>

---

THE STUDENT ECONOMIC REVIEW WOULD LIKE TO SINCERELY  
THANK ALL OF OUR SPONSORS FOR THEIR CONTINUED SUPPORT

## SPONSORS

MATHESON

40C

PROFESSOR MICHAEL McMAHON

MR HARRY HARTFORD

MR VINAY NAIR

MR CIARÁN O' NEILL

MR ALAN GRAY

PRINTING FUNDED BY THE TCD TRUST

THE TRINITY ASSOCIATION & TRUST GRANT SUPPORTS  
FOR A WIDE VARIETY OF COLLEGE PROJECTS. ONE OF THE MAIN  
SOURCES OF FUNDING FOR THE TRINITY ASSOCIATION & TRUST  
IS THE TRINITY AFFINITY CREDIT CARD.

MORE INFORMATION CAN BE FOUND ABOUT THIS AT THE FOLLOWING LINK:

[WWW.TCD.IE/ALUMNI/SERVICES/AFFINITY-CREDIT-CARD](http://WWW.TCD.IE/ALUMNI/SERVICES/AFFINITY-CREDIT-CARD)

# STUDENT ECONOMIC REVIEW

## THE 2023 COMMITTEE

**FORMER GENERAL MANAGER**  
**GENERAL MANAGER**  
**EDITOR**

NIALL BUTLER  
CONSTANTINE IORDANOV  
RACHEL KANE

**DEPUTY EDITOR**  
**COPY EDITOR**  
**PRODUCTION MANAGER**  
**WORKSHOPS MANAGER**  
**LAUNCH MANAGER**  
**DEBATES MANAGER**  
**FINANCE MANAGER**  
**PUBLIC RELATIONS OFFICER**

EVAN CARRON-KEE  
BRYONY HOYLE  
DÓNAL MANGAN  
CLAIRE REYNOLDS  
TOM COMER  
CONSTANTINE IORDANOV  
SANJANA PRADHEEP  
SIYI LI



**Back Row (L-R):** Constantine Iordanov, Dónal Mangan, Bryony Hoyle, Tom Comer  
**Front Row (L-R):** Evan Carron-Kee, Rachel Kane, Claire Reynolds, Sanjana Pradheep  
**Absent:** Niall Butler, Siyi Li

---

**PRIZE-WINNING ESSAYS OF  
THE STUDENT ECONOMIC REVIEW 2023**

**BEST OVERALL ESSAY: DERMOT MCALEESE MEDAL**

---

---

**INSTITUTIONS AND INNOVATION:  
EVIDENCE FROM ALSACE-LORRAINE 1877-1939**

*OISÍN MCCONWAY*

**BEST APPLIED ECONOMICS ESSAY: JOHN O'HAGAN MEDAL**

---

---

**EXPLORING THE RELATIONSHIP BETWEEN  
INCOME INEQUALITY AND REGIONAL U.S. GROWTH**

*CIAN HENNIGAN*

**BEST FRESH ESSAY PRIZE:**

---

---

**PRODUCTIVITY AND PROSPERITY:  
THE GOLDEN AGE OF CAPITALISM**

*CONAL GILLESPIE*

## EDITORS AND GENERAL MANAGERS OF THE STUDENT ECONOMIC REVIEW, 1987-2023

<b>Year</b>	<b>Editor</b>	<b>General Manager</b>
1987 (Vol. I)	John Fingleton	Paddy Waldron
1988 (Vol. II)	Kevin Carey	Finbar McDonnell
1989 (Vol. III)	Johnathan Wright	Joe Denehy
1990 (Vol. IV)	Philip Lane	C.J. O'Neill
1991 (Vol. V)	Paul O'Connell	Billy Stamp
1992 (Vol. VI)	Alan White	Addo C. Barrows III
1993 (Vol. VII)	Gareth Davis	David Butler
1994 (Vol. VIII)	Alan Dunne	Donagh Lynch
1995 (Vol. IX)	Fergal Shortall	Myles H. Clarke
1996 (Vol. X)	Geoffrey Gill	Suzanne O'Neill
1997 (Vol. XI)	Sarah Rowell	Carol Newman
1998 (Vol. XII)	Richard Doyle	Charlotte Hess
1999 (Vol. XIII)	Michael McMahon	Niamh McDonagh
2000 (Vol. XIV)	Ana Carrie	Collette Murphy
2001 (Vol. XV)	Ronan Lyons	Charles Larkin
2002 (Vol. XVI)	Ivan McAdam	Janine Boyd O'Carroll
2003 (Vol. XVII)	Rowena Gray	Elaine Doyle
2004 (Vol. XVIII)	Denis Tkatchenko	Tara McInhoe
2005 (Vol. XIX)	Cormac O'Dea	Paul Sammon
2006 (Vol. XX)	Deirdre Reilly	Melinda Simonffy
2007 (Vol. XXI)	Niamh Crilly	Charlie Nolan
2008 (Vol. XXII)	Nathalie Ennis	Kieran Curtis
2009 (Vol. XXIII)	Jean Acheson	James Walsh

<b>Year</b>	<b>Editor</b>	<b>General Manager</b>
2010 (Vol. XXIV)	Jason Sommerville	Amandine Lobelle
2011 (Vol. XXV)	Robert Farhat	Áine Ní Shúilleabháin
2012 (Vol. XXVI)	Tony O'Connor	Debbie Blair
2013 (Vol. XXVII)	Brian Higgins	Marielle Grigsby-Rocca
2014 (Vol. XXVIII)	Féidhlim McGowan	Cián McLeod
2015 (Vol. XXIX)	Gearóid Gibbs	Michael Mahony
2016 (Vol. XXX)	Gillian O'Connell	Kate Hayes
2017 (Vol. XXXI)	Míde Ní Ghríofa	Alexandru Rada Puiu
2018 (Vol. XXXII)	Keelan Beirne	Aditya Garg
2019 (Vol. XXXIII)	John (Charlie) Walsh	Luisa Mostarda
2020 (Vol. XXXIV)	Harry Humes	Kevin Loftus
2021 (Vol. XXXV)	Ronan Dunne	Yvonne O'Kiersey
2022 (Vol. XXXVI)	Sarah Clavin	Cian Brennan
2023 (Vol. XXXVII)	Rachel Kane	Constantine Iordanov

## GUEST SPEAKERS AT THE LAUNCH OF THE STUDENT ECONOMIC REVIEW, 1990-2023

<b>Year</b>	<b>Speaker</b>	<b>Organisation</b>
1990 (Vol. IV)	Richard Lipsey	Simon Fraser University
1991 (Vol. V)	Charles Goodhart	London School of Economics
1992 (Vol. VI)	Peter Sinclair	Brasenose College, Oxford
1993 (Vol. VII)	David Greenway	Nottingham University
1994 (Vol. VIII)	Hamish McRae	The Independent, London
1995 (Vol. IX)	John Sutton	London School of Economics
1996 (Vol. X)	John Martin	OECD
1997 (Vol. XI)	Alan Tait	IMF
1998 (Vol. XII)	David O'Sullivan	European Commission
1999 (Vol. XIII)	Paula Donovan	World Bank
2000 (Vol. XIV)	Dermot McCarthy	Department of an Taoiseach
2001 (Vol. XV)	Donal Donovan	IMF
2002 (Vol. XVI)	Margaret Doyle	The Economist
2003 (Vol. XVII)	Tom Healy	Irish Stock Exchange
2004 (Vol. XVIII)	Gerry Foley	ITV PLC.
2005 (Vol. XIX)	John Fingleton	Competition Authority
2006 (Vol. XX)	Marius Brühlhart	HEC University of Lausanne
2007 (Vol. XXI)	Cliff Taylor	Sunday Business Post
2008 (Vol. XXII)	Alan Barrett	ESRI
2009 (Vol. XXIII)	Patricia Callan	Small Firms Association
2010 (Vol. XXIV)	Jane Willians	Forfás
2011 (Vol. XXV)	Tom O'Mahony	Department of Transport
2012 (Vol. XXVI)	Kyran McStay	Key Capital Limited
2013 (Vol. XXVII)	Alan Gray	Indecon Economic Group



---

<b>Year</b>	<b>Speaker</b>	<b>Organisation</b>
2014 (Vol. XXVIII)	Anke Heydenreich	Attestor Capital LLP
2015 (Vol. XXIX)	Declan Sheehan	JP Morgan
2016 (Vol. XXX)	Various Speakers	Past Committee Members
2017 (Vol. XXXI)	Kevin O'Rourke	All Souls College, Oxford
2018 (Vol. XXXII)	Liam Delaney	U.C.D.
2019 (Vol. XXXIII)	Carmel Crimmins	Reuters
2019 (Vol. XXXIII)	Seán Barrett	Dáil Éireann
2020 (Vol. XXXIV)	Eithne Fitzgerald	Former Minister of State
2021 (Vol. XXXV)	John Fitzgerald	ESRI
2021 (Vol. XXXV)	David McWilliams	Irish Economist
2022 (Vol. XXXVI)	Andrea Linehan	Currency Fair
2022 (Vol. XXXVI)	Stephen Kinsella	University of Limerick
2023 (Vol. XXXVII)	Ivan Pastine	U.C.D.
2023 (Vol. XXXVII)	Sarah Parlane	U.C.D.
2023 (Vol. XXXVII)	Edel Doherty	N.U.I.G.

# STUDENT ECONOMIC REVIEW DEBATES, 1990-2023

<b>Year</b>	<b>Opposition</b>	<b>Topic</b>	<b>Victor</b>
1996	U.C.D.	Third Level Fees	Trinity
1998	U.C.D.	EMU Without Britain	Trinity
1999	Oxford	The Euro: The Way Forward	Oxford
2002	Oxford	Boston or Berlin?	Trinity
2003	Cambridge	The Euro is a Success	Cambridge
2004	U.C.D.	Free Trade and Development	U.C.D.
2005	Oxford	Third World Debt	Trinity
2006	Cambridge	Common Agricultural Policy	Trinity
2007	Oxford	Environmental Responsibility	Trinity
2007	Yale	Boston or Berlin?	Trinity
2008	Harvard	Mass Emigration and Labour	Trinity
2008	Cambridge	Britain's Place in Europe	Cambridge
2009	Yale	Boston or Berlin?	Yale
2009	Oxford	Bank Nationalisation	Trinity
2010	Cambridge	Should Ireland have joined the Euro?	Trinity
2010	Harvard	The Decline of US Economic Dominance	Harvard
2011	Oxford	Ireland Owes a Debt of Gratitude to Britain	Oxford
2011	Yale	It's all America's Fault	Trinity
2012	Cambridge	Ireland Should Rejoin the Sterling	Trinity
2012	Harvard	The US State Does Not Care for it's Sick	Harvard
2013	Oxford	Deserting the Euro	Trinity
2013	Yale	Tax is Theft	Trinity
2014	Cambridge	United States of Europe?	Cambridge
2014	Harvard	US Education System	Trinity
2015	Oxford	100% Inheritance Tax	Trinity

---

---

<b>Year</b>	<b>Opposition</b>	<b>Topic</b>	<b>Victor</b>
2015	Yale	Opening the Mexican Border	Yale
2016	Cambridge	Will the EU Benefit from Brexit?	Cambridge
2016	Harvard	Should we be afraid of Cheap Oil?	Harvard
2017	Oxford	The EU is Unsustainable	Oxford
2017	Yale	Globalisation is Doomed	Yale
2018	Cambridge	Britain Should Pay Reparation to Former Colonies	Cambridge
2018	Harvard	The American Dream is Dead	Trinity
2018	Oxford	This House would unite Ireland post-Brexit	Yale
2019	Yale	Protectionism is Failing America	Cambridge
2019	Cambridge	Open All Borders	Cambridge
2021	Oxford	Break-up the UK	Oxford
2021	Yale	Implement Universal Basic Income	Trinity
2022	Cambridge	Derelict Properties Should be Surrendered to the State	Cambridge
2022	Harvard	Economic Warfare Does More Harm than Good	Harvard
2023	Oxford	Tax Cuts Create Economic Growth	Oxford
2023	Yale	Break Up Big Tech	Trinity

## ENDORSEMENTS

*“The Student Economic Review gives many students their first opportunity to publish a piece of academic written work. It thus supports and promotes the rigorous analysis, excellence in learning and persuasion that are essential building blocks for future careers and broader intellectual contribution. The collected contributions, now reaching into a third decade, constitute an elegant contribution to scholarship and erudition of which Trinity College can be proud.”*

**John Fingleton**  
**Trading London**  
**Editor, SER 1987**

*“My involvement in the SER was an important defining point in my undergraduate experience at Trinity. It introduced me to the world of academia, the role and importance of academic publishing and the range of questions and depth of research possibilities in the discipline of economics. It has stood the test of time and grows stronger every year attracting the highest calibre of students.”*

**Carol Newman**  
**PhD TCD, Associate Professor TCD**  
**General Manager, 1997 SER**

*“Ever since leafing through a copy of the SER in my JF year, my ambition to become involved in this prestigious student society could not be curbed. Leading the committee through the year from the first workshop to the launch was an experience dotted along the way with enduring memories. From a three-way discussion about which tablecloth should be used for the workshop, to finally holding a copy of the review at the launch evening. I’m sure our friendships will last as long as the memory of my scrupulous organisation!”*

**Cián McLeod**  
**Strategic Operations Specialist, Google Ireland**  
**General Manager, SER 2014**

---

# FOREWORD

## The Student Economic Review ‘Adventure’ to Date

It is a pleasure and honour to be asked to contribute to the 37th Student Economic Review (SER). Since my retirement in 2016, I have had little involvement with the SER. I got reconnected this year, largely due to the many committee members taking the JS European Economy module, including all three on the editorial team. I wrote a lengthier piece for the 30th SER, in 2016, so this will be short!

The first Student Economic Review was launched in 1987, mainly thanks to the efforts of John Fingleton, a precocious young JS economics student. Since then, there has been an annual publication of essays chosen by the SER student editorial team, the launch of the Review every year being a show-case event for the Department. Many of our most distinguished graduates started their publication careers in the SER. Essays chosen each year come mainly from SS students, but five/six slots are reserved for JS and one/two for SF/JF student essays. This is to ensure that it is a review for all. Academic staff each year are asked to strongly encourage students from their classes to consider submitting essays. This endorsement has ensured over the years a high level of essay submissions, in some years over eighty being received. There is now each year a Dermot McAleese Medal for best overall essay, a Medal for the best Applied Economics essay (with my name very kindly attached) and a Prize for the best JF/SF essay.

One to three Department staff usually oversee the work of the SER and invite applications early each Michaelmas Term from JS students to serve on the SER committee (normally six/seven members) and then leave it to the students, apart from regular short meetings to provide advice and guidance. It is an extraordinary achievement for JS students to develop from scratch every year such a fine publication.

While the core of the SER for many years was the Review itself, it soon widened out to include debates, first against UCD (1996), replaced then by Oxford and Cambridge (1999), on alternate years, and more recently Harvard and Yale (2007), on alternate years, were added. These debates are played to packed audiences in the GMB. And to think that the Oxbridge debates were started by another young precocious JS economics student, Vinay Nair, against the President’s wishes! The debates are held jointly with the Hist and the Phil, two of Ireland’s, let alone Trinity’s, premier debating societies. There is now a Vinay Nair Cup presented to the winning team in **each** of these debates and from 2023 a medal and prize for the best individual speaker in the Harvard/Yale debates. An understanding in relation to the debates is that Department staff are involved in selecting the Trinity team, choosing a suitable economics topic for the debate and that at least one of the team be studying **economics**.

As if the above was not enough, the SER Committee usually hosts one/two work-

shops and invited speakers. In 2015/2016 invited speakers included two Nobel Prize Winners in Economics, one of them for an event co-hosted with the Hist.

Several graduates have over the years provided very generous funding to sustain the SER and their contribution is duly and rightly acknowledged at each debate and in the Review. Without this financial support the SER in its current format would be unsustainable.

The SER is, we think, the oldest undergraduate economics publication in the world. It has been produced each year by an exceptional cohort of students studying economics in Trinity. We are very proud of their achievements, when as students here and later in their careers, academic and otherwise. Long may this continue to be the case.

**John O'Hagan,**

**President SER (1987-2016) and Professor of Emeritus, Economics.**

---

# STUDENT ECONOMIC REVIEW WELCOMES



# WELCOME FROM THE GENERAL MANAGERS

At the start of the year, I was extremely grateful for the opportunity to be General Manager for the 2023 Student Economic Review (SER). The SER is steeped in history as it is renowned for being one of the oldest undergraduate publications in the world. However, what makes this tradition so special is that behind each of the previous 36 editions there is a unique story - a story in which a dozen inexperienced economists come together, fuelled by ambition to produce a highly credited piece of work.

In the beginning, our first challenge was to assemble the team, and I am proud to say that due to significant interest from our peers, we introduced a new position of Public Relations Officer. Whilst traditionally the SER has had a much smaller committee, we felt that inclusivity within the committee was something we wanted to prioritise and thus we were keen to involve anyone who shared any enthusiasm for the project. With one of the largest committees on record, I must also thank the Patrons for continuing with the annual Patrons Lunch. This involved free food for all committee members so I am sure it was a significant expense for them! Quite remarkably, this lunch was the first time many of our group had met, as our college experience up to that point had been heavily disrupted by the COVID-19 Pandemic. The fact that we had spent most of the previous two years stuck at home with Zoom played an integral role in the way we viewed this opportunity; it was a chance to meet like-minded peers, to work together and to collaborate on issues that interested us. The SER provided a social outlet, and this was valued just as highly as any academic excellence demonstrated in the journal. As we all go on with our careers, our understanding of teamwork and how to get the best out of our colleagues will be invaluable, and we have the SER to thank for that.

Unfortunately, my own story within the SER was not as expected as I had to resign from my role at the end of the Michaelmas Term due to unforeseen circumstances. This was a huge disappointment for me, so when our Editor Rachel asked me to reflect on my experiences as part of the publication I was delighted. To see how the team has continued to flourish despite my absence genuinely brings a smile to my face. With the organisation of two international debates, and preparations for the launch well underway, I would like to recognise the contribution of each individual member. Firstly, Constantine Iordanov for taking over as General Manager and for the boundless enthusiasm and energy he brought to every meeting, which certainly made my life easier. Secondly, to the Editorial team of Rachel Kane, Evan Carron-Kee and Bryony Hoyle. I am sure that this year's edition will live up to the prestige thanks to all their hard work and input. I would also like to thank Rachel and Bryony for helping initiate our first ever collaboration with the



---

Irish Society for Women in Economics (ISWE), an important organisation that I hope grows from strength to strength. Also involved in that project was our Workshop Manager Claire Reynolds for whom I must thank for her effort in organising the Foundation Scholarship Workshop, an extremely insightful event for those preparing for the exams. To Sanjana Pradheep our Finance Manager, who assisted me countless times in attempting to overcome the red tape and bureaucratic nature of commercial banking, thank you for your hard work. It must also be mentioned that Sanjana managed to secure the Review two separate TCD grants for the first time in its history, so her contribution must be noted. Siyi Li and Donal Mangan were Public Relations Officer and Production Manager respectively. I would like to thank Siyi for increasing our reach across the three major social media platforms of Facebook, Instagram, and LinkedIn. Siyi has a great eye for detail and created a strong image for the SER. Donal similarly must be credited for his extremely hard work. Donal had no prior experience with our formatting software InDesign, so through his self-teaching it can be said now with certainty that without him there would be no Review this year. As we move towards our Launch on the 11th of April, with preparations well underway, I would like to thank Tom Comer not only for his work on the Launch, but also for his contributions throughout the year. A man of many talents, Tom was of great service to the committee, most notably for his inside knowledge on The Phil, for which he is secretary.

Finally, I would like to sincerely thank our Patrons, Dr. Ronan Lyons, Dr. Michael Wycherley and Dr. Alejandra Ramos for all their enthusiasm and help throughout the year. Without their constant guidance and encouragement, the continued success of SER would not be possible. I think I speak on behalf of the whole committee when I say we are truly grateful for this.

We hope that you enjoy this 37th edition of the Student Economic Review. In the years ahead, I hope it will remain as fond a memory for you as it will for each committee member, reminding us of our time together at Trinity College.

**Niall Butler,**  
**Former General Manager,**  
**Student Economic Review Vol. XXXVII**

# WELCOME FROM THE GENERAL MANAGERS

Welcome to the 37th edition of the Student Economic Review (SER), one of the oldest undergraduate journals in the world. Our aim is to uphold the Review's academic excellence, by showcasing the finest work in economics by Trinity undergraduates. Many of the Review's past essay writers have gone on to be leaders in the field of economics and public policy. We have no doubt that the future holds similar successes for this edition's essay authors and committee members.

Firstly, I would like to say thank you to our former General Manager Niall Butler, who laid out a substantial amount of the groundwork for the 37th edition of the Review between September and December 2022, as well as building the strong team dynamic our committee had this year. A further thank you goes to Siyi Li, who as Social Media Manager, helped grow our social media presence, collaborating with the Social Media Officers of other societies like the Trinity College Dublin Historical Society, so that we could mutually benefit from the publicising of our joint events. Whilst unfortunately they were not able to serve on the SER committee for the full length of the review, the 37th edition would not be what it is without their significant contributions.

With Niall having overseen most of the Michaelmas term events, next came Hilary Term. The first two events of the SER in 2023 were the two debates, organised by our Debates Manager Constantine Iordanov (myself), where for the first time since the Pandemic we had both debates in person. This debate series has become a core part of SER, as committees over the years have duly recognised that within the realm of economics it is not only important to be able to relay information clearly in a written academic language, but also to be able to communicate it clearly and effectively to members of the public without a background in economics. This is a skill that our debaters exhibited brilliantly in the two intervarsity debates. It was great to see the substantial interest in the SER debates this year held in collaboration with the Hist and Phil, with over 25 trialists for the 3 spots in each debate. We also had Professor Emeritus of Economics and former President of the SER John O'Hagan present the inaugural John O' Hagan Medal and Prize for best speaker at the Yale debate, named after him for his substantial contribution to the SER over the years. This was in part made possible by his sister-in-law Virginia.

The second and last debate of the year, coincided with the closing for submissions for essays. Over the last week of February and first week of March our Editor Rachel Kane, Deputy Editor Evan Caron-Kee and Copy Editor Bryony Hoyle read through over 50 submissions which were received. This team then selected, proofread and edited the best essays. This also involved checking the references, and so a special thanks goes out

---

the Editorial Team for the countless late nights they spent during the reviewing process in order to get the best quality work into this year's Review. The review process lasted over 2 weeks and it was great to see all the contributors take on board the valuable feedback from our Editorial team and implementing it into their essays.

With everything written and approved by our editors, our Production Manager Dónal Mangan compiled the journal together and formatted using InDesign. The rest happens after this has been written and sent off, with the organisation of our Launch event on Tuesday April 11th 2023, being led by our Launch Manager Tom Comer. I would like to thank Bryony Hoyle for doing a fantastic job in securing 3 speakers for the Launch this year. Lastly, thank you to our Workshop Manager Claire Reynolds who organised the final workshop for the year with Rachel: the 'Applying Behavioural Economics to Innovation Challenges' workshop with Accenture's Human Sciences Studio at the Dock.

It was a fast paced and productive year for the 37th edition of the Review, with some adjustments along the way for being fully back in person for the first time in 4 years. Nonetheless, we will pass on our insights to the next committee and we look forward to seeing the SER grow even further. As General Manager, I would like to thank everyone on the committee this year for their invaluable work for the SER, everyone who submitted an essay, everyone who trialled for our debates, our debaters from Oxford and Yale, our chairs and judges for the debate, our guest speakers for the Launch, our sponsors, our Patrons, our spectacular committee who excelled not only in their own respective roles, but also in other fields that helped advance the Review and lastly the Trinity Economics Department. Without all of the aforementioned individuals, the SER would not be what it is today. I hope you will enjoy reading this year's edition of the Student Economic Review.

**Constantine Iordanov,**  
**General Manager,**  
**Student Economic Review Vol. XXXVII**

# LETTER FROM THE EDITOR

It is with immense pleasure that I welcome you to this year's edition of the Student Economic Review (SER). Now in its 37th year, the Review remains at the heart of economics discourse in Trinity by providing students with the unparalleled opportunity to liberate themselves from the confines of their course curricula and to engage independently with pressing economic issues, both empirical and theoretical in nature. Each year, the Review rewards such ambitious students with the opportunity to experience publication in an academically renowned journal. In fact, the Review has served as a mere first glimpse into the realm of academic publication for many leading figures in academia and industry today. Based on the quality of the essays in this year's Review, I have no doubt that you can expect to see this year's contributors in top academic journals in years to come.

This year, we received some 50 essays, with a diverse array of topics ranging from post-pandemic EU labour market issues to analyses of Marxist economics. The standard of these essays created a challenge for the Editorial committee, and led to many long nights of discussion and debate in the lead-up to Reading Week in Hilary term. I would like to thank every student who submitted an essay for consideration for this year's Review. Furthermore, I wish to offer my congratulations to each student who was successful in achieving publication this year. The essays are divided into four categories which are discussed below.

The first section in this edition of the Student Economic Review is Applied Economics. This section contains some truly elegant applications of both economic theory and econometric methodology to a variety of economic issues. The Review is opened by Oisín McConway's essay, which employs a difference-in-differences approach to analyse the effect of full institutional transition in 1923 on the innovation rate in Alsace-Lorraine. Oisín receives the Dermot McAleese Medal for best overall essay this year for this outstanding original contribution. Following this, Cian Hennigan's essay uses a fixed effects regression to analyse the impact of income inequality on economic growth at the county level in the U.S. Cian receives the John O'Hagan Medal for best applied economics essay for this fascinating piece. Conor Maher then provides a stimulating analysis of various arguments against free trade from the perspective of the Heckscher-Ohlin model, and concludes that education is a crucial factor in explaining political resistance to trade today. Conal Gillespie's essay then argues that the decoupling of real wages and productivity in Western Europe in the 1980s contributed to rising income inequality. This essay has been awarded this year's Best Fresh Essay prize.

The second section of this year's Review is Labour Economics, which concerns two key issues facing European labour markets today. Evan Carron-Kee and Frank Wolfe inves-

---

tigate COVID-19 induced unemployment from the perspective of social network theory and propose several digital policy solutions to prevent hysteresis in the event of future lockdowns. Bryony Hoyle then provides a compelling analysis of the challenges faced by disabled people in the labour markets of many EU member states at present, and argues these states must tap into this under-utilised resource in the face of labour force shrinkages.

The third section of this year's Review is History of Economic Thought. Conor Maher leads with a novel bifurcated approach to argue that Adam Smith is more of a 'founder-by-popular-appeal' than 'founder-by-originality'. Alexander Peter George Harding proceeds with a convincing argument that the economic nationalism of Friedrich List has a place in the debate of economic theories. Mark Mitchell concludes with a novel comparison of the economic ideas of Karl Marx and Robert Owen and a discussion of the determinants of their divergence.

The 2023 edition of the SER concludes with the Development Economics section. Jane Hayes Nally provides a critical analysis of the efficacy of export restrictions by developing countries as a candidate solution for rising global food prices. Next, Chiara Marino examines the extensive labour market vulnerabilities in developing countries in the wake of the climate crisis, using India as a case study. The final essay is Ella Hensey's outstanding argument for the inclusion of local populations in the policy-making process in the context of foreign aid decisions in developing countries.

At this juncture, I would like to thank my fellow editors, Evan Carron-Kee and Bryony Hoyle, and our Production Manager Dónal Mangan for all their hard work this year in making this journal materialise. I would also like to thank both of the General Managers for this year, Niall Butler and Constantine Iordanov, who supported the editorial process and made sure all ran smoothly this year. I also wish to extend my appreciation to the committee entire, who worked together to organise some truly fantastic workshops and debates. Finally, I would like to personally thank the Economics Department and our Patrons, Dr. Ronan Lyons, Dr. Michael Wycherley and Dr. Alejandra Ramos, for their support and guidance throughout the year. I wish to extend my gratitude also to former President of the SER Prof. John O'Hagan for his continued support throughout the year.

Now, reader, I invite you to turn the page and begin reading this year's Review. I hope you find reading these essays as enjoyable as I did.

**Rachel Kane**  
**Editor,**  
**Student Economic Review XXXVII**

# SER DEBATES

## 2022/23

The SER Debates first introduced in 1996 are a fundamental part of the SER. They recognise the increased importance in our fast-paced attention economy of being able to convey economic issues, some of which can be highly complex, in a manner that is accessible and easy to understand by the broader public, who, in general, do not have a background in economics. Therefore, every year we have 3 speakers each from highly prestigious universities in both the U.K and US. come to Trinity to debate against speakers in Trinity on current economic issues. This year we welcomed both Oxford and Yale to debate in the SER Debate series.

This year, given the recent so-called ‘Mini Budget’ proposed by former U.K Prime Minister Liz Truss and the increased moves towards a universal minimum corporation tax rate, a debate on the efficacy of tax cuts seemed only natural between Oxford and Trinity. The increasing power of Big Tech in Silicon Valley created another topical issue worth debating: whether or not Big Tech should be broken up.

The SER Committee wishes to give a special thanks to former SER President Prof. John O’Hagan’s sister-in-law Virginia for generously establishing the inaugural John O’Hagan Medal and Prize for the best speaker in the Trinity vs. U.S University debate series in light of his outstanding contribution to the study of economics in Trinity over the years. We also wish to thank John for his tireless work for the SER over the years, which has been instrumental in encouraging students of all backgrounds to push themselves beyond their taught coursework and to engage with economic issues.

It is also worthy of note that this Debate series would not be possible without the help and contributions of the Hist, especially their Auditor Sebastian Dunne Fulmer, their Correspondence Secretary Kate Henshaw and Treasurer Aíne Kennedy, as well as that of the Phil, in particular their President Ellen McKimm and Secretary Tom Comer, who is also our very own Launch Manager and contributed a substantial amount to the Yale Debate to ensure it got maximum attendance. Furthermore, I would also like to thank the SER’s Patrons as well as the Chair Karina Doorely and the panel of Judges, Dr. Kate Hynes, Dr. Kevin Denny and Dr. Joseph Kopecky, for chairing and judging the Oxford vs. Trinity Debate. Furthermore, I thank Dr. Orla Doyle, Kate Hynes and Daire Lawler for judging the Yale vs. Trinity Debate.

---

## Trinity vs. Oxford

Wednesday, February 1st, 2023

Our first intervarsity debate between Oxford and Trinity took place in collaboration with the Trinity College Dublin Historical Society at the beginning of Hilary Term. From Oxford we had former European Debating Champions Oskar Sherry and Rachel O’Nunain, as-well as Ana Verdnik. From Trinity we also had a former European Debating Champion, Jack Palmer, as-well as Team Captain Naomi Panovka and Ziyad Anwer. The motion before the house was ‘This House Believes Tax Cuts Create Economic Growth’. Chairing the debate we had Dr. Karina Doorley the Research Area Coordinator for the Tax, Welfare and Pensions team at the ERSI. The 3 judges were Dr. Kate Hynes from DCU, Dr. Kevin Denny Head of the School of Economics at UCD and Dr. Joseph Kopeccky from Trinity College Dublin.

The Oxford team’s argument consisted of three crucial points. Firstly, drawing on Ireland as a case study, they argued that low corporation tax has been the main driver behind Ireland’s economic growth since 2009. Tax cuts place more money in people’s pockets leading to greater economic stability. They then stated that tax cuts foster economic growth by providing additional incentives for innovation. The taxation cuts proposed by Truss were addressed, proposing that they could not be classified as a legitimate example as the markets did not believe they would be followed through with and thus failed for that reason. The proposition concluded that fiscal policy in low inflation environments is important. Taxation cuts should be used similarly to interest rates, ensuring that the economy stays on a steady growth trajectory.

Trinity covered much ground to refute Oxford’s arguments. They argued that due to the progressive tax system, tax cuts are less effective and more complex, offering the alternative of more effective welfare measures. Furthermore, they highlighted that tax cuts are not truly free and are often financed by budget deficits, which raises borrowing costs through higher interest rates. Another crux to their case was that tax cuts are essentially lobbied for by special interest groups who have more bargaining power, which is why there are fewer cases of lobbying for welfare. They closed the debate by exclaiming that governments were better at making spending decisions influencing economic growth than large corporations, who often do not innovate to the extent they could.

After the debate was over, the chair gave her address bringing in her research area into the relevance to the debate. Dr. Karina Doorley highlighted how the literature shows that tax cuts often lead to greater inequality, as people reliant on income transfers, do not benefit from tax cuts. Therefore, tax cuts at a minimum need to focus on welfare side. The judges then gave their verdict, with Oxford winning the debate and Ana Verdnik .

being awarded the prize for best speaker. It may have been a few months after Liz Truss' mini Budget, but yet the debate was relevant and informative as ever.

## **Trinity vs. Yale**

**Thursday, February 23rd 2023**

Our second intervarsity debate of the year took place on Thursday February 23rd of April 2023 in collaboration with the Trinity College Dublin Philosophical Society. We had two esteemed speakers from Yale, Shyla Summers and Cameron Chacon, both with prior competitive debating experience in the Worlds Debating Championships. Unfortunately the third speaker was not able to make it in the end. Thus, Trinity student Zihad Anwer spoke with Yale. From Trinity we had Stephen O'Sullivan, former European Debating champion Dylan McCarthy and Naomi Panovka. Judging the debate were Dr. Kate Hynes, Economics Professor at DCU, Dr. Orla Doyle, Economics Professor at UCD, and Daire Lawler, Senior Researcher at IIEA. The motion before the house was "This House Would Break Up Big Tech", with Trinity on proposition and Yale on opposition.

Trinity's logic centred around how much Big Tech act in their own self-interest, neglecting both consumers and the industry benefits. First, they argued that technology has reached stagnation and that Big Tech's oligopoly results in less innovation. Additionally, regulation often consolidated Big Tech's power rather than reducing it, since copyright law and GDPR are expensive to abide by for small firms, giving Big Tech further power. Then, Trinity compared Big Tech's actions to that of a farmer owning the land setting up their market stall at the very front, illustrating how Big Tech is anticompetitive. They also highlighted how Big Tech uses capital reserves, to loss lead and price out competitors. This is another justification for breaking up Big Tech. To close, they argued that Big Tech price gouges and specialises rather than competing with each other, which creates a government reliance on Big Tech.

Yale opened by refuting Trinity's point regarding innovation, instead arguing that that Big Tech makes sure products are perfect before being released to maintain their market position and thus that is why it often takes a lot of time for Big Tech to produce truly new products. Moreover, most Big Tech companies are natural monopolies, they have grown so large as they are able to provide people with extensive offerings. Examples were Amazon - a marketplace with all products, and Facebook - a platform with all friends and family. Then, they argued that Big Tech lobbies for policies that benefit consumers such as greater data protection as this is expensive for small firms. Further, they



---

added that it is easier to regulate a few large companies than many small tech companies. Thus, we should allow BigTech as it is more efficient. They concluded that BigTech invest heavily in cyber security and upskilling.

It was a very topical debate, with the newly coined term ‘Little Tech’ the true triumph of the evening. After a very close call, the judges determined Trinity as the winners. The John O’Hagan prize for best speaker, which recognises John O’Hagan’s extraordinary contribution to the SER over the years and made possible by his sister in law Virginia, was awarded to Naomi Panovka. John O’Hagan was in attendance to present the prize and address the audience as one of the founding members of the SER. That ended this year’s debates, with next year seeing Cambridge and Harvard return once again!

**Constantine Iordanov,**  
**Debates Manager,**  
**Student Economic Review Vol. XXVII**

# SER WORKSHOPS

## 2022/23

Each year, the Student Economic Review (SER) hosts two to three workshops for students in order to encourage students to push themselves beyond the confines of their taught coursework, think about pressing economic issues and to network with like-minded peers and leading figures in industry and academia.

### **SER Foundation Scholarship Workshop**

**10th November 2022**

Michaelmas term saw the completion of two workshops. Firstly, the annual Student Economic Review Foundation Scholarship Workshop took place on the 10th of November 2022 in the Jonathan Swift Theatre. A staple on the Review's calendar, the workshop allowed students from Economics, Philosophy, Politics and Sociology to gain information to assist them on their journey to completing the Foundation Scholarship exams. Senior Freshman students got to hear from recent Foundation Scholars about the structure of the Scholarship examinations, study tips, exam tips and general information, followed by a Q&A session.

The workshop eased the minds of students who intended to sit the exams, as they learned what the process entails and left the workshop with a myriad of resources and scholars to turn to if they had any further questions or difficulties. As the first event of the year for the SER, the annual workshop was a fantastic way to promote the Review across Trinity and get people thinking about submitting an essay.

### **SER x Irish Society for Women in Economics (ISWE)**

**Brown Bag Lunch for Women in Economics and Allies**

**25th November 2022**

To close out Michaelmas term, the Student Economic Review partnered with the Irish Society for Women in Economics (ISWE) to host a networking lunch for all economics students and academics identifying as women in Trinity. Established in 2021, ISWE is an organisation which aims to inspire, empower and increase women's visibility

---

in economics in Ireland to ensure that the role of economists in public debates, policy decisions, and education is more representative of Irish society.

The networking event allowed students to hear about experiences from academics and fellow students in economics, as well as give input into what they would like to see happen in the future for women in economics space in Ireland. Students and academics left the event with an established network of women in economics, as well as a wealth of new resources from ISWE which promote the recognition of women in the economics profession.

This event could not have been possible without the help of Dr. Alejandra Ramos and the Irish Society for Women in Economics. The SER was delighted to be a part of such an important initiative in increasing the visibility of females in the Economics sphere. Collaborating with organisations external to Trinity College allowed for the reach of the SER to expand to students and academics who are not affiliated with Trinity and increase excitement about the Student Economic Review.

## **SER x Accenture Human Sciences Studio**

### **Applying Behavioural Economics to Innovation Challenges**

**23rd March 2023**

In conjunction with the SER debates in Hilary term, the SER also partnered with Accenture's Human Sciences Studio at The Dock in March. The team at the Human Sciences Studio in Accenture research and apply expertise in social sciences, arts and humanities in order to design innovative and sustainable business solutions for their clients, whilst find new methods that drive growth and help to counteract societal problems.

The question posed in the workshop was; 'How can we enable a world where community wellbeing and environmental sustainability are prioritised alongside economic growth?'. The team at Accenture guided students through a typical behavioural sustainability challenge, namely energy usage, which has become increasingly topical in light of the energy crisis. Using this theme, the team demonstrated how behavioural economic models and concepts can be used to solve complex business and policy problems. This was then followed by a Q&A, where students got to learn more about the real world application of economic models and their importance outside of the classroom. It was truly fascinating to see how the economic models that we have learned about in lectures can assist important and life changing business and policy developments.

This event would not have been a success without the help of Dr. Kenneth McK-

enzie, Colm Mulcahy and Elena El Ters. Their professionalism, intuition and expertise was really inspiring and they acted as excellent role models for upcoming economics graduates.

Overall, this year saw the delivery of three impactful and rewarding workshops by the Student Economic Review. I would like to thank all the committee members of the SER for their continued support throughout the year in making these events a success.

**Claire Reynolds,**  
**Workshops Manager,**  
**Student Economic Review Vol. XXXVII**

---

# TABLE OF CONTENTS

<b>APPLIED ECONOMICS</b>	<b>1</b>
INSTITUTIONS AND INNOVATION: EVIDENCE FROM ALSACE-LORRAINE 1877-1939 <i>Oisín McConway</i>	2
EXPLORING THE RELATIONSHIP BETWEEN INCOME INEQUALITY AND REGIONAL U.S. GROWTH CIAN HENNINGAN	14
EDUCATION AND RESISTANCE TO TRADE: A HECKSCHER-OHLIN ANALYSIS <i>Conor Maher</i>	27
PRODUCTIVITY AND PROSPERITY — THE GOLDEN AGE OF CAPITALISM <i>Conal Gillespie</i>	36
<b>LABOUR ECONOMICS</b>	<b>44</b>
CUTTING TIES: LOCKDOWN-INDUCED HYSTERESIS, AND THE DIGITAL-AGE POLICY TOOLS THAT COULD TACKLE IT <i>Evan Carron-Kee &amp; Frank Wolfe</i>	45
DISABLING THE EU'S GREATEST RESOURCE <i>Bryony Hoyle</i>	55
<b>HISTORY OF ECONOMIC THOUGHT</b>	<b>64</b>
ADAM SMITH ON TRADE: ORIGINAL THINKER OR POPULAR INFLUENCER? <i>Conor Maher</i>	65
NATIONALIST, ECONOMIST, FRIEDRICH LIST <i>Alexander Peter George Harding</i>	75
WHY DID THE ECONOMIC IDEAS OF MARX DIFFER FROM THOSE OF THE UTOPIAN SOCIALIST THINKERS OF HIS TIME? <i>Mark Mitchell</i>	84

<b>DEVELOPMENT ECONOMICS</b>	<b>92</b>
TRAPPED IN THE TRADE-OFF: PRICE SIGNALLING AND EXPORT RESTRICTION IN INFLATIONARY GLOBAL FOOD MARKETS <i>JANE HAYES NALLY</i>	93
SELF-EMPLOYMENT AND CLIMATE LABOUR MARKET VULNERABILITIES IN DEVELOPING COUNTRIES: EVIDENCE FROM INDIA <i>CHIARA MARINO</i>	102
NO REFORM WITHOUT REPRESENTATION: REVISING THE ROLE OF FOREIGN AID IN POLICYMAKING AND SUSTAINABLE GROWTH <i>ELLA HENSEY</i>	113

---

# APPLIED ECONOMICS



# INSTITUTIONS AND INNOVATION: EVIDENCE FROM ALSACE-LORRAINE 1877-1939

OISÍN MCCONWAY

SENIOR SOPHISTER

*“The role of institutions in fostering innovation is of fundamental importance for sustained economic growth. In this analysis, Oisín McConway exploits the natural experiment opportunity presented by the Treaty of Versailles to better understand this relationship. The transition from German to French institutional traditions is associated with a marked reduction in patent production in Alsace-Lorraine, and informs the contemporary policy debate surrounding the relevance of property rights and political representation as instruments for development.”*

## Introduction:

Economists are interested in the specific institutional channels which facilitate innovation, given its important role in endogenous growth theory (Romer, 1990). A wide body of literature links the innovation rate in a given economy with institutional quality, as institutions facilitate innovation through the lowering of transaction costs resulting from information asymmetry, bargaining and coordination, and enforcement of contracts (North, 1990).

While relative consensus has been reached regarding the importance of innovation as a determinant of long run economic growth, it is necessary to exercise stronger scrutiny of the institutional environment in which innovation is incubated. Few opportunities have presented themselves to compare how innovation in a particular region has evolved following an exogenous change in the overarching institutional framework.

The unique history of Alsace-Lorraine in the 19th and 20th century offers an opportunity to directly examine the effect of particular institutional frameworks on innovation rates in a relatively well developed regional economy. From the Treaty of Frankfurt in 1871 to the Treaty of Versailles in 1919, Alsace-Lorraine was controlled by Imperial



---

Germany, and subsequently by France until the Nazi occupation of France was formalised in June 1940. Importantly, the final border demarcation of 1919 was exogenous to socio-economic conditions, and was rather determined by the use of the Vosges mountains as a natural geopolitical frontier (Förster, 1990). Full institutional transfer from Germany to France was established in 1923 (Glenn, 1974: 773). Hence, 1923 represents a shock to the economy in the region, where the institutional structure and norms changed rapidly. This offers a rich time period in which the particularities of Imperial German and French institutional environments can be compared, and the lessons learned used to inform the contemporary debate regarding innovation-optimal institutional frameworks.

Using a recently published database including historical records of all German patents since 1877 and all French patents since 1903, this article outlines a difference-in-difference econometric specification using yearly district patent output as the dependant variable and French control of Alsace-Lorraine as a binary treatment variable, along with controls. Records of British patents and US patents are also available in the same timeframe, allowing for foreign patents created by residents of Alsace-Lorraine to also be included in the innovation rate. The aim is to better understand which institutional framework better facilitated innovation.

## **Literature Review**

### **The Franco-German Context**

What the French annexation signifies is a regional transition from a system of high economic growth and strong property rights, to one of improved political representation at the cost of lower growth. There is an inherent dichotomy between the two systems at the outbreak of the First World War. Previous comparisons of Franco-German institutions highlighted that the guild-based system of the late 18th century had impeded economic growth in Germany (Donges, Meier and Silva, 2022), yet this system had been abolished by the 1850s (Keck, 1993). Germany was a latecomer to the economic growth of the period in Western Europe, but began outcompeting France by 1913, with a \$70 billion GDP compared to the French \$47 billion (1970 USD). Higher education participation increased from 14,000 students in 1870 to 60,000 in 1914, with Alsace-Lorraine specifically experiencing significant growth in new industries in the same period (Keck, 1993). Worsening this usurpation of institutional efficacy is the consensus that the French legal system, by way of its revolutionary origins, hinders economic development (Porta et al., 1998; Wang, 2013). From this perspective, Imperial Germany's institutional framework by the dawn of 20th century can be seen as a facilitator of innovation, reversing trends from the late 18th century.

However, Franco-German divergence in the treatment of Alsace-Lorraine in relation to political representation motivate interest in the potential of the research question. The German approach to the region focused on strictly limited territorial self-administration due to geopolitical concerns (Kreuzer, 2001). Alsace-Lorraine did not have the same political rights as ‘native’ parts of the German state, with an electoral allocation of 15 deputies to the Reichstag but no vote on the German Federal Council (Silverman, 1971; Dehdari and Gehring, 2022). Its treatment as a protectorate without full integration into the state prevented the full realisation of political participation for its citizens, a crucial barrier to innovation that is noted in the contemporary literature (Bariş, 2019). Reintegration of Alsace-Lorraine into France conferred full political participation (Carol, 2018: 30). Coupled with the superior political party stability in France, a fundamental difference in the two institutional landscapes is clear (Kreuzer, 2001).

This establishes the possibility of a difference-in-difference analysis that advances understanding of the role of institutions in fostering innovative activity. Assuming statistical significance, the sign of the treatment effect would improve understanding of the underlying mechanisms through which institutions influence innovation. A decrease in innovative activity following the institutional overhaul would support the importance of strong property rights and economic growth. An increase in innovation would provide newfound insight into the importance of uninhibited political participation and political stability, which was provided by the French state, at the cost of lower economic growth at the national level and an erosion of the strong property rights prevalent in the Germanic tradition.

### **The Effect of Institutions on Patent Output**

Joseph Schumpeter was among the first scholars to highlight and engage with the institution-innovation dynamic, theorising institutions as ‘the patterns of behaviour into which individuals must fit under penalty of encountering organized resistance’ (Hospers, 2005: 24). Romer (1990) and Grossman and Helpman (1993) built upon the initial theorisation, incorporating institutional quality into long run economic growth models through its role in enabling firms and individuals to innovate. Indeed, recent work has theorised that institutions affect the efficiency of the economy in much the same manner as technology itself, improving or worsening efficiency and incentives to invest in physical and human capital (Sala-i-Martin, 2002). Hence, effective institutions should facilitate innovation by decreasing transaction costs and associated spillover effects (Rodríguez-Pose, 2013).

These conjectures were confirmed with empirical studies as the constraining lack of data availability was improved. Historical economics is contributing significantly to the literature in this context. Analysis of the English Old Poor Law and social unrest from

---

39 English counties by Greif and Iyigun (2012) exemplifies this. They find significant evidence that England's institutions between 1650 and 1830 aided the modernisation of the economy by suppressing violence within key demographics threatened by economic change. Specifically, the law included monetary relief which subdued food riots, minimising the negative effect on innovative activity. Empirical findings in other institutional contexts are consistent with such findings. Tebaldi and Elmslie (2008) utilise an OLS regression to show that institutional arrangements explain much of the variation in patent production across countries in the modern day. This was corroborated by Cook's (2014) study of political conflict levels and domestic terrorism experienced by African-Americans at the turn of the 20th century. Using a novel dataset and proxying for economic innovation via patent output, the study found that institutional instability was responsible for 1100 'missing' patents, that is patents which would have been created in stable conditions but weren't due to the level of instability. Rule of law, government efficacy, control of corruption, and regulatory quality appear frequently in the literature as metrics for institutional quality (Bariş, 2019; Rodríguez-Pose and Zhang, 2020). Bariş (2019) elaborates further, finding statistically significant results in favour of the importance of political participation in maintaining individual level innovation. The extant literature effectively highlights the institution-innovation relationship in both modern and historical contexts but has yet to exploit the natural experiment opportunity of Alsace-Lorraine in 1923.

Discussion of economic growth and institutional quality metrics naturally prompt concerns regarding endogeneity. Wang (2013) outlines the procedural issue at hand; economic growth could create a larger, more educated middle class which demands more freedom and thus improved institutions. Attempts have been made to address this issue via the use of instrumental variables. This has been done effectively by Donges, Meier and Silva (2022) in their study of institutional evolution following the occupation of parts of Imperial Germany following the French revolution of 1789. Instrumenting for institutional quality through years of French occupation, they highlight the importance of inclusive institutions as a prime determinant of patents per capita. Acemoglu, Johnson and Robinson (2001) in their landmark study, utilise settler mortality from 17th to 19th century colonial expeditions as a statistically significant instrument predicting economic performance via the nature of the imposed institutions. While this connection is significant, the authors do not engage explicitly in uncovering the effect that this settler mortality had on innovation in the colonised states, leaving room for further study regarding the relationship between the extractive institutions created by inhospitable settlement environments and subsequent innovative activity.

### **Natural Experimentation in Innovation Analysis**

The proposed difference-in-difference identification strategy builds upon the ex-

tant literature which has used similar opportunities of quasi-natural experiments to better understand the effects of institutions on innovation. Much of the work in the field to-date is relatively recently published and focuses upon economic policy evaluation in Asia. Zhou et al. (2022) use the staggered introduction of an anti-corruption campaign within the Chinese Communist Party and firm-level green patent creation to analyse the effect of anti-corruption efforts on innovation. They identify a positive causal effect, where decreased corruption prompted improved environmental innovation, with the effect being suppressed in state-owned firms. Staggered foreign investment relaxation in China is also exploited as a quasi-natural experiment using a panel of Chinese energy firms from 2006-2016 (Kong, Zhu and Yang, 2020). In this context, foreign institutional investment had a positive effect on innovation output, also finding that the effect was weakened for firms with higher state ownership, advocating for the importance of free market policies in facilitating innovation. Xiong and Li (2022) complement these findings using a difference-in-difference approach focusing on the establishment of University Science and Technology parks across 293 Chinese cities from 1999 to 2017. Institutional improvement was facilitated through ‘industry-education convergence’ (Xiong and Li, 2022: 3) in this case, with the establishment of the science parks increasing patent activity by 40% within cities treated with their presence.

The relevant methodological literature is extensive, yet equally highlights the neglect of difference-in-difference frameworks in the cliometric context. Application to historical data would aid in further clarifying the institution-innovation relationship at large. Little work has been done in adopting the difference-in-difference framework to compare two broad institutional environments, rather focusing on individual policy changes within a single national institutional framework. This has inhibited understanding of which components of institutions most effectively drive innovation.

## Dataset Description

The primary data source is the PatentCity dataset (Bergeaud and Verluise, 2022). The entire span of the dataset covers US patent records since 1836, British records since 1894, German records since 1877, and French records since 1903. Focusing on these regions in the given timeframe (1877 – 1940) results in a database of 2050 kreise/département (district) level observations on an annual basis. Of these, 93 observations originate in the treatment area of Alsace-Lorraine. While French records are not included until 1903, patent activity prior to this period is captured in the German records, given their full control of the region until 1919.

Given the specific nature of the PatentCity dataset, it is also necessary to utilise other sources to form effective controls for the regression analysis. The war dummy variable is included to control for any effects the First World War may have had on innovative

activity in the data. It equals 1 if the year is between 1914-1918, and 0 otherwise. Annual GDP per capita for France and Germany is also collected from the Varieties of democracy Dataset as a general proxy for the level of wealth forming the foundation of state institutions.

## Methodology

The difference-in-difference method aims to examine the causal impact of the change in institutional framework by comparing the innovation rate between the groups prior to and after the impact of the French annexation of Alsace-Lorraine. Full institutional transfer took place in 1923 and forms the boundary mark for treatment implementation. The treatment cohort in this method are the districts which switched national jurisdiction. Building on the DID approach of Pippel and Seefeld (2016), the average treatment effect is formally described as:

$$\delta = \{[Y2(\text{Group} = 1, \text{PostVersailles} = 1) - Y1(\text{Group} = 1, \text{PostVersailles} = 0)] - [Y4(\text{Group} = 0, \text{PostVersailles} = 1) - Y3(\text{Group} = 0, \text{PostVersailles} = 0)]\}$$

The first difference calculates the change in the treatment group (districts in Alsace-Lorraine) before and after the French annexation of the districts. Conversely, the second difference calculates the change in the control group (kreise districts that remain as part of Germany) before and after the annexation. The difference between these two district-level cohorts is the treatment effect. As such, the following regression specification is proposed:

$$\text{PatentRate}_{i,t} = \beta_0 + \beta_1 \text{AlsaceLorraine}_i + \beta_2 \text{Post1923}_t + \delta_1 \text{AlsaceLorraine}_i \times \text{Post1923}_t + \beta_3 \text{War}_t + \beta_4 \text{GDP\_PC}_{j,t} + \mu_i + \gamma_t + \epsilon_t$$

Where  $i$  is a given district in year  $t$ .  $\text{PatentRate}_{i,t}$  is the dependent variable representing the outcome in terms of patents originating in district  $i$  in year  $t$ . The interaction term  $\delta_1(\text{AlsaceLorraineDistrict}_i \times \text{PostVersailles}_t)$  reflects the treatment effect in the regression and is the variable of most interest. As noted, the sign and significance of this coefficient will provide improved insight into the mechanisms through which institutions affect innovation when decomposed into its constituent parts. Controls for GDP per capita in country  $j$  in year  $t$ , and war in year  $t$ , are also included.

## Results and Discussion

The pre-defined regression specification is implemented via OLS regression. Multiple models are outlined based on the inclusion of controls and district fixed effects.

	<i>Dependent variable:</i>			
	District Level Annual Patent Output			
	<i>OLS</i>			
	(1)	(2)	(3)	(4)
Alsace Lorraine	-4.716* (2.613)	-35.896*** (3.048)	-4.841* (2.619)	-36.027*** (3.050)
Post 1923	26.712*** (5.632)	32.117*** (4.173)	11.367 (20.629)	16.652 (15.218)
War			-1.674 (8.164)	1.282 (6.030)
GDP Per Capita			0.003 (0.004)	0.003 (0.003)
Alsace-Lorraine*post1923	-10.818** (4.525)	-12.122*** (3.344)	-12.725** (5.153)	-14.044*** (3.807)
Constant	1.632 (4.596)	28.410*** (3.849)	-9.288 (14.851)	17.404 (11.103)
Year Fixed Effects	Yes	Yes	Yes	Yes
District Fixed Effects	No	Yes	No	Yes
Observations	2,050	2,050	2,050	2,050
R <sup>2</sup>	0.108	0.524	0.108	0.525
Adjusted R <sup>2</sup>	0.079	0.499	0.079	0.499
Note:	*p<0.1; **p<0.05; ***p<0.01			

Figure 1.

Prior to the reintegration of Alsace-Lorraine, the region underperformed relative to other German districts with respect to its patent output, even when controlling for GDP per capita and the innovation-inducing effects of the war effort. In the uncontrolled regressions, it is clear that average innovation activity increased post-1923 across the total study cohort. Much of this is driven by the significant increases in innovation within Germany in the inter-war period (figure 1).

Across all 4 models, the interaction term indicates a statistically significant suppressive effect on innovation activity following the transfer of institutional responsibility from Germany to France with respect to Alsace-Lorraine. The findings show that the transition from German to French norms of governance is associated with a reduction in innovation activity vis-à-vis ‘native’ German states which did not undergo a change in jurisdiction. The difference-in-difference coefficients indicate that sub-districts within Alsace and Lorraine produced between 10.8 and 14.4 fewer patents per annum in

---

the overall post-treatment period than they would have in the counterfactual scenario whereby Germany maintained control of the area. As such, it can be inferred that the relative weakening of property rights and reduction in national-level economic prosperity supersedes the increased political participation that the French annexation conferred. These findings would suggest that the ability of each state to catalyse innovation by the early 20th century had evolved from the 1850s, where the German guild-based system had been inferior to that of the French (Donges, Meier and Silva, 2022).

The inclusion of control variables does little to provide significant statistical power to the overall model but does have the effect of removing any statistical significance from the `post_1923` dummy variable. The cause of this is unclear, however it is possible that this variable captures a fundamental war-induced change in innovation capability which is instead captured by the war dummy variable in the controlled regression analysis. Nevertheless, the inclusion of controls does not weaken the significance of the interaction term itself.

Finally, the inclusion of district fixed effects and the accompanying increase in the value of *r*-squared suggests that much of variance in the patent output data is explained by district heterogeneity. The inclusion of district fixed effects significantly improve the statistical power of the overall model while also maintaining the statistical significance of the difference-in-difference coefficient. Model 4 provides the strongest overall *r*-squared while also controlling for war and GDP per capita. At the same time, this model provides the most pronounced negative association between French reintegration and a decrease in patent output, providing the most robust evidence for such a relationship.

## **Parallel Trends**

Additional analysis is carried out to confirm the presence of parallel trends prior to the treatment boundary. This may be confirmed graphically or via regression:

<i>Dependent variable:</i>	
District Level Annual Patent Output	
Alsace Lorraine	-39.775*** (2.924)
1920	7.460* (4.313)
1921	11.203*** (4.288)
1922	15.132*** (4.287)
Alsace-Lorraine*1920	6.913 (15.232)
Alsace-Lorraine*1921	1.028 (10.923)
Alsace-Lorraine*1922	1.099 (10.922)
Constant	28.403*** (3.864)
Year Fixed Effects	Yes
District Fixed Effects	Yes
Observations	2,050
R <sup>2</sup>	0.521
Adjusted R <sup>2</sup>	0.495
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01	

Figure 2.

The lack of statistical significance in the 3 years prior to reintegration illustrate that there exists no significant divergence between the two groups prior to treatment. This is also necessary to confirm from a historical perspective, as it is possible that the transition period of Alsace-Lorraine's annexation from the Treaty of Versailles in 1919 to 1923 could already have induced changes in the institutional norms in the area. This quantitative analysis comprehensively refutes such a perspective. This can be confirmed graphically. The graphical perspective also illustrates the long term parallel trends which existed while the region was part of wider Germany, and the stark divergence which takes place post-1923.





Figure 3.

## Conclusion

The reintegration of Alsace-Lorraine into France, and therefore into French institutional tradition, is a rare opportunity to examine the role of institutions in innovation, and specifically which institutional channels best induce patent activity. Where German institutional norms in the period are best defined by strong property rights and robust economic growth, the French alternative prioritises political stability and representation at the cost of property rights weakened by their revolutionary heritage, as well as a less robust economic foundation.

Quantitative analysis of this natural experiment yields a result which suggests that innovation was stifled following French annexation, supporting the importance of property rights, and underlying economic strength, as key drivers of innovation. The assumption of parallel trends is confirmed in the pre-treatment period.

Further research is necessary to better understand these findings when compared with the wider contemporary literature. For example, there is a growing consensus that strong intellectual property rights, associated with strong institutions, tend to decrease innovation in countries starting with relatively high or low levels of development (Hudson and Minea, 2013; Sharma, Sousa and Woodward, 2022). Theorisation of a U-shaped institution-innovation relationship with respect to economic development (Furukawa, 2007) should be compared and contrasted with the emerging cliometric literature.

## References

1. Acemoglu, D., Johnson, S. and Robinson, J. A. 2001. 'The colonial origins of comparative development: An empirical investigation', *American Economic Review*, 91:5: 1369–1401.
2. Bariş, S. 2019. 'Innovation and institutional quality: Evidence from OECD countries', *Global Journal of Business, Economics and Management: Current Issues*. Birlesik Dunya Yenilik Arastirma ve Yayıncilik Merkezi, 9:3: 165–176.
3. Bergeaud, A. and Verluise, C. 2022 A new Dataset to Study a Century of Innovation in Europe and in the US. Centre for Economic Performance, LSE.
4. Carrol, A. 2018 *The Return of Alsace to France, 1918-1939*. Oxford University Press.
5. Cook, L. D. 2014. 'Violence and economic activity: evidence from African American patents, 1870–1940', *Journal of Economic Growth*. Springer, 19:2: 221–257.
6. Dehdari, S. H. and Gehring, K. 2022. 'The origins of common identity: Evidence from Alsace-Lorraine', *American Economic Journal: Applied Economics*, 14:1: 261–292.
7. Donges, A., Meier, J.-M. and Silva, R. C. 2022. 'The impact of institutions on innovation', *Management Science*. INFORMS.
8. Förster, S. 1990. 'General-Feldmarschall Helmuth von Moltke und die kriegsgeschichtlichen Folgen des deutsch-französischen Krieges', *La guerre de 1870/71 et ses conséquences*, 86–96.
9. Furukawa, Y. 2007. 'The protection of intellectual property rights and endogenous growth: Is stronger always better?', *Journal of Economic Dynamics and Control*. Elsevier, 31:11: 3644–3670.
10. Glenn, H. P. 1974. 'The local law of Alsace-Lorraine: A half century of survival', *International & Comparative Law Quarterly*. Cambridge University Press, 23:4: 769–790.
11. Greif, A. and Iyigun, M. 2012. *Social Institutions, Violence and Innovations: Did the Old Poor Law Matter?* Stanford, CA.
12. Grossman, G. M. and Helpman, E. 1993. *Innovation and growth in the global economy*. MIT press.
13. Hospers, G.-J. 2005. 'Joseph Schumpeter and his legacy in innovation studies', *Knowledge, Technology & Policy*. Springer, 18:3: 20–37.
14. Hudson, J. and Minea, A. 2013. 'Innovation, intellectual property rights, and economic development: a unified empirical investigation', *World Development*. Elsevier, 46: 66–78.

- 
15. Keck, O. 1993. 'The national system for technical innovation in Germany', National innovation systems: A comparative analysis. Oxford University Press Oxford.
  16. Kong, D., Zhu, L. and Yang, Z. 2020. 'Effects of foreign investors on energy firms' innovation: Evidence from a natural experiment in China', *Energy Economics*. Elsevier, 92: 105011.
  17. Kreuzer, M. 2001. *Institutions and Innovation: Voters, Parties, and Interest Groups in the Consolidation of Democracy--France and Germany, 1870-1939*. University of Michigan Press.
  18. North, D. C. 1990. 'Economic performance', New York.
  19. Pippel, G. and Seefeld, V. 2016. 'R&D cooperation with scientific institutions: a difference-in-difference approach', *Economics of Innovation and New Technology*. Taylor & Francis, 25:5: 455–469.
  20. Porta, R. La et al. 1998. 'Law and finance', *Journal of political economy*. The University of Chicago Press, 106:6: 1113–1155.
  21. Rodríguez-Pose, A. 2013. 'Do institutions matter for regional development?', *Regional studies*. Taylor & Francis, 47:7: 1034–1047.
  22. Rodríguez-Pose, A. and Zhang, M. 2020. 'The cost of weak institutions for innovation in China', *Technological Forecasting and Social Change*. Elsevier, 153: 119937.
  23. Romer, P. M. 1990. 'Endogenous technological change', *Journal of political Economy*. The University of Chicago Press, 98:5:2: S71–S102.
  24. Sala-i-Martin, X. 2002. '15 years of new growth economics: What have we learnt?'
  25. Sharma, A., Sousa, C. and Woodward, R. 2022. 'Determinants of innovation outcomes: The role of institutional quality', *Technovation*. Elsevier, 118:. 102562.
  26. Silverman, D. P. 1971. 'The Economic Consequences of Annexation: Alsace-Lorraine and Imperial Germany, 1871–1918', *Central European History*. Cambridge University Press, 4:1: 34–53.
  27. Tebaldi, E. and Elmslie, B. 2008. 'Do institutions impact innovation?'
  28. Wang, C. 2013. 'Can institutions explain cross country differences in innovative activity?', *Journal of Macroeconomics*. Elsevier, 37: 128–145.
  29. Xiong, Y. and Li, S. 2022. 'Can the Establishment of University Science and Technology Parks Promote Urban Innovation? Evidence from China', *Sustainability*. MDPI, 14:17: 10707.
  30. Zhou, K. et al. 2022. 'The power of anti-corruption in environmental innovation: Evidence from a quasi-natural experiment in China'.

# EXPLORING THE RELATIONSHIP BETWEEN INCOME INEQUALITY AND REGIONAL U.S. GROWTH

CIAN HENNIGAN  
SENIOR SOPHISTER

*“This paper examines the impact of income inequality on real Gross Domestic Product (GDP) growth at the U.S. county level. Using a fixed effects regression, I find that income inequality has a positive effect on GDP growth in aggregate, but this effect is heterogeneous depending on the level of economic development of the county. The results show that richer counties benefited more from inequality while in poorer counties there was a negative relationship between inequality and growth. These findings provide support for policies to reduce income inequality in poorer regions in order to increase regional and aggregate growth. These differences highlight the regional complexities when studying economic growth and development at a sub-national level.”*

## Introduction

Income inequality, or the difference in income earned by different members of the income distribution, remains a problem in many societies and economies. The purpose of this study is to test the direct impact that income inequality, or more specifically the income share held by the top 1 and 10 percent of income earners, has on real Gross Domestic Product (GDP) growth at U.S. county level. Many prior studies have found inconclusive evidence around whether income inequality has any impact on GDP growth. These studies compare countries from many diverse regions of the globe, but there is evidence that the effects of income inequality are quite different depending on geographical location (Chancel et al., 2022). This research adds to the existing literature by studying the issue at a regional level, rather than a national or cross-country level. Using a fixed effects regression, I examine the impact of income inequality on growth for 3,143 counties

from 2010 to 2015. This study finds that income inequality has an overall positive effect on GDP growth, but this effect is heterogeneous depending on the level of development of the county. More importantly, the effect of income inequality is negative on real GDP growth in the poorest 25% of counties. These results suggest that income inequality dampened economic growth for poor regions and increased economic growth for richer regions. This adds to the existing literature by providing evidence that income inequality has different effects at different stages of economic development, and that the impact of income inequality is more complex than previously thought. These findings have important regional implications for policy makers, suggesting that reducing income inequality in poorer regions may have beneficial effects on economic growth.

## Literature Review

In the last 40 years, income inequality has risen in the US to its highest level since pre-WWII. This increase can be seen by the persistent rise of the proportion of income being earned by the top 1 and 10 percent income earners in the US, shown in Figure 1.



Figure 1. Historical Income Inequality in the US (Chancel et al., 2022, p. 227)

The US stands as an outlier of advanced economies when it comes to income inequality; income inequality fell in most other rich nations after the Great Recession, and has not risen since (Chancel et al., 2022: Ch. 2). This anomaly can be attributed to the

regressive taxation system of the US (Saez & Zucman, 2020). With this context in mind, the US provides an interesting setting to investigate how high income inequality impacts real economic variables and society as a whole. There are many mechanisms through which this could occur. For example, high income inequality could create political unrest leading to reduced investment (Alesina and Perotti, 1996). Bivens (2012) shows that the effect of rising income inequality in the US has slowed aggregate demand by an average of 2 to 4 percent in the last few years. This comes from secular stagnation, where increases in savings by high-income households restricts money flow and aggregate demand growth in the economy. The main channel through which income inequality improves economic growth is through incentives, however. Higher income acts as an incentive to increase labour input as well as investing in one's educational attainment, increasing general productivity (Petersen and Schoof, 2015).

Research on the relationship between income inequality and real economic variables was first conducted by Kuznets (1955). Using a descriptive analysis of data prior to WWII, he hypothesised that the relationship between income inequality and income per capita could be represented using an inverted U curve. This suggests that poor and rich countries have little income inequality, and that as a country industrialises it experiences a high level of income inequality which then subsides as economic convergence occurs. This creates a trade-off dilemma between reducing income inequality and promoting growth. Empirical studies have shown evidence that Kuznets theory holds such as Papaneek and Kyn (1986) and Barro (2000), but explain little of the variation in income inequality. Despite this, recent historical evidence shows little evidence of reduced income inequality for advanced economies (Chancel et al., 2022). The empirical study of growth and inequality was initiated by Deininger and Squire (1996), who conducted a descriptive analysis on a novel cross-country dataset and concluded that there was no such relationship. Subsequently, Forbes (2000) carried out a study on the relationship using a panel of countries from 1965 to 1995. Importantly, she used a Generalised Method of Moments (GMM) model for her empirical approach, a more rigorous empirical estimation. She finds that GDP growth increases when income inequality rises for her data set. A study by Barro (2000) analyses the impact that income inequality has on real GDP growth for a panel of roughly 100 countries in the same time period as Forbes (2000). The regression results show that there is inconclusive evidence that income inequality has any impact on growth rates over this period, but does find that high income inequality tends to hamper growth in poor countries, but increases growth in richer countries.

A study by Jianu et al. (2021) clusters European Union member states into developing and developed groups, and measures the effect of income inequality on GDP growth in these groups. Their fixed effects regression from 2010-2018 shows that income inequality in the developing countries decreases growth after the Great Recession, while income inequality increases real GDP growth for developed countries. There is clear

---

evidence from the literature that the impact of growth on income inequality may differ at different stages of development. A study by Cingano (2014) uses the GMM model to study the impact of income inequality on real GDP growth for a panel of 31 OECD countries from 1970 to 2010. The results show a significant increase in GDP growth when the country has reduced income inequality; a one point reduction in the Gini index would raise average growth by slightly more than 0.1 percentage points per year, with a cumulative gain in GDP at the end of the period of around 3% over a 25-year time period.

There is a vast body of literature empirically examining the relationship between income inequality and growth, but there are conflicting results. Firstly, it is likely in cross-country panel data studies that there is offsetting of the impact of income inequality for rich and poor countries. Shin (2012) uses economic modelling to show that both positive and negative impacts are possible, depending on the stage of an economy's development, reinforcing the findings of Barro (2000) and Jianu et al. (2021). The differing results are also likely due to the different methods of estimation, different statistical measures of inequality and inconsistent samples and time periods (Neves and Silva, 2014).

Given the limitations associated with cross-country studies, it is more advantageous to explore this relationship at a subnational level. This approach increases internal validity and acts as a natural control for the level of economic development and other drivers of growth, such as institutional strength. Frank (2009) creates a dataset on various measures of income inequality at state level in the US and examines the impact it has on growth. The dataset he created has a long time dimension, making it useful to examine the relationship of inequality and growth. He finds a positive relationship between inequality and growth, which is robust to a number of different inequality measures. This research looks to validate the positive relationship identified by Frank (2009), while also adding to the literature by focusing on regional differences rather than international differences. The availability of regional data makes the United States an ideal country to investigate such differences, which is likely why the study of regional effects in other countries is less prevalent.

## Methods

A fixed effects regression is selected to analyse the impact that income inequality has on real GDP growth in this study. A year dummy is introduced to control for differences in the effect of the independent variables on real GDP growth over time. The fixed effects method is used to control for time invariant factors in the data that are associated with each county. In order to control for heteroskedasticity, standard errors are clustered at the county level. The dependent variable in the model is real GDP growth, which is the percentage change in real GDP year-on-year for each US county. The main independent variables are the income share earned by the top 1 and 10 percent income earners for

each county. In order to control for omitted variable bias, other control variables are included. Race is included, which is calculated as the percentage of the county's population who are non-white alone. The education (Educ) variable is the percentage of over-25s who have at least a high school diploma, controlling for the effects of human capital on growth. Unemployment (Unem) is the annual average percentage unemployment rate for each county, while Age is the age dependency ratio which is the percentage of the combined under-18 and 65-and-over population over the 18-to-64 population. Finally, GDPpc is GDP per capita and GDPpc\_sq is GDP per capita squared, included to account for non-linearity in the relationship between income inequality and GDP per capita, as found in Barro (2000).

Equation 1 represents the standard fixed effects regression with IncomeShare1.

$$GDP_{it} = \beta_0 + \delta_1 d.Year_t + \beta_1 IncomeShare1_{it} + \beta_2 Race_{it} + \beta_3 Educ_{it} + \beta_4 Unem_{it} + \beta_5 Age_{it} + \beta_6 GDPpc_{it} + \beta_7 GDPpc_{sq_{it}} + u_{it} \quad (1)$$

I then test whether income inequality affects growth at different rates depending on the economic development of the state. I create a dummy variable labelled Poor, which represents the counties who are in the bottom 25% of GDP per capita. I interact this dummy variable with IncomeShare1 to test the impact of income inequality on growth for the poorest US counties using Equation 2.

$$GDP_{it} = \beta_0 + \delta_1 d.Year_t + \beta_1 IncomeShare10_{it} + \beta_2 Educ_{it} + \beta_3 Unem_{it} + \beta_4 Age_{it} + \beta_5 GDPpc_{it} + \beta_6 GDPpc_{sq_{it}} + \beta_7 Poor + \beta_8 Poor * IncomeShare10 + u_{it} \quad (2)$$

I then apply the same process above the 25% richest counties, creating a dummy variable Rich, and interact this with IncomeShare1. This is represented by Equation 3.

$$GDP_{it} = \beta_0 + \delta_1 d.Year_t + \beta_1 IncomeShare10_{it} + \beta_2 Educ_{it} + \beta_3 Unem_{it} + \beta_4 Age_{it} + \beta_5 GDPpc_{it} + \beta_6 GDPpc_{sq_{it}} + \beta_7 Rich + \beta_8 Rich * IncomeShare10 + u_{it} \quad (3)$$

I then repeat the regressions as above using IncomeShare10, represented by Equation 4, 5 and 6.



$$GDP_{it} = \beta_0 + \delta_1 d.Year_t + \beta_1 IncomeShare10_{it} + \beta_2 Race_{it} + \beta_3 Educ_{it} + \beta_4 Unem_{it} + \beta_5 Age_{it} + \beta_6 GDPpc_{it} + \beta_7 GDPpc\_sq_{it} + u_{it} \quad (4)$$

$$GDP_{it} = \beta_0 + \delta_1 d.Year_t + \beta_1 IncomeShare10_{it} + \beta_3 Educ_{it} + \beta_4 Unem_{it} + \beta_5 Age_{it} + \beta_6 GDPpc_{it} + \beta_7 GDPpc\_sq_{it} + \beta_8 Poor + \beta_9 Poor * IncomeShare10 + u_{it} \quad (5)$$

$$GDP_{it} = \beta_0 + \delta_1 d.Year_t + \beta_1 IncomeShare10_{it} + \beta_3 Educ_{it} + \beta_4 Unem_{it} + \beta_5 Age_{it} + \beta_6 GDPpc_{it} + \beta_7 GDPpc\_sq_{it} + \beta_8 Rich + \beta_9 Rich * IncomeShare10 + u_{it} \quad (6)$$

## Description of the Dataset

The sample consists of data from 3143 county and census areas in the United States, over a period of 6 years from 2010 to 2015. For lack of data reasons, I have omitted the territories of Puerto Rico and Guam from the study. I source my income share data from the Economic Policy Institute (EPI) (Sommeillier and Price, 2018). This data has the advantage of being calculated using a mixture of tax returns and survey data, which avoids omission bias, as highlighted above. All GDP data is sourced from the Bureau of Economic Analysis (BEA, 2022). Race, educational attainment, age dependency ratio and population data are all sourced using the data available at the US Census Bureau (US Census Bureau, 2022). More specifically, these figures come from the 5-year American Community Survey estimates for each year. Unemployment data is sourced from the Bureau of Labour Statistics, using their historical local area unemployment statistics (Bureau of Labour Statistics, 2022). Summary Statistics for the data can be seen in Figure 2.

VARIABLES	N	mean	sd	min	max
GDPpc	18,530	51.86	267.8	2.375	19,276
Incshare10	18,817	41.92	5.876	13.53	97.81
GDP	18,533	2.216	11.11	-89.40	304.5
IncShare1	18,817	13.07	5.125	2.468	85.48
Race	18,852	14.63	16.40	0.318	97.19
Educ	18,856	84.32	7.025	44.90	99.30
Unem	18,846	7.489	2.986	1.100	29.40
Age	18,855	65.82	10.36	5.100	141.8

Figure 2 – Summary Statistics

Even though the sample size is 3143, the regressions consist of 3087 observations for each time period, so the panel is strongly balanced. Inequality data is absent for some counties, with the omission being random across states. A large proportion of counties in the state of Virginia are omitted because of issues with GDP data. The EPI provides income share data for each individual city and county, while the Bureau of Economic Analysis (BEA) aggregates the GDP data for the independent city and the county that surrounds it. Therefore, these cities and counties must be omitted from the study. For robustness, it is safe to assume these bureaucratic differences in formatting data are exogenous from the income inequality of a county.

## Empirical Results

Figure 3 displays the estimated coefficients for Equations 1, 2 and 3. For Equation 1, IncomeShare1 is significant at the 5% level, with a 1% increase in the income inequality leading to a 0.135% increase in GDP growth, holding all else equal. Education shows no significant effect, which is surprising given its impact in other studies. This may be due to education measuring high school attainment, as it is possible that university attainment is more important for growth. Race is extremely significant with a 1% increase in the non-white population in a county leading to a 0.946% increase in growth, holding all else equal. This shows that counties with a higher minority population grew at a quicker rate after the Great Recession. Unemployment is significant at the 1% level and is negative, which is expected considering the importance of labour in the production of goods and services. Age shows no significance, and its effect on growth is small and positive. GDP per capita is significant at the 5% level, showing that a 1000 dollar increase in the GDP per capita of a county leads to a 0.0435% increase in the growth rate, holding all else equal. GDP per capita squared is both significant and negative, implying that there is a non-linear relationship between GDP per capita and growth. The quadratic estimator is quite small however, so the quadratic element has an extremely weak impact. For Equation 2, Incomeshare1 remains significant and positive, but the estimator has increased to 0.168. The other independent variables remain very similar to Equation 1. The dummy variable Poor is significant at the 1% level, showing that the poorest counties have a growth rate on average 5.9086% lower than the other counties, holding all else equal. For the interaction of Poor\*IncomeShare1, we can see that the estimator is significant at the 10% level, and the effect is negative. In Equation 3, the Rich variable is significant and also has a strong impact at 8.955%. However, the Rich\*IncomeShare1 shows no significance.

VARIABLES	(1) GDP	(2) GDP	(3) GDP
Year = 2	-1.453*** (0.283)	-1.462*** (0.282)	-1.587*** (0.276)
Year = 3	-3.449*** (0.481)	-3.414*** (0.482)	-3.586*** (0.399)
Year = 4	-2.296*** (0.472)	-2.205*** (0.471)	-2.452*** (0.468)
Year = 5	-4.749*** (0.381)	-4.690*** (0.383)	-5.061*** (0.379)
Year = 6	-5.271*** (0.384)	-5.151*** (0.377)	-5.653*** (0.697)
IncomeShare1	0.135** (0.0536)	0.168*** (0.0638)	0.124*** (0.0479)
Race	0.946*** (0.366)	0.827** (0.367)	0.854** (0.362)
Educ	-0.148 (0.117)	-0.142 (0.115)	-0.161 (0.114)
Unem	-0.361*** (0.121)	-0.699*** (0.122)	-0.780*** (0.121)
Age	-0.0122 (0.0625)	-0.0195 (0.0615)	0.00663 (0.0638)
GDPpc	0.0435** (0.0196)	0.0403** (0.0197)	0.0348* (0.0197)
GDPpc_sq	-6.23e-06*** (2.87e-06)	-7.38e-06*** (2.87e-06)	-6.90e-06** (2.71e-06)
Poor		-5.906*** (1.284)	
Poor*IncomeShare1		-0.154* (0.0932)	
Rich			8.915*** (1.527)
Rich*IncomeShare1			0.0172 (0.0918)
Constant	8.822 (12.96)	8.043 (12.99)	6.628 (12.83)
Observations	18,498	18,498	18,498
R-squared	0.024	0.040	0.047
Number of US County	3,087	3,087	3,087

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 3. Regression Results for IncomeShare1

Figure 4 displays the regression output for Equations 4, 5 and 6. Analysing Equation 4, we can see the Race, Education, Unemployment, Age and GDP per capita follow very similar effects to the regression when IncomeShare1 was included instead. Importantly, IncomeShare10 is statistically significant at the 1% level with a 1% increase in income inequality causing growth to increase by 0.144%. For Equation 5, Poor no longer explains a significant portion of the variance in growth. Poor\*IncomeShare10 is highly significant, showing increases in income inequality decrease the growth rate of poor counties more than for rich counties. For Equation 6, the introduction of the Rich dummy and the interaction variable leads to IncomeShare10 and GDP per capita becoming less significant, while Rich and Rich\*IncomeShare10 are not significant. Overall, the results show evidence that increases in income inequality causes increases in growth on average for all US counties. This supports the analysis of Forbes (2000) and is in contradiction with Cingano (2014). The most important finding is that increases in income inequality dampens growth in poor counties, suggesting that the results reported by Barro (2000) and Jianu et al. (2021) may also hold at the regional level. The findings also show that there is no significant increase in growth for the richest countries, but income inequality is most

positively impactful when we include the poor dummy. This provides evidence for a poor/non-poor inverse in the impact of income inequality on growth. The regressions all have a low  $R^2$ , which is to be expected for a regression containing GDP growth as the dependent variable.

VARIABLES	(1) GDP	(2) GDP	(3) GDP
Year = 2	-1.474*** (0.283)	-1.409*** (0.282)	-1.397*** (0.277)
Year = 3	-1.484*** (0.403)	-1.439*** (0.402)	-1.427*** (0.402)
Year = 4	-2.265*** (0.468)	-2.260*** (0.467)	-2.499*** (0.468)
Year = 5	-4.833*** (0.564)	-4.753*** (0.555)	-5.217*** (0.541)
Year = 6	-5.240*** (0.762)	-5.112*** (0.763)	-5.579*** (0.697)
IncomeShare10	8.142** (0.0346)	9.206*** (0.0634)	9.187** (0.0396)
Race	0.031*** (0.004)	0.020** (0.004)	0.041*** (0.004)
Educ	-0.153 (0.114)	-0.144 (0.115)	-0.167 (0.114)
Unemp	-0.761*** (0.128)	-0.760*** (0.121)	-0.773*** (0.121)
Age	-0.009 (0.0627)	-0.008 (0.0621)	-0.00777 (0.0618)
GDPpc	0.0418** (0.0196)	0.0410** (0.0195)	0.0350* (0.0187)
GDPpc <sub>it</sub>	-0.256-06*** (2.58e-06)	-7.834-06*** (2.67e-06)	-6.95e-06** (2.71e-06)
Poor		3.818 (4.148)	
Poor*IncomeShare10		-0.279*** (0.101)	
Rich			4.434 (4.120)
Rich*IncomeShare10			0.118 (0.0979)
Constant	2.666 (13.00)	2.187 (13.88)	3.607 (13.00)
Observations	18,498	18,498	18,498
R-squared	0.024	0.041	0.047
Number of US County	3,087	3,087	3,087

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 4. Regression Results for IncomeShare10

Fisher-type unit-root test for GDP Based on augmented Dickey-Fuller tests		
H0: All panels contain unit roots	Number of panels	= 3090
H1: At least one panel is stationary	Avg. number of periods	= 6.00
AR parameter: Panel-specific	Asymptotics: T → Infinity	
Panel means: Included		
Time trend: Included		
Drift term: Not included	ADF regressions: 1 lag	
	Statistic	p-value
Inverse chi-squared(6178) P	0.0000	1.0000
Inverse normal Z		
Inverse logit t(4) L*		
Modified inv. chi-squared Pm	-55.5788	1.0000

Figure 5. Unit Root Test for GDP

# Robustness Checks

For robustness, I performed a Fisher test outlined in Choi (2001) to test for unit roots in my panel data displayed in Figure 5. The test is non-significant, showing evidence for a unit root process for real GDP growth. This autocorrelation biases the fixed effects regression, and the given estimators. Figure 6 shows the Fisher test for IncomeShare10, showing the same result. These tests cast doubt over the results obtained, due to the dependent and main independent variable being autocorrelated, and potential spurious regression affecting the estimators obtained.

Fisher-type unit-root test for incshare10 Based on augmented Dickey-Fuller tests		
<hr/>		
H0: All panels contain unit roots	Number of panels	= 3140
H1: At least one panel is stationary	Avg. number of periods	= 5.99
<hr/>		
AR parameter: Panel-specific	Asymptotics: T -> Infinity	
Panel means:	Included	
Time trend:	Included	
Drift term:	Not included	ADF regressions: 1 lag
<hr/>		
	Statistic	p-value
Inverse chi-squared(6278) P	0.0000	1.0000
Inverse normal Z	-	-
Inverse logit t(4) L*	-	-
Modified inv. chi-squared Pm	-56.0268	1.0000
<hr/>		

Figure 6. Unit Root Test for IncomeShare10

I subsequently performed a Westerlund test, which shows evidence that some panels are cointegrated in Figure 7. Overall, the robustness checks show signs that some assumptions of the fixed effects model may not hold, which has implications for the accuracy of the estimators.

Westerlund test for cointegration		
<hr/>		
H0: No cointegration	Number of panels	= 3088
H1: Some panels are cointegrated	Avg. number of periods	= 5.9916
<hr/>		
Cointegrating vector: Panel specific		
Panel means:	Included	
Time trend:	Not included	
AR parameter:	Panel specific	
<hr/>		
	Statistic	p-value
Variance ratio	3.4731	0.0003
<hr/>		

Figure 7. Westerlund Test for Cointegration

## Discussion

The results corroborate the empirical findings of Frank (2009), and confirm the positive relationship between inequality and growth. From a regional perspective, there is evidence of heterogeneity in the effect of inequality on growth depending on the level of development, aligning with research showing differing effects for developed and developing countries. From a policy perspective, there may be benefits to reducing income inequality in poorer regions, albeit small. The above findings most likely hold for regions within other advanced economies, but more research is needed to see whether the heterogeneous regional relationship holds for developing countries.

Despite these results, it is important to understand the robustness issues of the methodology. The autocorrelation of key variables and endogeneity problems are areas of concern, and the limited time dimension exposes the estimates to Nickell bias (Nickell, 1981). Future research in this area should use the Generalized Method of Moments (GMM) model rather than the fixed effects model. GMM helps to deal with endogeneity between income inequality and GDP growth, while also allowing for the inclusion of a lagged dependent variable, helping to control for autocorrelation (Cingano, 2014). It would also be beneficial to include a regressor related to investment or capital expenditure. Gross fixed capital is included as a variable in many of the cross-country studies, which is not available at the county level. There is also a simultaneity issue with investment, which makes it difficult to include in a fixed effects model.

## Conclusion

The main result from this study is that increased income inequality is beneficial for growth in the majority of US counties from 2010-2015, but has a negative impact for the poorest 25% of counties. These results align with the findings that the effect of income inequality on real GDP growth is heterogeneous depending on the level of development of the region. Studying the relationship at a regional level helps to alleviate some of the issues with cross-country panel studies, and highlight the importance of regional specificity when examining economic growth. However, due to model limitations, the results should be interpreted with caution.

## References

1. Alesina, A., and Perotti, R. 1996. Income distribution, political instability, and investment. *European Economic Review*, 40:6: 1203–1228.
2. Barro, R. J. 2000. Inequality and growth in a panel of countries. *Journal of Economic Growth*, 5:1: 5–32.

3. BEA. 2022. 'Regional data'. [on-line], <https://apps.bea.gov/itable/itable.cfm?ReqID=70&step=1> [Accessed: 12 March 2022].
4. Bivens, J. 2012. 'Inequality is slowing U.S economic growth'. Economic Policy Institute. [on-line], <https://www.epi.org/publication/secular-stagnation/>
5. Blanchet, T., Flores, I., and Morgan, M. 2022. 'The weight of the rich: Improving surveys using tax data'. *The Journal of Economic Inequality*, 20: 119–150.
6. Bureau of Labour Statistics. 2022. 'Local area unemployment statistics (laus)'. [on-line], from <https://www.bls.gov/lau/#tables> [Accessed: 14 March 2022].
7. Chancel, L., Piketty, T., Saez, E., and Zucman, G. 2022. *World inequality report 2022*. World Inequality Lab.
8. Choi, I. 2001. Unit root tests for panel data. *Journal of International Money and Finance*, 20:2: 249–272.
9. Cingano, F. 2014. Trends in income inequality and its impact on economic growth. OECD Social, Employment and Migration Working Papers, No. 163, OECD Publishing. [on-line], <http://dx.doi.org/10.1787/5jxrjncwvx6j-en> [Accessed: 13 March 2022].
10. Deininger, K., and Squire, L. 1996. A New Data Set Measuring Income Inequality. *The World Bank Economic Review*, 10:3: 565–591.
11. Forbes, K. J. 2000. A reassessment of the relationship between inequality and growth. *American Economic Review*, 90:4: 869–887.
12. Frank, M.W. 2009. Inequality and Growth in the United States: Evidence from a New State-Level Panel of Income Inequality Measure. *Economic Inquiry*, 47:1: 55–68.
13. Jianu, I., Marin, D., Huru, D., and Bodislav, A. 2021. Examining the relationship between income inequality and growth from the perspective of eu member states' stage of development. *Sustainability*, 13:9.
14. Kuznets, S. 1955. Economic growth and income inequality. *The American Economic Review*, 45:1: 1–28.
15. Neves, P. C., and Silva, S. M. T. 2014. Inequality and growth: Uncovering the main conclusions from the empirics. *The Journal of Development Studies*, 50:1: 1–21.
16. Nickell, S. 1981. Biases in Dynamic Models with Fixed Effects. *Econometrica*, 49:6: 1417–1426.
17. Papanek, G. F., and Kyn, O. 1986. The effect on income distribution of development, the growth rate and economic strategy. *Journal of Development Economics*, 23:1: 55–65.

18. Petersen, T., and Schoof, U. 2015. The impact of income inequality on economic growth. *Impulse*, 5: 1–12.
19. Saez, E., and Zucman, G. 2020. The rise of income and wealth inequality in america: Evidence from distributional macroeconomic accounts. *Journal of Economic Perspectives*, 34:4: 3–26.
20. Shin, I. 2012. Income inequality and economic growth. *Economic Modelling*, 29:5: 2049– 2057.
21. Sommeillier, E., and Price, M. 2018. ‘The new gilded age’. Economic Policy Institute. [on-line], <https://www.epi.org/publication/the-new-gilded-age-income-inequality-in-the-u-s-by-state-metropolitan-area-and-county/> [Accessed: 12 March 2022].
22. US Census Bureau. 2022. ‘Census data’. [on-line], <https://data.census.gov/cedsci/> [Accessed: 12 March 2022].



---

# EDUCATION AND RESISTANCE TO TRADE: A HECKSCHER-OHLIN ANALYSIS

CONOR MAHER  
SENIOR SOPHISTER

*“This paper presents and reviews the economic insecurity argument as an explanation for political resistance to free trade, as derived from the Heckscher-Ohlin model. It is argued that this explanation suffers from major limitations such as its inability to be reconciled with sociotropic-voting preferences, the protectionist gender-disparity, the ‘college-plateau’, and evidence of similar opinions on trade between active workers and retirees. To address these issues, the paper proposes tolerance argument and the economic knowledge argument. The paper concludes that education is a key factor in explaining the political resistance to trade and can address the main defects associated with the Heckscher-Ohlin approach.”*

## Introduction

Few things unite economists more than the issue of free international trade. There has been a broad consensus, dating back to Adam Smith, that free trade produces welfare-improving outcomes for countries at the aggregate level. Smith famously critiqued mercantilism and advocated for free trade on the basis that it allows for a greater degree of specialisation and division-of-labour, thereby fostering economic growth. David Ricardo, building upon this framework, constructed the pioneering theory of Comparative Advantage and in-doing-so established the benefits of free trade as economic orthodoxy.

These benefits have not been contained solely in abstract economic theory but have been expressed in the real world wherever trade has been unrestricted. The increased competition from trade has reduced prices for consumers and expanded output as firms avail of economies-of-scale (Feenstra and Weinstein, 2017). Trade forces unproductive firms out of the market which facilitates a reallocation of resources to more efficient firms, allowing them to charge lower prices to consumers (Bernard et al., 2012). Moreover, there is some evidence for the existence of dynamic gains from trade which accrue gradually and sustainably such as the gains from product research and innovation (see Feyrer, 2019).

Yet, despite these benefits, public opinion in favour of free trade is waning in some countries. Support for free trade in the United States decreased by sixteen percentage points between 2020 and 2021 (Gallup, 2021) as part of a growing trend that was reflected in the election and policies of Trump and the rise of Bernie Sanders. This rise in anti-trade sentiment is particularly apparent in the decline of globalisation – trade as a percentage of world GDP peaked at 64% in 2008 and dropped to just 53% in 2020 (Ikenson, 2021). Economists must explain why there is such resistance to free trade considering the long-established aggregate benefits it offers society, in order to re-stabilise political support for free trade and secure these benefits for future generations.

This paper reviews the Heckscher-Ohlin model's attempt to answer this question in light of the evidence presented by O'Rourke and Sinnott (2001) and Mayda and Roderik (2005). The paper will then critique the Heckscher-Ohlin model by highlighting its inability to adequately explain the patterns in support for free trade apparent in the literature. Finally, the paper draws on sociology and political science to propose explanations which better fit the data: the tolerance argument and economic knowledge argument.

## **The Heckscher-Ohlin Model**

The Heckscher-Ohlin (H-O) model of trade consists of two factors of production (labour and capital), two countries (one relatively abundant in labour and the other in capital), and two products, hence why it is sometimes referred to as the 2x2x2 model. Unlike the Ricardian-model, the H-O model does not explain patterns of trade with reference to technological differences between countries but by their differences in relative factor endowments. Countries specialise in the production and export of goods that require intensive use of the factor of production which the country possesses in relative abundance. For example, a country relatively abundant in labour will specialise in those goods which require intensive use of labour and obtain capital-intensive goods through trade.

The model shows that trade is welfare improving on the aggregate level for both countries as they can both take advantage of their natural endowments and the opportunity that arises from the disparity between autarky prices and world trade prices. More importantly, however, the model provides useful insights into the distribution of the gains from trade. It holds that the price of the good produced by the relatively abundant factor is higher after opening up to trade than under autarky because the world price is influenced by countries that are relatively scarce in the factor needed to produce said good. Consequently, the domestic country shifts more production away from the good produced by the relatively scarce factor and towards the good produced by the relatively abundant factor. This increases the demand for the relatively abundant factor and increases its real return - the opposite being true for the relatively scarce factor. As such, the

---

model predicts that when a country opens up to trade, returns to the relatively abundant factor increase while the returns to the less abundant factor fall - this result is known as the Stolper-Samuelson Theorem.

It is therefore rational for those who have a stake in the success of the relatively scarce factor of production to oppose free trade if redistribution measures are not in place to compensate them for their loss. This becomes particularly salient if the economy is relatively abundant in high-skilled, educated labour and relatively scarce in low-skilled, uneducated labour. In this scenario, when the country opens up to trade, the Stolper-Samuelson Theorem holds that the real earnings of low-skilled, uneducated labour will decrease while the real earnings of high-skilled, educated labour will increase.<sup>1</sup> In this framework, people's support for trade will be in accordance with the expected effect that it will have on their real earnings. I will refer to this as the economic insecurity argument for political resistance to free trade (see van der Waal and de Koster, 2015).

## **Empirical Support for the Economic insecurity Argument**

If it can be shown empirically that the winners and losers from trade, as predicted by the H-O model, support trade in accordance with their respective gain or loss, then the economic insecurity argument provides a strong and intuitive answer as to why we observe political resistance to free trade. O'Rourke and Sinnott (2001) tested the H-O model using a 1995 survey by the ISSP in which citizens from 24 countries were surveyed on topics relating to national identity, including support for free trade. Using education as a proxy for skill, their findings were in line with the predictions of the H-O model. Low-skilled workers in high-GDP countries were more likely to oppose free trade than high-skilled workers. Similarly, high-skilled workers in low-GDP countries were more likely to oppose free trade than low-skilled workers. In other words, the relatively abundant factor of production (which is export-oriented) favoured free trade more than the relatively scarce factor (which is import-oriented). Similar findings were reported by Mayda and Rodrik (2005) using the World-Values-Survey which incorporates a more extensive range of developing countries. They likewise detected that skilled-workers are more likely to support free trade in high-GDP countries than low-GDP countries. In other words, the marginal effect of skills on support for free trade increases with GDP. On face value, it seems empirically credible that the reason why we observe political resistance to trade is that the losers from trade, as predicted by the H-O model are in opposition.

---

1

This distinction between skilled and unskilled labour was used to solve the Leontief Paradox.

## Empirical Challenges for the Economic insecurity Argument

However, the economic insecurity argument faces significant challenges from the literature, too.

The political economy literature suggests that agents often vote according to sociotropic-preferences as opposed to self-interest when it comes to economic affairs (see Kinder and Kiewiet, 1981; Alford and Legge, 1984). This means that voters consider the well-being of the economy as a whole when deciding who or what to vote for rather than merely considering their personal economic welfare. It has been observed that voters will vote for the incumbent when the economy as a whole is thriving even when they are personally struggling economically (Kiewiet and Lewis-Beck, 2011). Similarly, voters who are individually thriving economically will vote to remove the incumbent if they perceive the wider economy to be struggling (*ibid.*). This literature contradicts the economic insecurity argument insofar as it rests upon agents pursuing their self-interest when deciding whether to support free trade policies or not.

There are further challenges to the assumption that individuals form opinions on free trade based on self-interest alone. Hainmueller and Hiscox (2006) point out that if people form their opinions about free trade in line with the effect they perceive it to have on their real earnings (as the economic insecurity argument predicts), then there should be a significant disparity between the effect of education on support for trade among active workers and retirees. Since retirees are no longer receiving a wage for their labour or expect to receive a wage in the future, their opinions on free trade cannot be based on their expectations regarding the effect of free trade on real wages. However, using data from the ISSP and NES surveys, Hainmueller and Hiscox (2006) observe that the effect of education on support for free trade is almost identical between these two groups. This was also confirmed by Mansfield and Mutz (2009). A proponent of the economic insecurity argument might argue that retirees instead form their opinions on free trade based on the effect they expect it to have on the real earnings of their spouse and/or children (assuming they have the same education). To address this concern, they conduct a sub-analysis of retirees with and without a spouse and find no evidence of a disparity between the two.

There is also some evidence for a non-linear relationship between education and support for free trade, which cannot be accounted for by the economic insecurity argument. Hainmueller and Hiscox (2006: 486) find that the effect of an undergraduate college education on support for free trade is two to three times greater than the effect of a high-school education. Similarly, the effect of postgraduate education is almost identical to the effect of undergraduate education. This non-linearity has been coined the 'college-plateau' and it is difficult to reconcile with the economic insecurity argument. There is no reason why undergraduate college education should constitute a significantly

---

greater contribution towards support for free trade since all education is a form of upskilling.

Lastly, there is also wide evidence of a gender disparity concerning opinions on free trade. Hiscox and Burgoon (2004) find that females are consistently more likely to support protectionist policies than males. This is true even after controlling for skill and education level. Again, the economic insecurity argument does not explain why this would be the case.

Clearly, an appropriate explanation for the empirical facts regarding political resistance to free trade must be able to explain the findings of O'Rourke and Sinnott (2001) while also accounting for sociotropic-voting, the similar effects of education on support for trade among active workers and retirees, the college-plateau, and the gender disparity. It is for this purpose that I introduce the tolerance and economic knowledge arguments.

## **Towards a Robust Explanation**

Advocates of the economic insecurity argument make the mistake of assuming that the positive correlation between education and support for free trade in high-GDP countries can only be explained by the logic of the H-O model. This paper contends, alongside van der Waal and de Koster (2015), that there are at least two other explanations for this correlation. Firstly, it could be the case that education increases tolerance towards foreigners and out-groups which in turn makes people more willing to engage in mutually beneficial transactions with foreign countries (the tolerance argument). Secondly, education may increase one's exposure to economic arguments in favour of free trade like Ricardo's Comparative Advantage Theory, and as such, make one more likely to support free trade on its aggregate merits (the economic knowledge argument).

There is an established sociological literature linking education and tolerance, where 'tolerance' refers to a general lack of prejudice towards out-groups (Vogt, 1997; Coenders and Scheepers, 2003). Many mechanisms have been proposed to explain this correlation; one is that education may lead to greater knowledge of foreign peoples and cultures, and that this knowledge reduces prejudice (McGregor, 1993). The socialisation approach, on the other hand, suggests that education propagates democratic values and norms which fosters a greater acceptance of diversity (Weil, 1985). The exact mechanism through which education leads to tolerance is beyond the scope of this paper however – what is important is that the two are clearly linked.

To explain the college-plateau in this framework, it could be argued that undergraduate college education is where the greatest exposure to foreign cultures, peoples, and democratic norms takes place and as such there are diminishing marginal returns to

to tolerance as education continues. However, the tolerance argument has difficulty explaining the gender-disparity since females consistently rank higher than males in tolerance towards outgroups, despite traditionally higher college attendance by males than females (Bierly, 1985). Consequently, the tolerance argument offers an improved but incomplete explanation of political resistance to trade and must be supplemented by the economic knowledge argument.

Support for the economic knowledge argument comes largely from the positive association between economic literacy and support for free trade (Hainmueller and Hiscox, 2006; Mansfield and Mutz, 2009; van der Waal and de Koster, 2015). The strength of this argument is particularly evident when we consider the counter-intuitive nature of the comparative advantage theory – those who have not been exposed to this argument in an academic setting are unlikely both to be aware of it and to be convinced by it (Hainmueller and Hiscox, 2006). This drives a wedge between those with a college education, who are likely to be exposed to the theory, and those without a college education, who will likely not be exposed to the theory. Furthermore, Saunders (1980) shows that taking an introductory economics module in college has a lasting impact on an individual's understanding of the world, which likely includes their understanding of free trade.

This approach can help to explain the gender disparity as being a result of higher male enrolment in economics classes relative to females, meaning males receive greater exposure to economic knowledge and free trade arguments. It can also explain why we still observe protectionism despite sociotropic-voting patterns – people who have not been exposed to economic arguments for free trade are likely unaware of the positive effects of free trade policies on the aggregate economy, and therefore even if they wish to vote in a pro-social manner, they are unable to effectively do so. It can explain the college-plateau on the basis that most people are exposed to introductory free trade arguments in undergraduate courses, meaning further education is largely redundant in shaping most students' opinions on free trade. Finally, both the tolerance and economic knowledge arguments can explain why retirees and active workers have similar preferences since these arguments do not claim that people form trade opinions based on their expected future real wage. Rather, trade opinions are shaped by levels of economic knowledge and tolerance toward outgroups which are fostered through education. There is therefore no reason to expect workers and retirees with the same education level to have different opinions on free trade within this framework.

## **What about Low-GDP Countries?**

One possible objection to the tolerance and economic knowledge arguments comes from the apparent negative association between education and support for free trade in low-GDP countries. To some this might suggest that these arguments can only explain

---

attitudes towards free trade in rich countries. However, this objection can be disputed on two grounds.

Firstly, it is not entirely clear that the supposed negative relationship between education and support for free trade in low-GDP countries actually exists. Even O'Rourke and Sinnott (2001) found that although the marginal effect of education was lower for the low-GDP countries, a negative association was only found in three countries, and in no cases were these results statistically significant. Similarly, Beaulieu et al. (2004) only found a negative association between education and support for trade in one country (The Philippines) out of 24. This was confirmed by Baker (2005) using a larger sample of 41 countries.

Secondly, if an empirical foundation is strongly established, it is nonetheless possible to construct a narrative for why the tolerance and economic knowledge arguments are likely to have a greater effect in high-GDP countries compared to low-GDP countries. For example, undergraduate economics classes in poorer countries are more likely to emphasise the importance of fair-trade agreements in the context of colonial history rather than the intricacies of Comparative Advantage Theory. Consequently, it is conceivable that economic education in these countries produces a smaller positive (or negative) effect on support for free trade (Hainmueller and Hiscox, 2006). Similarly, poorer countries (in general) have a weaker relationship with democracy and norms associated with diversity and as such a college education will not be able to promote free trade through tolerance in the same way that wealthy democratic countries can (ibid.).

## Conclusion

The economic insecurity argument associated with the Heckscher-Ohlin model is unable to fully explain patterns in political resistance to free trade, including sociotropic-voting, the college-plateau, the gender-disparity, and the similarities between support for trade among active workers and retirees. As such, this paper contends that a more nuanced understanding of the effect of education on support for trade is needed which considers the role of education in fostering tolerance and economic knowledge.

The paper concludes that we observe political resistance to trade not just because of the unequal distribution of benefits, but because of a lack of education. Those with less education receive less exposure to democratic norms of tolerance towards foreign out-groups, and less information regarding the economic benefits of free trade and as such, they are more inclined to favour protectionism.

## References

1. Alford, J.R. and Legge, J.S. 1984. Economic Conditions and Individual Vote in the Federal Republic of Germany. *The Journal of Politics*, 46:4: 1168–1181. doi:10.2307/2131247.
2. Baker, A. 2005. Who Wants to Globalize? Consumer Tastes and Labor Markets in a Theory of Trade Policy Beliefs. *American Journal of Political Science*, 49:4: 924–938. doi:10.1111/j.1540-5907.2005.00164.x.
3. Bernard, A.B., Jensen, J.B., Redding, S.J. and Schott, P.K. 2012. The Empirics of Firm Heterogeneity and International Trade. NBR Working Paper Series, Working Paper 17627. doi:10.2139/ssrn.2201804.
4. Bierly, M.M. 1985. Prejudice Toward Contemporary Outgroups as a Generalized Attitude. *Journal of Applied Social Psychology*, 15:2: 189–199. doi:10.1111/j.1559-1816.1985.tb02344.x.
5. Coenders, M. and Scheepers, P. 2003. The Effect of Education on Nationalism and Ethnic Exclusionism: an International Comparison. *Political Psychology*, 24:2: 313–343. doi:10.1111/0162-895x.00330.
6. Feenstra, R.C. and Weinstein, D.E. 2017. Globalization, Markups, and US Welfare. *Journal of Political Economy*, 125:4: 1040–1074. doi:10.1086/692695.
7. Feyrer, J. 2019. Trade and Income—Exploiting Time Series in Geography. *American Economic Journal: Applied Economics*, [online] 11:4: 1–35. Available at: <https://www.jstor.org/stable/pdf/26794320.pdf> [Accessed 16 Nov. 2022].
8. Gallup 2021. Sharply Fewer in U.S. View Foreign Trade as Opportunity. [online] Gallup.com. Available at: <https://news.gallup.com/poll/342419/sharply-fewer-view-foreign-trade-opportunity.aspx>.
9. Hainmueller, J. and Hiscox, M.J. 2006. Learning to Love Globalization: Education and Individual Attitudes toward International Trade. *International Organization*, 60:2. doi:10.1017/s0020818306060140.
10. Hiscox, M. and Burgoon, B. 2004. The Mysterious Case of Female Protectionism: Gender Bias in Attitudes Toward International Trade. [online] [wcfia.harvard.edu](http://wcfia.harvard.edu). Available at: <http://www.tinyurl.com/y2wncxpb> [Accessed 17 Nov. 2022].
11. Ikenson, D. 2021. Mercantilist Reciprocity or Free trade: Globalization at a Crossroads. [online] Available at: <https://www.wita.org/wp-content/uploads/2021/10/Mercantilist-reciprocity-or-free-trade-Hinrich-Foundation-Dan-Ikenson-October-2021.pdf> [Accessed 16 Nov. 2022].



- 
12. Kiewiet, D.R. and Lewis-Beck, M.S. 2011. No Man is an Island: Self-Interest, the Public Interest, and Sociotropic Voting. *Critical Review*, 23:3: 303–319. doi:10.1080/08913811.2011.635868.
  13. Kinder, D.R. and Kiewiet, D.R. 1981. Sociotropic Politics: The American Case. *British Journal of Political Science*, [online] 11:2: 129–161. Available at: <https://www.jstor.org/stable/pdf/193580.pdf> [Accessed 9 Nov. 2022].
  14. Mansfield, E.D. and Mutz, D.C. 2009. Support for Free Trade: Self-Interest, Sociotropic Politics, and Out-Group Anxiety. *International Organization*, 63:3: 425–457. doi:10.1017/s0020818309090158.
  15. Mayda, A.M. and Rodrik, D. 2005. Why Are Some People (and countries) More Protectionist than others? *European Economic Review*, 49:6: 1393–1430. doi:10.1016/j.euroecorev.2004.01.002.
  16. McGregor, J. 1993. Effectiveness of Role Playing and Antiracist Teaching in Reducing Student Prejudice. *The Journal of Educational Research*, 86:4: 215–226. doi:10.1080/00220671.1993.9941833.
  17. O’Rourke, K.H. and Sinnott, R. 2001. The Determinants of Individual Trade Policy Preferences: International Survey Evidence [with Comments and Discussion]. *Brookings Trade Forum*, [online] 157–206. Available at: <https://www.jstor.org/stable/pdf/25063160.pdf> [Accessed 8 Nov. 2022].
  18. Saunders, P. 1980. The Lasting Effects of Introductory Economics Courses. *The Journal of Economic Education*, 12:1:1. doi:10.2307/1182816.
  19. van der Waal, J. and de Koster, W. 2015. Why Do the Less Educated Oppose Trade openness? a Test of Three Explanations in the Netherlands. *European Journal of Cultural and Political Sociology*, 2:3-4: 313-344. doi:10.1080/23254823.2016.1153428.
  20. Vogt, W.P. 1997. *Tolerance & Education : Learning to Live with Diversity and Difference*. Thousand Oaks, California: Sage.
  21. Weil, F.D. 1985. The Variable Effects of Education on Liberal Attitudes: a Comparative- Historical Analysis of Anti-Semitism Using Public Opinion Survey Data. *American Sociological Review*, 50:4:458. doi:10.2307/2095433.

# PRODUCTIVITY AND PROSPERITY: THE GOLDEN AGE OF CAPITALISM

CONAL GILLESPIE

SENIOR FRESHMAN

*“The slowdown in Western European economic growth and the increase in income inequality from 1980 onwards differs vastly from the period that took place in the aftermath of World War II. The post-war period from 1950-1973 proved to be the finest hour for the economies of Western Europe with high growth and decreasing inequality. This essay argues that a key factor in this was the coupled growth of real wages and productivity. This essay argues that the decoupling of real wage growth from productivity growth contributed to the relative slowdown of economic growth in Western European economies. This decoupling is attributed to the relaxation of restraints on capital and labour. The decline of real wage growth and the lowering of marginal tax rates on the top decile of incomes that occurred from 1980 onwards also concurrently contributed to increased income inequality. This essay concludes that discussion must begin on the appropriate measures to counter this trend and restore Western European economies to their post-war level of economic growth and trend of decreasing inequality.”*

## Introduction

The post-war period from 1950-1973 is largely recognised as ‘the Golden Age of Capitalism’ (Maddison, 2014). This period brought about, high and sustained economic growth in the advanced capitalist countries (ACCs), which included Western economies and Japan (Marglin and Schor, 1991: 40). Not only was growth high, but it was accompanied by low inflation and decreasing inequality (Marglin and Schor, 1991). This flew in the face of conventional economic theory which held that there was a trade-off between economic growth and inequality (Negre et al., 2019). However, the Golden Age period stands in stark contrast to the current state of Western Europe’s economies which are characterised by increasing inequality and slowing economic growth (Stiglitz, 2020). This essay highlights how during the Golden Age of Capitalism, the coupled growth of

productivity and real wages drove economic growth for Western Europe. When regulation and controls on capital and labour unions were reduced in conjunction with reduced tax rates on the highest earners, real wages decoupled from productivity growth, reducing Western Europe’s economic growth and increasing inequality. This discussion is of vital importance for those seeking to reduce inequality and strengthen economic growth in western Europe; only through understanding how European economies entered this state can we design effective policies to help lift them out of it.

## The Golden Age – Growth in GDP and Productivity

After the end of the Second World War, Western Europe’s capital stock was decimated (Piketty, 2014: 148). However, this loss of capital combined with a sense of shared war burden effectively tipped the balance of power from the land-owning aristocracy and towards the middle and working classes. This shift in power was an important factor in the establishment of the welfare-state and in the increase in support for unions. This low amount of capital relative to labour in these post-war economies meant they had the potential for both high growth and convergence with the U.S. (Fernández-Villaverde and Ohanian, 2018). As shown in Figure 1 below, real GDP growth between 1950-73 for all the ACCs was higher than in the decades which followed the post-war period.

	Average unemployment (% rate)		Real GDP		Real GDP per Man-Hour					
	1952-64	1965-73	1950-73	1973-79	1970-83	1950-73	1973-79	1970-83	1950-73	1973-81
US	5	4.5	2.7	8.2	8.2	2.2	1.9	0.7	2.6	1.1
UK	2.5	3.2	4.6	11.4	10.7	2.5	1.3	0.4	3.1	2.9
France	1.7	2.4	5	10.7	12.1	4.1	2.6	1.1	5.1	3
Germany	2.7	0.8	2.7	4.7	3.1	5	2.6	0.5	6	3.7
Italy	5.9	3.4	3.9	16.3	17.5	4.8	2	0.6	5.8	2.5
Japan	1.9	1.3	5.2	10	4.3	8.4	3	3.9	8	3.1

	Non-residential fixed capital stock		Non-residential fixed capital stock per man-hour		Value of exports		
	1950-73	1973-8	1950-73	1973-78	1950-73	1973-8	1970-81
US	4	3	2.9	1.8	6.3	4.9	-1.6
UK	3.9	3.2	4	4.3	3.9	4.7	-0.1
France	4.5	4.5	4.5	5.3	8.2	6.1	2.3
Germany	6.1	4.1	6.1	6.3	12.4	4.7	4.1
Italy	5.1	4.2	5.4	6.3	11.7	7.1	1.2
Japan	9.2	6.2	7.6	6.8	11.4	7.6	10.2

Figure 1. Post-war economic performance in size major industrial countries (average annual percentage growth rates) (Marglin and Schor, 1991)

Strong and sustained investment ensured that the capital stock of Western Europe continued to grow, and this had an impact on economic growth. This is evident in the positive correlation between the amount of non-residential fixed capital stock and real GDP growth rates in these countries (Marglin and Schor, 1991). However, the extent to which capital stock contributed to economic growth has been disputed. Fernández-Villaverde and Ohanian (2018:2) acknowledge that while growth was influenced by capital stock being below its steady state equilibrium, ‘productivity growth was the main driving force behind Western European economic growth at the time’. Determining which factor was more conducive to GDP growth is important in a modern context, as the growth due to a recovering capital stock that was destroyed during the Second World War is likely, and indeed hopefully, a once-off occurrence, owing to the magnitude of the capital stock destruction in this period. On the other hand, increasing productivity is likely more feasible in a modern economy and can aid us in policy-making. Paul Krugman (1997: 11) once stated that:

Productivity isn’t everything, but in the long run it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker.

Krugman’s argument lends credence here by the fact that in the 1950s output per employed person increased at a rate of 3.6% per year while in the 1960s this increased to 4% per year in Western Europe (Eichengreen, 2008: 198). This argument justifies itself when we analyse productivity growth in Western Europe during this period and its convergence with US productivity.

Productivity levels per man-hour relative to US (US=100)					
	1870	1913	1950	1973	1979
US	100	100	100	100	100
UK	114	81	56	64	66
France	60	54	44	76	86
Germany	61	57	33	71	84
Italy	63	43	32	66	70
Japan	24	22	14	46	53

Figure 2. Productivity levels per man-hour relative to US (Marglin and Schor, 1991)

Western European productivity began to catch up to US levels from 1950 onwards, especially in Italy where productivity levels relative to the US doubled between 1950-1973. According to Fernández-Villaverde and Ohanian (2018: 2), ‘France, Germany, Italy, and Spain all experienced rapid yearly total factor productivity (TFP) growth between 2.6 and 3.2 percent over this period’. This productivity growth was able to translate into

a significant increase in living standards, as Krugman (1997) argued. This is evident as continental western Europe's annual per-capita growth was 5% within the period 1950-1970 (Piketty, 2014: 98).

## Factors and Institutions for Real-Wage Growth

Rising productivity does not bring tangible benefits to the consumer unless the benefits are transferred directly in the form of increasing real wages. During the Golden Age of Capitalism, a bargaining system consisting of strong unions and regulations (such as collective agreements and minimum-wage legislation) ensured that real wages rose with productivity and preserved the balance of power between capital and labour (Marglin and Schor, 1991; Eichengreen, 2008). However, since 1980, real wages have become decoupled from productivity gains in many Western European economies (Dølvik, 2000). This means that the gains from increased productivity have increasingly gone to shareholders and business owners instead of workers.



Figure 3. Development in real wage compensation and labour productivity in the current EU member states 1980-1999, 1980 = 100 (Dølvik, 2000)

This trend roughly coincides with the rise of neo-liberalism in Western European economic policy (Mijs et al., 2016). The introduction of neo-liberal policies such as deregulation on capital and labour in Western Europe contributed to a decline in union-membership and therefore reduced the bargaining power for workers (Vachon et al., 2016). With the power of unions having been reduced, the post-war bargaining

system that had protected the relationship between wages and productivity was eroded. When the productivity of labour increases, businesses make cost savings which result in profit growth. Businesses will then either keep the resulting surplus or distribute it amongst their shareholders. This pattern is evident from the fact that global corporate after-tax operating profits increased 30% faster than global GDP between 1980 and 2013 (Dobbs et al., 2015). At the same time, wages in Europe fell as a share of GDP (Romei, 2019). Cost savings for companies has increasingly come from falling labour costs, alongside higher labour and capital productivity (Dobbs et al., 2015). This illustrates that companies chose to retain the higher earnings rather than redistribute through the form of increased wages to the labour force.

The decoupling of wage growth and productivity growth is not merely an academic issue of course. This process has had negative effects on economic growth and productivity growth in western Europe, which I will discuss below.

## Slowing Growth

When real-wage growth matches productivity growth, it enables consumers to increase their consumption as a result of their higher earnings. This increased consumption also causes production to increase to keep up with demand, leading to an increased overall supply and demand in the economy and raising output and GDP. This was a key feature of the post-war economies (Marglin and Schor, 1991). Without real-wage growth matching productivity however, consumers lack the extra income to purchase more goods so aggregate demand in the economy does not increase.

Supporting this expectation, the decoupling of real wages from productivity also coincided with a slowdown in economic growth in Western Europe. An analysis of France and Germany's economic growth, considering their large share of Western European GDP, indicates this slowdown. During the period 1950-1973, GDP per capita increased on average by 4.0% and 4.9% annually in France and Germany respectively (Skidelsky, 2010). However, from 1980-2007, GDP per capita growth slowed to 1.6% and 1.8% in France and Germany, respectively (Skidelsky, 2010)<sup>1</sup>.

There are many factors that may have contributed to a slow-down in economic growth during this time. Marglin and Schor (1991) showed that in the model used previously to analyse the post-war period, after 1980 all other variables such as capital stock and productivity continued to increase, albeit at a slower rate. The only variable which stagnated was real wages (Marglin and Schor, 1991). It is therefore not unreasonable to

---

<sup>1</sup> The exclusion of the period 1973-1979 is to account for the two oil crises that occurred and remove this major exogenous factor that would skew growth.

propose that the decoupling of real wages from productivity influenced the slowdown of economic growth in Western Europe. As mentioned above, the stagnation of real wages reduces an individual's ability to increase consumption. Consumption is a key component of aggregate demand in the economy and decreased aggregate demand also leads to decreased investment. This lends credence to the argument proposed above since another crucial factor of economic growth enjoyed by Western European countries is the overall level of investment (Eichengreen, 2008).

## Increasing Inequality

The stagnation of real wages negatively impacts the middle and lower classes as wages comprise a relatively large proportion of their annual income. The upper classes however are more likely to receive income from share dividends and yield on capital. This imbalance between labour and capital is what makes the stagnation of real wages so pertinent in the discussion of rising inequality in Western Europe. From 1980 onwards, income inequality in Western Europe began to increase, highlighting the impact declining real wage growth had on income distribution (Piketty, 2019). This trend coincided with the reduction of controls on the movement of capital (Skidelsky, 2010). This enabled the upper classes to increase their returns to investment from capital while the middle and lower classes still received their primary income from their wages. Third, beginning in 1980 marginal tax rates on the highest incomes in France, Germany and the U.K. began to decline (Piketty, 2021). With the decline of the redistributive effect of the tax system alongside, income inequality increased.



Figure 4. *Inequality, 1900-2020: Western Europe (U.K., France, Germany, Sweden) United States and Japan (Piketty, 2019)*

Despite the relative slowdown of increasing inequality, the slowing population growth in Western Europe (Coleman and Rowthorn, 2011) and its slowing economic growth (Stiglitz, 2020) will likely cause this trend to continue. Piketty (2014) argues that when present, these two factors lead to growing inequality:

A stagnant or, worse, decreasing population increases the influence of capital accumulated in previous generations. The same is true of economic stagnation. With low growth, moreover, it is fairly plausible that the rate of return on capital will be substantially higher than the growth rate, leading towards very substantial inequality' (Piketty, 2014: 84).

## Conclusion

To conclude, this essay has analysed the effect that productivity growth coupled with rising real wages had on post-war economic growth in Western Europe. This enables future discussion of factors that may contribute to maintaining productivity growth rather than reaching the conclusion that the once-off catch-up effect of capital stock cannot be replicated through policy measures in a modern developed economy. However, it has also highlighted that the economic gains of productivity growth can only be realised when they are reflected in increased real wages. In Western Europe when this relationship broke down, economic growth slowed and, with the weakening of redistributive taxation, income inequality increased. This discussion has highlighted the importance of understanding the effects of decoupling wages and productivity growth. Future research should attempt to design policies which can counteract this process and its negative effects.

## References

1. Coleman, D. & Rowthorn, R. 2011. 'Who's afraid of population decline? A critical examination of its consequences'. *Population and Development review*, 37: 217-248.
2. Dobbs, R., Koller, T. & Ramaswamy, S. 2015. 'The future and how to survive it'. *Harvard Business Review* [Online]. Available: <https://hbr.org/2015/10/the-future-and-how-to-survive-it> [Accessed 23/02/2023].
3. Dølvik, J. E. 2000. *Economic and monetary union: implications for industrial relations and collective bargaining in Europe*. Brussels, ETUI Brussels.
4. Eichengreen, B. 2008. *The European economy since 1945. The European Economy since 1945*. Princeton University Press.



- 
5. Fernández-Villaverde, J. & Ohanian, L. E. 2018. 'The lack of European productivity growth: causes and lessons for the US'. Research Briefs in Economic Policy [Online]. Available: [https://www.cato.org/sites/cato.org/files/pubs/pdf/rb\\_141.pdf](https://www.cato.org/sites/cato.org/files/pubs/pdf/rb_141.pdf) [Accessed 21/02/2023].
  6. Krugman, P. R. 1997. The age of diminished expectations: US economic policy in the 1990s. Cambridge, MIT press.
  7. Maddison, A. 2014. Economic growth in the West: Comparative experience in Europe and North America. Oxfordshire, Routledge.
  8. Marglin, S. & Schor, J. 1991. The golden age of capitalism: reinterpreting the post-war experience. Oxford, Oxford University Press.
  9. Mijs, J. J., Bakhtiari, E. & Lamont, M. 2016. 'Neoliberalism and symbolic boundaries in Europe: Global diffusion, local context, regional variation'. Socius [Online]. Available: [https://scholar.harvard.edu/files/lamont/files/neoliberalism\\_and\\_symbolic\\_boundaries\\_in\\_europe.pdf](https://scholar.harvard.edu/files/lamont/files/neoliberalism_and_symbolic_boundaries_in_europe.pdf) [Accessed 22/02/2023].
  10. Negre, M., Cuesta, J., Revenga, A. & Morley, P. J. 2019. 'Dismantling the myth of the growth-inequality trade-off'. Briefing Paper.
  11. Piketty, T. 2014. Capital in the Twenty-First Century, Cambridge, Harvard University Press.
  12. Piketty, T. 2019. Capital and Ideology, Cambridge, Harvard University Press.
  13. Piketty, T. 2021. A Brief History of Equality, Cambridge, Harvard University Press.
  14. Romei, V. 2019. EU workers miss out on gains of economic recovery. Financial Times [Online]. Available: <https://www.ft.com/content/0a245c28-6cc3-11e9-80c7-60ee53e6681d> [Accessed 23 February 2023].
  15. Skidelsky, R. 2010. Keynes: the return of the master. New York, PublicAffairs.
  16. Stiglitz, J. E. 2020. Rewriting the rules of the European Economy: An agenda for growth and shared prosperity. New York, WW Norton & Company.
  17. Vachon, T. E., Wallace, M. & Hyde, A. 2016. 'Union decline in a neoliberal age: Globalization, financialization, European integration, and union density in 18 affluent democracies'. Socius [Online]. Available: <https://journals.sagepub.com/doi/full/10.1177/2378023116656847> [Accessed 23/02/2023].

# LABOUR ECONOMICS



---

# CUTTING TIES: LOCKDOWN-INDUCED HYSTERESIS, AND THE DIGITAL-AGE POLICY TOOLS THAT COULD TACKLE IT

EVAN CARRON-KEE & FRANK WOLFE

JUNIOR SOPHISTER

*“This paper argues that unemployment induced by COVID-19 pandemic social restrictions (‘lockdowns’) is distinct from unemployment caused by other exogenous shocks. By combining Granovetter’s weak ties hypothesis with a partial hysteresis model, we hypothesise that the labour market during the pandemic suffered from the ‘cut ties effect’, where workers made unemployed during a lockdown exhibited a lower job finding rate as a result of social restrictions, and as a result spent more time unemployed and were less likely to be re-hired. Given that lockdowns may be necessary to tackle future pandemics, we then propose digital policy interventions which could be used to alleviate the cut ties effect. Future research should both test the cut ties effect and investigate how online employment technologies might be better utilised to reduce unemployment.”*

## Introduction

The effect of the COVID-19 pandemic on the labour markets of developed world countries is unique in modern economic history. Lockdowns – a collection of sudden and severe restrictions on social activity – were implemented to curb the spread of the virus but they also caused significant job losses. We argue that it is a mistake for economists and policymakers to treat lockdown-induced unemployment in the same way as unemployment caused by other exogenous shocks. By drawing on Granovetter’s weak ties hypothesis, we show that pandemic social restrictions are likely to have resulted in an unemployed group with a significantly lower job finding rate compared to the pre-pandemic average. We then show how this could lead to lasting unemployment effects through hysteresis. Finally, we will propose digital policy interventions which could be used to increase the job finding rate and reduce unemployment, in case lockdowns are necessary to tackle future pandemics.

## Social Structure and the Job Finding Rate

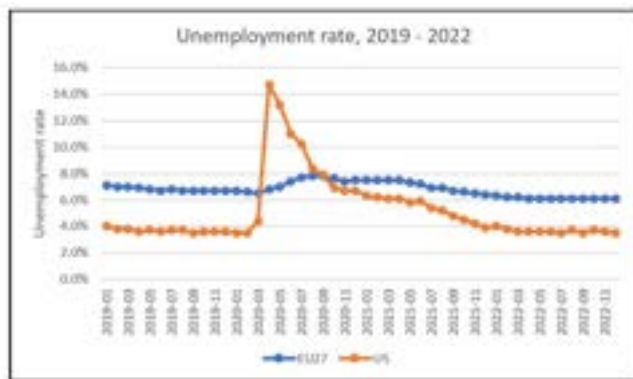


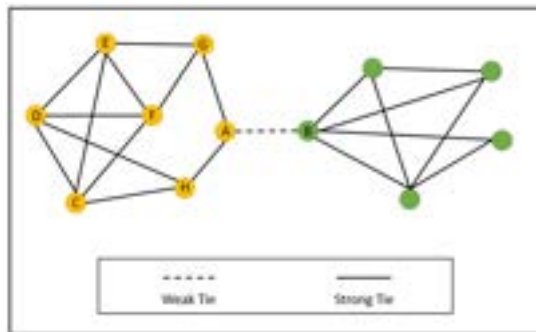
Figure 1. — Source: Eurostat (2022),

Data set: EI\_LMHR\_M, seasonally adjusted percentage of population in the labour force

Figure 1 shows the EU27 and US average monthly unemployment between January 2019 and November 2022. Both saw a spike in unemployment in Q1 2020, and have since reached rates below pre-pandemic levels (Eurostat, 2022). In the United States, Zhang et al. (2021) find strong evidence of employment hysteresis – where exogenous shocks such as the COVID-19 pandemic affect unemployment long after the shock itself has passed. They found evidence of this phenomenon across various income levels, sectors, geographical areas, and firm size. The conclusions are more mixed with regards to hysteresis in the EU. Ando et al. (2022) found significant variation in the responsiveness of member states' labour markets to the initial output shock. This data makes it clear that there is significant variation in how responsive EU labour markets are to changes in output. Caporale et al. (2022) also showed that there is significant heterogeneity in how the pandemic affected unemployment persistence across European countries. To explain this variation, and to design policies which can prevent and reduce the severity of hysteresis, we need to research the causes of this variation and propose new explanations for why hysteresis occurred after the COVID-19 pandemic.

The pandemic unemployment shock was not simply the result of an economic downturn – it coincided with and was in part caused by lockdowns which restricted social contact. As such, it seems likely that the application of concepts from social network analysis will help us to better understand the unique effects of lockdowns on the labour market. One particularly important aspect of a social network for understanding the job market are information channels, the relationships through which one receives informa-

tion from others. When considering the ideal structure of a social network for finding a new job, it may appear that having many strong ties would be beneficial. Strong ties are those in your network with whom you are most closely connected, are the most likely to know that you are looking for a new job, and are the most motivated to offer you support (Uehara, 1990). However, Mark Granovetter (1973) famously argued that weak ties are in fact more useful for accessing job opportunities. While strong ties are more motivated to help, they are also more likely to be well-connected to each other, as strong ties are normally formed within dense networks such as the family. Therefore, they are likely to only hear about job vacancies which you have already heard about, making the information they share redundant. However, weak ties are more likely to operate as highly useful ‘bridges’ between dense networks of strong ties. These ties are more useful as information channels because they tend to share new information from other networks. Consider the following example: although C has four strong ties, these ties are all well-connected to each other meaning as information channels they are likely to be redundant – any information from E, say, is likely to already have been shared by D, F, or H. A only has three ties however – two strong ties within A’s group, and one weak tie to B. This means that A will receive information from both groups and is more likely to find a suitable job opening. The relevance of this relationship in the modern labour market was confirmed by Rajkumar et al. (2022).



*Figure 2.*

Given how severely lockdowns curtailed spontaneous social interaction, it seems highly likely that individuals made fewer new weak ties and lost old weak ties at an increased rate, leading to their stock of weak ties diminishing. This may have reduced their ability to find suitable work, leading to an increase in the frequency and duration of frictional unemployment. If present, this effect might also persist for a time after the pandemic, as workers miss out on the benefit of the ties they would have made during the pandemic. While the existing evidence for the loss of weak ties during the pandemic is

is mixed (Bertogg and Koos, 2022; Völker, 2023), no study has directly tested the relationship between specific lockdown policies and social network structure. This article proceeds on the assumption that lockdowns lead to the loss of more weak ties than strong ties, although more research is needed to establish the relationship between lockdowns and the strong/weak tie mix of social networks.

The effect of a decreased stock of weak ties is that it becomes harder for employers to find suitable candidates for each vacancy. This can be represented formally as a reduction in the job finding rate. Following Kothari et al. (2022), we define the lockdown-induced weak ties effect on the unemployment rate as the difference between the actual unemployment rate during a lockdown and the counterfactual unemployment rate for a lockdown if the unemployed had the finding rate associated with non-lockdown unemployment. The conditional unemployment rate is based on a conditional finding rate  $f_{NL}$  which represents the marginal effect of not being in a lockdown on the finding rate after controlling for other factors, such as the severity of the shock or the level of unemployment support available. It follows that if the finding rate is lower for the unemployed during a lockdown, then the unemployment rate will be higher in the short run than it would have been had there been no lockdown.

$$u_L - u_L^{c, \text{finding}} \approx \frac{s_L}{s_L + f_L} - \frac{s_L}{s_L + f_{NL}}$$

## Hysteresis

This effect on the job finding rate is not merely a short-term frictional issue. There are three main frameworks through which we can understand how exogenous shocks such as the COVID-19 pandemic can have lasting effects on unemployment. The first is the natural rate hypothesis, which holds that for any given economy there is a NAIRU – a fixed rate of unemployment at which there is no change in the rate of change of inflation. In this model any shocks are transitory and will not have lasting effects, even in the short run (Friedman, 1968). The second is Blanchard and Summers' (1986, 1987) hysteresis model which holds that there is no long-run equilibrium value of unemployment, and its present value depends completely on past shocks. The third is a model of partial hysteresis or unemployment persistence, which takes elements from both models to show that some shocks will have lasting effects in the short run. We use this model to explain how a decrease in the job finding rate due the weak ties effect may have caused a lasting increase in unemployment over the short run.

$$U_t = \alpha U_{t-1} + \beta Z_t$$

Both hysteresis models are based on the simple model presented above (Michael, 2004), where  $Z_t$  is an exogenous demand shock at time  $t$  and the coefficient of past unemployment reflects the severity of hysteresis in the system.

---

## Hysteresis - $\alpha = 1$

$$u_t = U_0 + \beta \sum_{i=1}^{t-1} Z_i$$

Where  $\alpha = 1$  the economy exhibits full hysteresis. The general solution for this case is shown above. Here, the present unemployment rate depends only on the unemployment rate in the first period and on the sum of exogenous demand shocks which have taken place by time  $t$ . Blanchard and Summers (1986) use this model to show how unemployment and inflation will tend to trend upwards over time. It assumes that insiders (employed workers) unilaterally set wages, employers choose the size of their workforce in response to this, and 'outsiders' (involuntarily unemployed workers) cannot undercut the insiders' wages. If the workers' goal is to maximise their wages, they will set wages at the highest rate at which the employer will still hire all current workers. However, if there is a sudden decrease in labour demand, the workers who were laid off are now outsiders, and no longer have any power in setting wages. The new smaller group of insiders will then increase wages to the rate at which the employer will hire a number of workers equal to the size of the insider group. This has two important effects. First, unemployment stays high even though the original shock has passed. Second, instead of downwards pressure on inflation in response to increased unemployment, as the NAIRU model predicts, an increase in unemployment will result in increased inflation due to increasing wage demands. The assumptions required to generate this result are extremely restrictive, but they can be relaxed while preserving the fundamental result (see: Michael, 2004).

## Unemployment Persistence - $0 < \alpha < 1$

$$U^* = \frac{\beta Z^*}{1 - \alpha}$$

Where  $0 < \alpha < 1$ , the economy will eventually return to a path-independent long-run equilibrium rate of unemployment, but the time taken to reach this state is inversely related to the size of the coefficient. This case is known as partial hysteresis or unemployment persistence. It is associated with macroeconomic outcomes which are distinct from both the NAIRU and full hysteresis models. For instance, Layard et al. (1991) explain how unemployment persistence can in fact lead to a situation in which an economy experiences a steady inflation rate at an unemployment level above the long-run NAIRU. Persistence is widely considered a more plausible model for the unemployment rate compared to the full hysteresis case (Michael, 2004). Indeed, recent studies which find evidence for hysteresis use this persistence model rather than the more restrictive

full hysteresis case (Cuestas, Gil-Alana and Staehr, 2011; Caporale, Gil-Alana and Trejo, 2022). For this reason, this article uses the partial hysteresis framework.

## The Cut Ties Effect

One important assumption in the hysteresis model is that insiders (the employed) can ignore the wishes of outsiders (the unemployed) when making wage demands. If outsiders are willing and able to work at a wage lower than the insiders' wage demands, then employers would simply fire the insiders and hire the outsiders at the lower wage. Thus, insiders would not be able to make wage demands which create involuntary unemployment. Bean (1994) outlines how 'outsider ineffectiveness' can allow labour markets to meet this assumption. When workers are laid off, their skills begin to atrophy making them less useful to employers. However, if they do not update their reservation wage to reflect their lower productivity, they will enter long-term unemployment and leave the labour force. This shrinks the pool of possible workers, meaning for a given number of vacancies, there will be a lower number of job matches. This strengthens the bargaining power of insiders, as they know both that employers have fewer hiring options beyond insiders. Employers may also be biased towards hiring those who have been unemployed for a short time compared to the long-term unemployed, which further strengthens insiders' bargaining power because workers know that even if they make wage demands which are too ambitious and they are laid off, they will still have a better chance of being hired elsewhere than long-term outsiders.

However, the existing hysteresis literature has failed to consider how the characteristics of the unemployed workers affects their ability to be found by employers, regardless of their productivity. Well-connected weak ties are a resource which seems likely to accrue more quickly to those who are employed than to those who are unemployed. It also seems likely that the professional weak ties of the long-term unemployed would atrophy in a similar way to their skills, reducing the aggregate job finding rate. This 'cut ties effect' is a type of outsider ineffectiveness which, to our knowledge, has not been proposed in previous literature and which may have special significance for understanding unemployment during the COVID-19 pandemic. Social restrictions likely had a significant negative effect on the stock of weak ties workers held and prevented workers from generating new weak ties. Any workers who were laid off as a result of these lockdowns may therefore be more likely to enter long term unemployment. In the unemployment persistence model this would be represented as an increase in, and thus more severe and long-lasting hysteresis in the labour market.



---

## Implications for Policymakers

Given the serious consequences of unemployment persistence, identifying and tackling possible cut ties effects must be of utmost importance to policymakers. It is worth noting that lockdowns are government policies. If policymakers do not account for the effects described above (wherein lockdowns damage individuals' productive traditional social networks<sup>1</sup> by reducing their social interactions), they underestimate how much of a negative effect that lockdowns have on the labour market, potentially contributing to hysteresis and lasting unemployment above the NAIRU. The first policy implication is that this effect needs to be accounted for when evaluating the costs and benefits of lockdowns.

The second implication is that there is a need for policies which can mitigate this effect when lockdowns are required. The rest of this essay focuses on modern, digital policy tools which can be used to address the 'cut ties' effect. This emphasis on policy tools which are implemented digitally is partly due to how underappreciated they are in the labour market policy literature, and partly to be serviceable when lockdowns are in place. We proceed by modifying the weak ties model introduced earlier, but differentiating between 'traditional' job finding (not using online platforms or websites used to help people find employment), and 'online' job finding:

$$u_L - u_L^{c.finding} \approx \frac{s_L}{s_L + f_{T,L} + f_{O,L}} - \frac{s_L}{s_L + f_{T,NL} + f_{O,NL}}$$

Where  $f_{T,NL}$  traditional finding rate with no lockdown,  $f_{O,NL}$  is the online finding rate with no lockdown,  $f_{T,L}$  is the traditional finding rate with a lockdown, and  $f_{O,L}$  is the online finding rate with a lockdown. The cut ties effect means that the traditional (non-online) finding rate decreases from  $f_{T,NL}$  to  $f_{T,L}$ . Policies to address the cut ties effect can focus either on a) reducing the extent of the decrease from  $f_{T,NL}$  to  $f_{T,L}$ , or on b) increasing  $f_{O,L}$ , the online finding rate during or immediately after a lockdown.

## Online Employment Technologies

We argue that there is significant, untapped potential for policymakers to increase  $f_{O,L}$ , the online finding rate. 'Online employment technologies' (OETS) describe any online platforms or websites used to help people find employment. These often combine professional social networking with job search programs, like in the case of the websites LinkedIn and Xing, both of which are run by private companies. Individuals use these platforms primarily to acquire information about prospective employers and job

1 'Productive' is used to mean a tie or network which helps individuals gain employment.

opportunities, and secondarily to access referrals and convey information to prospective employers using the platform (Johnson and Wheeler, 2017). Note that this closely maps onto how traditional social networks are used to obtain employment. However, online platforms substantially increase the number of connections that an individual is able to manage and subsequently leverage for the job finding process (Garg and Telang, 2018). Network-building and job-matching on OETs represents a large and increasing portion of the labour market across developed economies, and OETs seem to be uniquely effective at reducing the frictions that typically characterise the job-matching process (Brenner et al., 2020; Rajkumar et al., 2022). If so, OETs have substantial potential for reducing unemployment, particularly during periods in which the traditional finding rate is diminished due to lockdowns.

However, the customer base of privately-owned OETs like LinkedIn tends not to be people who are struggling to find employment, but instead people who already employed, well-educated, and have strong offline professional networks (Brenner et al., 2020). This implies that endogenous network formation on OETs is inefficient, insofar as it is concentrated among those who are already employed and have other career advantages. In other words, the people who stand to benefit the most from using OETs use them the least. As a result, it seems highly likely that there is significant potential for policymakers to improve the online finding rate by improving the uptake of OETs by unemployed people, and improving the usefulness of OETs to those people. It seems likely that many unemployed people do not appreciate the potential usefulness of online employment/professional social network platforms to their job search. This may contribute to explaining why they do not use them as much as would be efficient (Brenner et al., 2020). Subsequently, there is scope to use some of the tools of behavioural economic policy to improve the uptake of OETs, by nudging, encouraging, and reminding people to make use of these platforms (see: Thaler and Sunstein, 2009). Another policy both to improve uptake and make such platforms more useful is training work seekers to join and use them effectively (Johnson and Wheeler 2017).

Finally, policymakers should also consider the possibility of exerting control over the OETs themselves. While existing OETs like LinkedIn and Xing are demonstrably effective at aiding job-matching (see above), these privately-run companies presumably aim to maximise profits, rather than minimise unemployment. This might explain why low-status workers are underrepresented on these platforms: the platforms have less incentive to target them as customers, as they have a lower ability to pay for premium features and generate less advertising revenue. Given the seemingly large potential for OETs to benefit work seekers more than they currently do, government involvement in this area appears to be an intriguing area for policy interventions.

---

## Conclusion

Recent evidence suggests that there is significant variation among developed country labour markets in their response to COVID-19 lockdowns, and in how these lockdowns affected social networks. A combination of the weak ties and hysteresis hypotheses provides a plausible explanation of this variance which should be investigated further. If this explanation is correct, then this finding should guide labour market policy. In particular, online employment technologies appear a promising focus for future policy research.

## References

1. Ando, S. et al. 2022 ‘European Labor Markets and the COVID-19 Pandemic: Fallout and the Path Ahead’, Departmental Papers, 2022:004:. Available at: <https://doi.org/10.5089/9798400200960.087.A001>.
2. Bean, C. 1994 ‘European Unemployment: A Survey’, *Journal of Economic Literature*, 32:2:573–619.
3. Bertogg, A. and Koos, S. 2022 ‘The Making and Breaking of Social Ties During the Pandemic. Socio-Economic Position, Demographic Characteristics, and Changes in Social Networks’, *Frontiers in Sociology*, 7. Available at: <https://doi.org/10.3389/fsoc.2022.837968>.
4. Blanchard, O.J. and Summers, L.H. 1986 ‘Hysteresis and the European Unemployment Problem’, *NBER Macroeconomics Annual*, 1:15–78. Available at: <https://doi.org/10.1086/654013>.
5. Blanchard, O.J. and Summers, L.H. 1987 ‘Hysteresis in unemployment’, *European Economic Review*, 31:1:288–295. Available at: [https://doi.org/10.1016/0014-2921\(87\)90042-0](https://doi.org/10.1016/0014-2921(87)90042-0).
6. Brenner, S., Aksin Sivrikaya, S. and Schwalbach, J. 2020 ‘Who is on LinkedIn? Self-selection into professional online networks’, *Applied Economics*, 52:1:52–67. Available at: <https://doi.org/10.1080/00036846.2019.1638497>.
7. Caporale, G.M., Gil-Alana, L.A. and Trejo, P.V. 2022 ‘Unemployment persistence in Europe: evidence from the 27 EU countries’, *Heliyon*, 8:2:e08898. Available at: <https://doi.org/10.1016/j.heliyon.2022.e08898>.
8. Cuestas, J.C., Gil-Alana, L.A. and Staehr, K. 2011 ‘A further investigation of unemployment persistence in European transition economies’, *Journal of Comparative Economics*, 39:4:514–532. Available at: <https://doi.org/10.1016/j.jce.2011.09.002>.

9. Friedman, M. 1968 'The Role of Monetary Policy', *The American Economic Review*, 58:1:1–17.
10. Garg, R. and Telang, R. 2018 'To Be or Not to Be Linked: Online Social Networks and Job Search by Unemployed Workforce', *Management Science*, 64:8:3926–3941.
11. Granovetter, M.S. 1973 'The Strength of Weak Ties', *American Journal of Sociology*, 78:6:1360–1380.
12. Johnson, E. and Wheeler, L. 2017 'The Impact of LinkedIn on Disconnected Young Work-Seekers: Evidence from South Africa', in. 2017 International Population Conference, IUSSP. Available at: <https://iussp.confex.com/iussp/ipc2017/meetingapp.cgi/Paper/1832> (Accessed: 24 February 2023).
13. Kothari, S. et al. (2022) 'What Matters for Job Finding and Separation in the Long Run? Evidence from Labor Market Dynamics in New Zealand', *IMF Working Papers*, 2022(172), p. 1. Available at: <https://doi.org/10.5089/9798400218910.001>.
14. Layard, R., Nickell, S. and Jackman, R. 1991 *Unemployment: Macroeconomic Performance and the Labour Market*. Oxford University Press. Available at: <https://econpapers.repec.org/bookchap/oxpobooks/9780198284345.htm> (Accessed: 23 February 2023).
15. Michael, D. 2004 'Hysteresis and Insider-Outside Theory - A Literature Review', Macquarie University, Department of Economics, Research Papers [Preprint].
16. Rajkumar, K. et al. 2022 'A causal test of the strength of weak ties', *Science*, 377:6612:1304–1310. Available at: <https://doi.org/10.1126/science.abl4476>.
17. Statistics | Eurostat 2022. Available at: [https://ec.europa.eu/eurostat/data-browser/view/EI\\_LMHR\\_M\\_\\_custom\\_89629/bookmark/line?lang=en&bookmarkId=9fe2520f-0f4e-465f-b9fb-c7d5e41c81ce](https://ec.europa.eu/eurostat/data-browser/view/EI_LMHR_M__custom_89629/bookmark/line?lang=en&bookmarkId=9fe2520f-0f4e-465f-b9fb-c7d5e41c81ce) (Accessed: 20 December 2022).
18. Thaler, R.H. and Sunstein, C.R. 2009 *Nudge: improving decisions about health, wealth, and happiness*. Rev. and expanded ed. New York: Penguin Books.
19. Uehara, E. 1990. Dual exchange theory, social networks, and informal social support. *American Journal of Sociology*, 96:3:521–557. <https://doi.org/10.1086/229571>
20. Völker, B. 2023 'Networks in lockdown: The consequences of COVID-19 for social relationships and feelings of loneliness', *Social Networks*, 72:1–12. Available at: <https://doi.org/10.1016/j.socnet.2022.08.001>.
21. Zhang, X. et al. 2021 'Employment hysteresis in the United States during the COVID-19 pandemic', *Economic Research-Ekonomska Istraživanja*, 34:1:3343–3354. Available at: <https://doi.org/10.1080/1331677X.2021.1875253>.

---

# DISABLING THE EU'S GREATEST RESOURCE

BRYONY HOYLE  
JUNIOR SOPHISTER

*"This essay evaluates the structural issues of the EU labour market through the lens of people with disabilities. It begins with an overview of the position of disabled people in the EU labour market and delineates the most pressing challenges they face. This essay also offers a brief overview of the mis-modelling of disability in the 1970s and 1980s, so we can truly understand the severity of the challenges faced today. The originality of this contribution lies in its synthesis of the previous measures taken to combat the exclusion of disabled people from employment and its identification of the lessons that can be learned from these policy measures. In light of these failures, one offers Sweden as the archetype for future policies. Finally, this essay suggests that convergence across the EU on this particular issue will enable the EU to relieve itself of labour market pressures, whilst simultaneously furthering the inclusion of disabled people."*

## Introduction

The European Union (EU) labour market is bolstered by the four freedoms; the free movement of goods, services, people, and capital, which work jointly to provide employment opportunities for individuals across the EU. Recently, employment opportunities have been thwarted by the Great Recession, Brexit, and the COVID-19 pandemic. These crises have diverted attention from structural issues that cripple the economic and social progression of the labour market. This can be attributed in part to policymaker myopia. This refers to the tendency of policymakers to excessively discount the significance of future policy problems and instead concentrate on more immediate issues. While this focus on short run problems within the labour market was undoubtedly necessary during the COVID-19 pandemic in particular, the failure to address longer term structural issues within the EU labour market precedes this extraordinary shock and has in fact been a consistent feature of the EU since the establishment of the European Economic Community in 1957.

As a result of these consistent failures, one of the most pertinent problems that is continually overlooked is the lack of freedom and opportunities afforded to disabled people. This paper examines the extensive structural issues of the EU labour market that continue to oppress the rights of disabled people. It follows with an exploration of the ineffectual policies deployed by EU member states to date. One turns to Sweden to delineate policies that transcend the inclusion of disabled people, not only in employment, but most importantly, in society overall.

## Facing the Facts

There are 87 million disabled people in the EU, many with restricted access to the labour market (European Commission, 2022). Many disabled individuals go unrecognised as they are not classified as disabled by the state, or they fail to disclose it. Researching those with disabilities is also complex as gathering data is difficult and often self-reported (van der Zwan & de Beer, 2021). These are two of the intricacies that make the inclusion of disabled people challenging in administrative terms. Whilst administrative complexities are a challenge in themselves, the most damaging problem is restricted access to the labour market encountered by disabled people that prevent them from achieving full inclusion in society (Anišić Campbell, 2010). Employment is one stepping stone to greater inclusion within society. A good job contributes to one's self-worth, offers membership in a community, provides benefits like health insurance, and is critical to financial stability and independence (Barkoff & Read, 2017). Yet social barriers and impairments such as prejudice among employers, perceived risk of disabled people as employees, and the accessibility of the working environment continue to diminish equality of opportunity for disabled people and undermine their access to the aforementioned welfare-enhancing freedoms. This ultimately results in their exclusion from society. The exclusion of disabled people is observed in employment figures. The EU maintains an average of only 50% of disabled people in employment. In contrast, this figure is much higher for non-disabled people as 75% of that group are employed (European Commission, 2022). The disability employment gap is much wider for disabled women and those with learning disabilities.

At the surface level, this appears to be an economic problem of poor resource allocation within the labour market, but really it cuts much deeper. It is a blatant human rights violation. Disability rights are human rights as laid down by the United Nations (UN) in 2007. The UN Convention on the Rights of Persons with Disabilities (CRPD) requires state parties to recognise the right of disabled people to work by eliminating discrimination, ensuring equitable recruitment, and providing an accessible and inclusive work environment (Kuznetsova & Yalcin, 2017). The EU demonstrated their commitment to the equality of every individual by signing on the first day it was open for

---

signature. As many policy measures are selected at the national level, rather than at the supranational level, it was imperative all member states of the EU followed suit. Every member state signed, indicating homogeneity of such guarantees across member states. This was a momentous occasion as it marked the first time that the EU had become a party to any international human rights treaty (Avkoska, 2018). This reflected their broader commitment to a barrier-free society and emphasised that disabled individuals should be able to enjoy the same freedoms and opportunities as anyone else. Until equality of employment opportunity is granted to all disabled individuals in the EU, the EU is failing to fulfil the principles it founded itself upon, breeding a culture of dogmatism.

The EU has been slow to appreciate the devastating effects these failures have had on disabled individuals across the region. This inadequate response sees many disabled citizens prohibited from fully participating in society. Disabled individuals already experience lower marriage rates, a greater likelihood to live alone, and a reduced likelihood of socialising with friends outside of the home or being involved in group activities compared to those without disabilities (Schur, 2002). Yet if disabled people can fully participate in employment without discrimination or stigmatisation, then the benefits accrued will be extensive and meaningful. Depending on the structure of employment policies, individuals will hopefully enjoy increased incomes, greater wellbeing, and feel more included within society. Most jobs involve interactions with co-workers or members of the public, which can help decrease social isolation and build social capital (Putnam, 2000). While some of the effects of employment are difficult to quantify, it is apparent that it will reduce the social and economic disparities faced by the disabled and create a sense of economic security. This will cause greater life satisfaction as one feels they are filling a valuable social role, which in turn, contributes to integration within society (Schur, 2002).

There are not only negative effects of exclusion on the disabled individual, but on broader society; the excluded disabled group may develop a greater dependency on public benefits, which augments public spending percentages on disability and sickness care, enhancing the likelihood that disabled individuals will dwell in poverty, further increasing their dependency on public dole (Anišić Campbell, 2010). However, through shifting the narrative that currently exists in many EU countries towards disabled people, it is possible to utilise one EU labour market challenge to solve another. The EU is faced with a shrinking workforce resulting from demographic changes brought about by an ageing society (Anišić Campbell, 2010). By severing off a capable arm of its workforce, namely those with disabilities, the EU is only furthering the already extensive structural issues that exist within the labour market. Yet, if policies were adopted to afford equal employment opportunities to the disabled, two birds would be killed with one stone. Equal employment opportunities would lead to societal gains such as a bolstered labour force, increased economic activity, and reduced dependency on social welfare (van der

Zwan & de Beer, 2021). Increased economic activity would produce greater revenue for the government through taxation, whilst a reduced dependency on social welfare would decrease government expenditure. This additional revenue can be invested by member states in policies that support the advancement of disability rights. As delineated here, the disabled community should be viewed as one of the EU's greatest untapped resources, who if mobilised effectively, have the propensity to mitigate the effects of a shrinking workforce.

## **Trials and Tribulations**

Historically, the rights of disabled people were considerably neglected by the European Economic Community. Any recognition of disability rights, and policies to alleviate these difficulties were aligned with the 'medical model' rather than the 'social model'. The medical model of disability focuses on the disabled persons impairment itself and recognises it as the root cause of the disadvantage experienced by the disabled person (Anišić Campbell, 2010). This perspective was adopted by the EU and became the crucial driving force behind disability policy until 1996. As a result, disability policy was characterised by reductionism, concentrating on the individual and seeking a 'cure' to the disability that caused the displacement within the labour market. However, progress stagnated with the medical model and adopted programmes failed to achieve the desired effect.

To overcome the challenges facing disabled people, the paradigm needed to shift. This reductive school of thought that rendered disabled people incapable spurred disability rights movements among communities that highlighted the nature of troubles they faced. This required policymakers to appreciate that the major challenge for the disabled was not the disability itself, but rather the overt and latent discrimination of society (Anišić Campbell, 2010). The turn of fortune for disabled people was marked by the EU's move towards the 'social model' in 1996. Unlike the models that dominated the realm of EU policymaking before, this model aimed to sever the causal connection that existed between impairment and disability. The social model shifts the focus from impairment onto disability, using the term to refer to disabling social, environmental, and attitudinal barriers rather than lack of ability (Anišić Campbell, 2010). The EU now perceives disability as the result of the dynamic interaction between a person and their environment, including social constructions, which lead to discrimination and stigmatisation (Anišić Campbell, 2010). Thus, policy measures should be implemented within the workplace environment to support the individual by dismantling the barriers that subordinate them. The embodiment of the social model in the employment sphere was a blessing for the advancement of disability rights and greater equality of opportunity for citizens in the EU. However, this adoption of the social model at the supranational level has not translated



---

perfectly to the national level. Contrasting interpretations of the challenges facing disabled people has severely affected any chance at achieving equality, and ultimately, placed the EU further away from achieving a barrier-free society.

## **Investing for Inclusivity**

It must be noted that whilst the EU embraces this social model at the supranational level, labour market policies are decided at the national level. There are directives and initiatives, but member states ultimately have discretion on how to achieve greater inclusivity of disabled people. Across the EU, member states have mostly adopted active labour market policies (ALMPs) to tackle the disability employment gap, with the hope that increased spending on ALMPs aimed at supporting disabled people will increase employment rates among disabled EU citizens (van der Zwan & de Beer, 2021). ALMPs should principally serve two purposes: 1) to increase employment incentives and 2) to eradicate barriers to employment for people with disabilities.

A supposedly ground-breaking policy was the creation of sheltered employment for disabled individuals within member states. Sheltered employment aimed to offer adapted jobs to those disabled people who failed in independently securing a traditional job (van der Torre & Fenger, 2014). Initially, this policy measure was viewed as transformative as regular paid work increased the income and wellbeing of disabled people, and society reaped economic benefits from higher productivity levels. However, the apotheosis of sheltered employment was short-lived as policymakers began to question the supposed inclusive nature of sheltered employment. The renewed consensus is that sheltered employment contributes to the exclusion of disabled people from society rather than their inclusion, as sheltering limits contacts and interactions with non-disabled people (van der Torre & Fenger, 2014). Creating sheltered employment solely for disabled people is damaging for societal integration. Disabled people should be targeted to increase their employment rate, but not at the expense of social interaction within their community. Member states conceded the problems with this policy and switched their investing away from sheltered employment to supported employment.

Supported employment involves providing financial support to employers who hire a person with a disability (van der Zwan & de Beer, 2021). Member states acknowledged that the liberation of disabled people cannot and will not materialise when their subordination is perceived as profitable by employers. By hiring non-disabled people instead of disabled people, employers do not have the perceived cost burden of absenteeism, or adapting the workplace, or lower productivity levels that would otherwise impact their profitability. It is the responsibility of policymakers to mitigate these preconceptions through whatever means necessary. Policymakers provide financial incentives such as subsidies for hiring disabled people or adapting workplaces, and a no-risk policy that

guarantees they will pay the employee's wage if they are incapacitated by ill health (van der Torre & Fenger, 2014). Consequently, employers will be incentivised to hire disabled people, which contributes not only to improved labour market opportunities for disabled people but increased social integration. Financial incentives alone are not enough, nor are they sustainable long term. Policymakers have also invested in education with campaigns that promote the advantages of hiring disabled people and publishing success stories (van der Torre & Fenger, 2014). Despite this, the average employment figures are damning, and the EU's lack of commitment to uphold the rights of disabled people reverberates across the region. The EU as a whole has not found its employment elixir, but this begs the question who has?

## Striving to Sweden

### Top 10 countries with highest employment rate for disabled people

Out of the 58 countries where data is available, Switzerland's employment rate for disabled people is the highest at 69%. Two developing countries, Rwanda and The Seychelles, also feature.

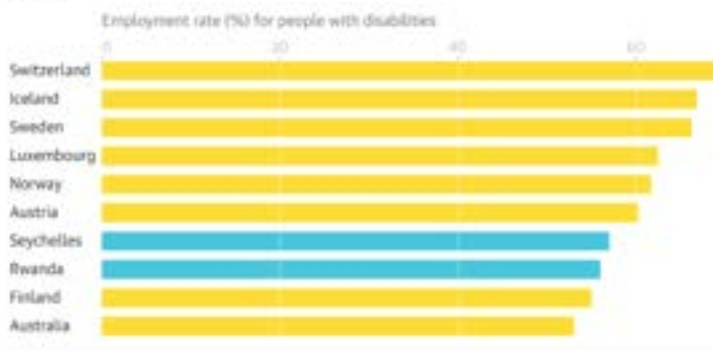


Figure 1. Guardian (2016),

Many EU member states have tried to break down the discrimination barriers with respect to disability, considering disabled people as an integral part of the workforce and society (Shima et. al., 2008). Despite these efforts, no member state has created an absolute employment haven for disabled people. Yet Sweden should still be observed as a trailblazer in creating inclusive employment. The graph illustrates Sweden's high employment rate of 65% for disabled people, with this rising to 71% as of 2021 (Swedish Central Bank, 2022). Comparing this with an employment rate of 79% for non-disabled people, this alone showcases the potency of the measures taken to create a more inclusive labour market. Disability policy has been characterised by high state responsibility, gen-

---

erous benefit provisions, and a strong focus on employment subsidies and rehabilitation (Kuznetsova & Yalcin, 2017). Sweden has drawn on all its possible instruments by enacting a myriad of ALMPs, resulting in their public expenditure on these measures ranking second highest in the OECD as a percentage of GDP (Kuznetsova & Yalcin, 2017). This exemplifies Sweden's devotion to upholding the rights of disabled people as laid out by the UN, promoting both equality and economic prosperity simultaneously.

Sweden also recognised the importance of dismantling the overt and covert barriers in place by employers that create a challenging employment landscape for disabled people. Sweden enacted strict regulatory obligations for employers which in turn increased the responsibility of the employer of protecting vulnerable populations such as the disabled. These regulatory obligations came in a series of acts. The first was the Anti-Discrimination Act 1999, predating the EU framework. In the following years, Sweden ratified the UN CRPD and enacted a new Anti-Discrimination Act to align with this (Kuznetsova & Yalcin, 2017). These acts led to an explicit decline of direct discrimination in recruitment and promoted equal rights to employment for people with disabilities (Kuznetsova & Yalcin, 2017). As well as non-discrimination legislation, Sweden has established effective enforcement mechanisms that ensure the dismantling of workplace barriers. These work in unison with a multitude of targeted measures to produce greater level of social inclusion for disabled people in Swedish society.

One of these targeted pioneering Swedish policies is the establishment of job coaches. Job coaches provide individual, continual support to a person with a disability, their employer, and their co-workers whilst the person with the disability becomes established in working life (Wehman et. al., 2007). This allows disabled people continual guidance throughout the employment process and hopefully, fosters an inclusive environment where they can root and then thrive. As exemplified, Sweden exhibits an overall strong commitment to including disabled people in mainstream employment by adopting social regulatory policies with a common aim of promoting non-discrimination, equality, and participation (Kuznetsova & Yalcin, 2017).

## Conclusion

Measures aimed at improving the inclusion of disabled people across the EU labour markets have never been very successful, as evidenced by low employment rates. The EU maintains an average of only 50% of disabled people in employment (European Commission, 2022). The allocation of competences in the EU with respect to labour market policies has led to consistent failures in reducing the disability employment gap across the EU. Allowing member-state discretion on such policies has resulted in continued discrimination from employers, social isolation, lower incomes at the individual level and an increasingly fragmented EU labour market. By conceding the inherent faults in previous

policies, other EU member states now have the freedom to take inspiration from Sweden and instigate change across their labour markets and societies. Cultivating inclusive employment, and ultimately, an inclusive society can be achieved through greater coordination and communication between groups, ambitious projects, and a convergence of policy among member states.

## References

1. Anišić Campbell, M. 2010. 'Disability rights and the EU labour market: An analysis of legislation and policy'. *Croatian Yearbook of European Law and Policy*, 6: 231-264.
2. Banning-Lover, R. 2016. 'Russia and the US have the worst employment gaps for disabled people' *The Guardian*. Guardian News and Media. Available at: <https://www.theguardian.com/global-development-professionals-network/2016/jun/23/russia-and-the-us-have-the-worst-employment-gaps-for-disabled-people> [Accessed: 15th December 2022]
3. Barkoff, A. and Read, E.B. 2017. 'Employment of People with Disabilities: Recent Successes and an Uncertain Future'. *Human Rights*, 42: 8–11.
4. Čavkoska, B. 2018. 'Sustainable development and the social inclusion of disabled people'. *SEER*, 21:2:252-260. Available at: <https://doi.org/10.5771/1435-2869-2018-2-103>.
5. Kuznetsova, Y and Yalcin, B. 2017. 'Inclusion of persons with disabilities in mainstream employment: Is it really all about the money? A case study of four large companies in Norway and Sweden'. *Disability & Society*
6. Persons with disabilities (2022) Persons with disabilities - Employment, Social Affairs & Inclusion - European Commission. Available at: <https://ec.europa.eu/social/main.jsp?catId=1137> [Accessed: 16th December 2022]
7. Putnam, R.D. 2000. *Bowling Alone: The collapse and revival of American community*. New York: Simon & Schuster Paperbacks.
8. Schur, L. 2002. 'The difference a job makes: The effects of employment among people with disabilities'. *Journal of Economic Issues*, 36:2:339–347. Available at: <https://doi.org/10.1080/00213624.2002.11506476>.
9. Shima, I., Zólyomi, E. and Zaidi, A. 2008. *The Labour Market Situation of People with Disabilities in EU25*. Policy Brief 2.1/2008. Vienna: European Centre.

- 
10. Stenbjorn, C. 2022 'Situationen på arbetsmarknaden för personer med funktionsnedsättning' Available at:[https://www.scb.se/contentassets/af9cb0690b-234d54a2ebecf0ab21b4ff/am0503\\_2021a01\\_br\\_am78br2202.pdf](https://www.scb.se/contentassets/af9cb0690b-234d54a2ebecf0ab21b4ff/am0503_2021a01_br_am78br2202.pdf) [Accessed: 16th December 2022]
  11. van der Torre, L. and Fenger, M. 2014. 'Policy Innovations for including disabled people in the labour market: A study of innovative practices of Dutch sheltered work companies'. *International Social Security Review* , 67: 67-84.
  12. van der Zwan, R. and de Beer, P. 2021. 'The Disability Employment Gap in European countries: What is the role of labour market policy?'. *Journal of European Social Policy*, 31: 473-486.
  13. Wehman, P. , Inge, K., Revell, W., and Brooke V. 2007. *Real work for real pay: Inclusive employment for people with disabilities*. Baltimore, MD: Paul H. Brookes Pub.

# HISTORY OF ECONOMIC THOUGHT



---

# ADAM SMITH ON TRADE: ORIGINAL THINKER OR POPULAR INFLUENCER?

CONOR MAHER  
SENIOR SOPHISTER

*“To resolve the debate over the founder of economics, this paper proposes bifurcating the title into a founder-by-originality and a founder-by-popular-appeal. Adam Smith’s trade policy is then presented and tested for originality. It is shown that his key arguments in favour of trade and against mercantilism could be found in the work of his predecessors and were therefore not original by the time he formally published them in 1776. Smith’s popular-appeal and influence is subsequently developed and shown to be important for the development of economics. The paper concludes that in relation to trade, Smith cannot be considered the founder-by-originality, but a stronger case can be made for being considered the founder-by-popular-appeal.”*

## Introduction

Adam Smith is widely hailed in popular domains as the ‘founder of economics’ (FoE) due to his work in allegedly revolutionising the discipline in his magnum opus, ‘An Inquiry into the Nature and Causes of the Wealth of Nations’ (WoN). Scholarly circles, however, have long-questioned his merit for such an accolade by pointing to his heavy reliance on the work of his predecessors; with Schumpeter even suggesting that he lacks ‘a single analytic idea, principle, or method that was entirely new in 1776’ (Schumpeter, 1954: 179). Scholars (hereby known as ‘Originalists’) sharing this conviction have proposed various other contenders for the coveted accolade on the basis that their ideas are richer in substance and originality than Smith’s - Petty, Turgot, Serra, and Cantillon are among the many popular candidates. Still, there are those who defend Smith’s legacy and title (hereby known as ‘Smithians’) by referencing his ability to synthesise and present ideas in such a way as to cultivate unprecedented popular interest and subsequently influence the development of the discipline like no other. To further complicate the de-

bate, some argue (hereby known as Pluralists') that the broad nature of economics as a discipline makes it impossible to reduce it to a single founder (see Backhouse, 2002 and Roncaglia, 2009).

This debate is important both in the order of justice, by giving credit to where it is earned and withholding it from where it is not, and in the order of truth, by correcting the record of history to more accurately represent reality. Nevertheless, the debate is at a deadlock because the Originalists and the Smithians are speaking two different languages – they have different criteria for who is deserving of FoE. The Originalists emphasise the importance of the substance of the ideas themselves and the originality thereof, whereas the Smithians defend the importance of popular appeal and influence. To resolve the debate, this paper proposes bifurcating the FoE into a founder-by-originality, as defined by the criteria of the Originalists, and a founder-by-popular-appeal, as defined by the criteria of the Smithians.

For simplicity, the scope of this paper is limited to Smith's trade theory – meaning his originality will be determined solely by the extent to which he relied on the trade theory of his predecessors. The paper begins with an outline of his trade theory, involving his critique against mercantilism and his division of labour argument for trade. It is then argued that the substance of this theory was not new by the time it was published and consequently his claim to the founder-by-originality is undermined. Lastly, an examination of Smith's superiority in generating popular interest is presented to defend him as a founder-by-popular appeal.

This novel approach not only resolves the tension between the Smithians and the Originalists, but also incorporates the approach of the Pluralists by conceding that it is insufficient to reduce the discipline to a single founder.

## Smith on Trade

Adam Smith's advocacy for free trade is one of the most defining policy proposals stemming from his economic theory, making it an appropriate vantage-point from which to test his originality. The common understanding of trade at the time of Smith's writing was informed by the 'mercantilist' system of thought. It is difficult to define mercantilism precisely due to the gradations it took on over the years but broadly speaking it posited the importance of maintaining a positive balance of trade, now known as the 'balance-of-trade doctrine' (Viner, 2018). It holds that exports are an unequivocal good as they increase the inflow of bullion into the economy and thereby increase the wealth of the nation, with the opposite being true for imports.<sup>1</sup> It therefore promotes policies that

1 Some nuance is required here since mercantilists like Thomas Mun thought it was permissible to maintain a deficit with a particular country if the imports from said country are needed to produce export goods that allow for an overall balance-of-trade surplus (Screpanti and Zamagni, 2010).



---

encourage exports like subsidies and discourage imports like tariffs.

The error of mercantilism, Smith argues, was seeing trade as a zero-sum-game in which one nation can only benefit at the expense of another, with the benefit moving in the direction of the balance-of-trade. Smith explains that international trade is beneficial for both nations in the same way that local trade is beneficial for both tradesmen – the trade would not take place if both parties did not gain from the exchange (Smith et al., 1982):

When two men trade between themselves it is undoubtedly for the advantage of both... The case is exactly the same betwixt any two nations (ibid.: 511).

The source of this error is a misunderstanding of the nature of wealth. Contrary to the mercantilists, bullion (or money) does not equal wealth for Smith and therefore it is not the case that exports (imports) necessarily increase (decrease) the wealth of the nation (WoN, IV, I). He understood that when the nation receives an influx of bullion in exchange for exports, more money chases after fewer goods and the real value of money decreases. Consequently, the real wealth of the economy, measured by ‘what money purchases’, is eroded (ibid.: 335). If, on the other hand, the nation removes barriers to importing, households could import goods from countries that sell them cheaper than at home, thereby bolstering purchasing power and increasing real wealth:

In order to make the same purchases, we must load ourselves with a greater quantity of them, and carry about a shilling in our pocket where a groat would have done before (ibid.: 343).

In addition to his arguments against mercantilism, Smith also presents a positive argument in favour of free trade derived from the division of labour. It begins, incontrovertibly, with the notion that the division of labour improves standards of living because when each worker can specialise in one task of a production process, more output can be produced for a given input of labour (WoN, I, I). However, he understood that division of labour is ‘limited...by the extent of the market’ (WoN, I, III: 18). A rurally based carpenter, for example, cannot focus exclusively on carpentry, but must also carry out every other wood-related task because the small pool of labour and market size cannot accommodate a refined specialisation (ibid.). Smith, therefore, supported increased connectivity between markets through transport-links and free trade as a way to make markets more extensive and allow for a greater division of labour, thereby improving standards of living.

## Unoriginality of the Mercantilist Critique

Now that Smith’s case against mercantilism and in favour of free trade has been established, the originality thereof can be assessed by examining the extent to which his

predecessors made similar arguments.

Firstly, Smith was certainly not the first to suggest that free trade is necessarily mutually beneficial on the basis that the trade would not occur if it were not so. An almost identical line of reasoning can be found in the work of Dudley North, around 80 years prior to Smith's articulation:

That there can be no Trade unprofitable to the Publick; for if any prove so, men leave it off; and wherever the Traders thrive, the Publick, of which they are a part, thrives also (North, 1691: Preface).

Additionally, the connection that Smith made between free trade and the economic success of the nation can be detected in the same quote. North notes that if the 'Traders' are thriving, then the 'Publick' (from which we can extrapolate the nation) must also be thriving. This point is made even clearer by Josiah Child in 1692, who held that if trade is 'limited or bounded...it [the nation] will never prosper' (Somers, 1813: 622).<sup>2</sup> Hence, a clear link between free trade and the economic prosperity of the nation was established long before Smith's writing.

Secondly, Smith was not the first to correct the mercantilist's misunderstanding of the nature of wealth. The Physiocrats, writing before Smith in the 18th century, distinguished between 'primary' wealth, as measured by the stock of consumption goods, and 'pecuniary' wealth, which comes from money and whose value is derived from its ability to acquire primary wealth (Bloomfield, 1938: 720). There was therefore, an already established recognition among certain scholars that money does not equal wealth in the true sense but is only a means to achieving it.

Moreover, the quantity theory of money which Smith relies on to show that importing bullion increases prices, was articulated comprehensively by Locke in 1691 and later by Hume (see Humphrey, 1974) but as Leigh (1974) notes, this was an old idea even in 1691. The origins of the idea can be traced to the scholastic schools, notably in the work of French philosopher, Nicole Oresme (14th century). Oresme's novelty consisted in applying Aquinas's 'just price theory' to metallic money, thereby treating it like other goods (O'Brien, 2000). And as the 'just price' came to be equated with the price decided by a fair market, the price (or value) of each good was understood to be inversely related to its scarcity – the same holding true for money (*ibid.*).

Here, defenders of Smith may object by maintaining that Smith was the first to explicitly apply the ideas to trade even if he did not author the core ideas themselves. Admittedly, Locke and many Physiocrats were inconsistent – they failed to bring their ideas to their logical conclusion and consequently retained some mercantilist principles with respect to trade. David Hume, however, was able to apply the core ideas to trade and even surpassed Smith in his exposition despite writing over 20 years before him. His

2 Viner (2018) is credited with connecting Child to the tract.

---

work therefore offers a rebuttal to the defenders of Smith's originality.

Hume, in his critique of the balance-of-trade doctrine, presented a sophisticated mechanism to explain the flow of specie between countries. He notes that when a country imports bullion (via exports), the price level increases (by the quantity theory of money) which in turn reduces the nation's competitiveness in foreign markets and brings a halt to the inflow of bullion (Hollander, 1911). Similarly, he explains that if most of Britain's money was destroyed, prices would decrease, leading to an inflow of money into the country until their competitive advantage is eroded and their prices are in line with other nations (*ibid.*). In outlining this self-regulating mechanism, Hume attacks mercantilism on its infeasibility – the laws of markets will simply not allow the endless importing of bullion into a country.

Not only does this show that Smith's critique of mercantilism was unoriginal, it also highlights his deficiencies with respect to his predecessors. Despite being well acquainted with Hume and his work, Smith failed to incorporate this specie-flow mechanism into the WoN and therefore failed to advance or even match the established critique of mercantilism in substance (see Viner, 2018).

## **Unoriginality of the Division of Labour Argument**

Now that Smith's critique of mercantilism has been shown to be unoriginal, his positive argument for trade, namely the division of labour argument will be checked for originality.

It certainly cannot be denied that Smith did not invent the division of labour as a concept or as an economically beneficial prospect since its roots go back to Ancient Greece, at the earliest. Socrates, in Plato's Republic presents a primitive version by noting that man should be assigned a single task in the polity because man is better at working at one task than at many (Plato, 2009: II 370b). Additionally, before Plato, Xenophon had already articulated Smith's conviction that the division of labour is limited by the extent of the market. He understood that in 'small towns', the same worker is required to complete multiple tasks whereas in 'great cities', he can singularly specialise since 'there are numbers that want each particular thing' (Xenophon, 1855: 244) – in other words, the larger market size in the city facilitates a more extensive division of labour. And for robustness, Petty, Quesnay, Turgot (see Walker, 2019) and many others before Smith appealed to the division of labour and therefore it cannot be argued that Smith rediscovered it from the ancients.

Nonetheless, the important question is not whether Smith invented the division of labour but whether he was original in applying it to trade. Xenophon, despite recognising the limitation of market size on the division of labour, did not advocate for internation-

al trade on that basis. However, the often-forgotten German economist, Ernst Ludwig Carl, published his major three volume work in 1722-23 and comprehensively made the connection between division of labour and international trade, over 50 years prior to Smith. Naturally, he was a staunch defender of the division of labour as the means for the nation to accrue wealth:

This separation of each trade into several branches makes each one more skilful, and produces a larger number of products, when it is applied to a single object (Carl, 1723: II 242 cited in Sun, 2013: 3.2).

Recognising the market size and population limits on division of labour, Carl encouraged each country to specialise in the production of those goods that are supported by the country's 'particular gifts' and to subsequently trade liberally between each other (Carl, 1723: III 254–7 cited in Sun, 2013: 3.2). In doing so, each country can invest more labour into their speciality area and thereby facilitate a greater degree of specialisation and division. This is an early derivation of the 'absolute cost advantage' trade theory, something Smith is traditionally credited with.<sup>3</sup>

Additionally, a similar argument was made by the unknown author of 'Considerations on the East-India Trade', published in 1701. They note that trading allows the country to acquire goods from abroad for less labour than they can be produced at home, which frees up additional labour to be employed in the home country's specialty area (Viner, 2018). Hence, a greater division of labour can be supported, and more wealth accrued.

It should now be clear that Smith was not the first to author the connection between international free trade and greater gains from the division of labour.

## Smith's Popular-Appeal

The previous sections have shown that, in relation to trade, the Originalists are correct in their assertion that Smith was lacking in substance and originality. But as mentioned in the introduction, Smithians are indifferent to the originality (or lack of) of his ideas. Rather, they claim he is deserving of the FoE for the popular appeal and influence that his work generated. Therefore, to evaluate the position of the Smithians, it is necessary to examine the extent to which Smith achieved the appeal and influence that they claim.

Smith is undoubtedly the most well-known of the FoE contenders. A 2009 survey of 299 economists in academia indicated that Smith was by far the most cited economist

---

3 There is a recent debate over Smith's actual beliefs in relation to the absolute advantage theory, but a comprehensive review of such debate is beyond the limits of this paper (See Yoshii, Fujimoto, and Shiozawa, 2019).

---

with 221 citations, well ahead of Keynes on 134 (Norman, 2019). Additionally, Smith even surpassed Marx in citations among general (not specifically economic) papers, thereby revealing his influence and reach beyond academic economists (*ibid.*). There is still some debate over whether the influence and popularity of WoN was achieved during or after Smith's lifetime (see Rashid, 1982) but there is nonetheless a consensus that it was in fact achieved. We do know, however, that 5 editions were published and translated into the main European languages so it must be the case that there was at least some immediate interest (Pike, 1966). Smith's influence on the American founding fathers has also been well documented by Fleischacker (2002), who notes that James Madison and Thomas Jefferson were particularly compelled by the argumentation in WoN.

Smith heavily influenced the later classical economists, David Ricardo, and John Stuart Mill, on the issue of trade (Hanley, 2016). Like Smith, they rejected mercantilism and encouraged international trade as a means of attaining wealth. Ricardo was able to build upon Smith's absolute cost advantage theory and in doing so, developed the more robust comparative cost advantage theory. The references made to Smith's work on trade by these 'great' economists is evidence of his impact on the development of the discipline. Additionally, Smith's influence was not restricted to the academic world – his free trade arguments were also influential in the political arena. Hanley (2016) notes that the Anti-Corn Law League's affiliation and embrace of Smith's writing was instrumental in moving public opinion away from the support of import restrictions on corn and oats. The move towards free trade in general in Britain during the 19th century was certainly motivated (at least in part) by the success of the WoN.

It has been suggested that Smith's writing style and presentation was the source of this popularity. Although Smith was not original in ideas (at least in relation to trade), he provided a synthesis of the established orthodoxy that was comprehensive enough to make reading it worthwhile for the common man but simple enough to make reading it possible. The WoN also contains unexpected wit and oddities to keep the reader engaged as when he informs us that Queen Elizabeth I was the first to wear stockings in England (Pike, 1966):

[H]e made it plain to the common apprehension, that he made it the property of men in the common walks of life. (Godwin, 1876 cited in Liu, 2018: 211)

This is often contrasted with Richard Cantillon's 'dry' and inaccessible style which is tolerable and even admired by modern academics but charmless to the common man of his time (Brewer, 1992: 196). It is therefore not much of a stretch to suggest that the WoN's appeal to the sensibilities of non-academics was largely responsible for its popularity.

Economic ideas, insofar as they remain solely in the academic sphere, are largely unavailing. It is only when those ideas germinate in the minds of everyday people that

they can produce fruit in the social and political sphere. Thus, the popular appeal that Smith was able to generate for economics cannot be altogether discounted because his ideas lacked originality. The fanfare he generated was necessary for establishing economics as a credible discipline and as such he has a strong claim to being considered the founder-by-popular-appeal.

## Conclusion

This paper employed the novelty of bifurcating the FoE into a founder-by-originality and a founder-by-popular-appeal. It was shown that in relation to trade, Adam Smith cannot be considered the founder-by-originality because his critique against mercantilism and division of labour argument did not constitute an original contribution to the discipline as they were presented before him by his predecessors. Nonetheless, the paper conceded that Smith's influence and popularity could not be ignored. He made economics accessible to the masses and thereby helped to establish it as a credible discipline of inquiry. Therefore, a strong case can be made for considering Smith to be the founder-by-popular-appeal.

It is hoped that the novel framework provided in this essay can break the deadlock between the Originalists and the Smithians and in doing so facilitate a resolution to the debate over the FoE. Future research could examine the originality of Smith's work beyond his trade theory and also pay more attention to non-European economists in history, who are often overlooked in the FoE debate.

## Bibliography

1. Backhouse, R. 2002. *The Penguin history of economics*. London: Penguin.
2. Bloomfield, A.I. 1938. The Foreign-Trade Doctrines of the Physiocrats. *The American Economic Review*, [online] 28:4:716–735. Available at: <https://www.jstor.org/stable/pdf/1806309.pdf> [Accessed 19 Oct. 2022].
3. Brewer, A. 1992. *Richard Cantillon : Pioneer of Economic Theory*. London ; New York: Routledge.
4. Fleischacker, S. 2002. Adam Smith's Reception among the American Founders, 1776-1790. *The William and Mary Quarterly*, 59:4: 897. doi:10.2307/3491575.
5. Hanley, R.P. 2016. *Adam Smith: His Life, Thought, and Legacy*. Princeton University Press.
6. Hollander, J.H. 1911. The Development of the Theory of Money from Adam Smith to David Ricardo. *The Quarterly Journal of Economics*, 25:3:429. doi:10.2307/1883613.

- 
7. Humphrey, T.M. 1974. The Quantity Theory of Money: Its Historical Evolution and Role in Policy Debates. [online] Available at: <https://core.ac.uk/download/pdf/6917453.pdf>.
  8. John Selby Watson, Dale, H. and Xenophon 1855. The Cyropaedia: or, Institution of Cyrus, and the Hellenics, or Grecian History. Literally Translated from the Greek of Xenophon.
  9. Leigh, A.H. 1974. John Locke and the Quantity Theory of Money. *History of Political Economy*, 6:2:200–219. doi:10.1215/00182702-6-2-200.
  10. Liu, G.M. 2018. ‘The Apostle of Free trade:’ Adam Smith and the Nineteenth-Century American Trade Debates. *History of European Ideas*, 44:2:210–223. doi:10.1080/01916599.2018.1429709.
  11. Norman, J. 2019. Adam Smith: What He thought, and Why It Matters. London: Penguin Books.
  12. North, D. 1691. Discourses Upon Trade. [online] [oll.libertyfund.org](http://oll.libertyfund.org). Available at: <https://oll.libertyfund.org/title/hollander-discourses-upon-trade> [Accessed 17 Oct. 2022].
  13. O’Brien, D.P. 2000. Bodin’s Analysis of Inflation. *History of Political Economy*[online] , 32:2:267–292. Available at: <https://muse.jhu.edu/article/13219/pdf> [Accessed 19 Oct. 2022].
  14. Pike, E.R. 1966. Adam Smith, Father of the Science of Economics.
  15. Plato 2009. The Republic. Cambridge ; New York: Cambridge University Press.
  16. Rashid, S. 1982. Adam Smith’s Rise to Fame: a Reexamination of the Evidence. *The Eighteenth Century*, [online] 23(1), pp.64–85. Available at: [https://www.jstor.org/stable/41467257#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/41467257#metadata_info_tab_contents) [Accessed 26 Oct. 2022].
  17. Roncaglia, A. 2009. The Wealth of Ideas: a History of Economic Thought. Cambridge: Cambridge University Press.
  18. Schumpeter, J. 1954. History of Economic Analysis. [online] Available at: <http://digamo.free.fr/schumphea.pdf>.
  19. Screpanti, E. and Zamagni, S. 2010. An Outline of the History of Economic Thought. Oxford: Oxford University Press.
  20. Smith, A., Meek, R.L., Raphael, D.D. and Stein, P. 1982. Lectures on Jurisprudence. Indianapolis: Liberty Classics.
  21. Smith, A. 2007. An Inquiry into the Nature and Causes of the Wealth of Nations. [online] Available at: [https://www.ibiblio.org/ml/libri/s/SmithA\\_WealthNations\\_p.pdf](https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf).

22. Somers, J. 1813. A Collection Of Scarce and Valuable Tracts, On The Most Interesting and Entertaining Subjects: But Chiefly Such as Relate to the History and Constitution of These Kingdoms. [online] London. Available at: [https://books.google.ie/books?id=qZ0hAQAAMAAJ&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](https://books.google.ie/books?id=qZ0hAQAAMAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false).
23. Sun, G.-Z. 2013. The Division of Labour in Economics. Routledge.
24. Viner, J. 2018. Studies in the Theory of International Trade. S.L.: Routledge.
25. Walker, P. 2019. The Division of Labour and the Mainstream Theory of the Firm. SSRN Electronic Journal. doi:10.2139/ssrn.3373835.
26. Weinstein, J.R. 2022. Adam Smith (1723-1790). [online] Internet Encyclopedia of Philosophy. Available at: <https://iep.utm.edu/smith/#H3>.
27. Yoshii, S., Fujimoto, T. and Shiozawa, Y. 2019. Was Adam Smith a Proponent of Absolute Advantage Theory? a Formative History of an Urban Legend and Lessons Learned Was Adam Smith a Proponent of Absolute Advantage Theory? a Formative History of an Urban Legend and Lessons Learned. [online] Available at: <https://www.nucba.ac.jp/archives/189/202005/NUCB-DP-19003.pdf>.



---

# NATIONALIST, ECONOMIST, FRIEDRICH LIST

ALEXANDER PETER GEORGE HARDING  
SENIOR SOPHISTER

*“The economic nationalism of Friedrich List has been widely overlooked as a valid economic theory. In order to examine this idea, I suggest a two-pronged test for the validity of an economic theory. The first criterion is unsurprising – the proposal must describe a phenomenon that is economic in nature, as opposed to some other discipline. The second is that the theory must be testable in the real world. Although Listian economic nationalism incorporates theory from other branches of knowledge, it is shown to be primarily focussed on economic concerns. Through a discussion of the idea of infant industry protection, I go on to demonstrate the real-world applicability of List’s economic nationalism, thus concluding that it merits consideration as a valid economic theory.”*

## Introduction

The economic nationalism of Friedrich List (1789-1846) has often been dismissed in economic literature as being excessively ideological (Shafaeddin, 2000). Due likely in part to the patriotic tone of his writings, through which his personal priorities are made abundantly clear, List’s ideas are broadly written off as more ‘a set of themes and attitudes’ than ‘a coherent and systematic body of economic theory’ (Gilpin, 1987: 31). However, such oversimplifications do not do justice to List’s work, which presents a much more cogent and robust case for economic nationalism than the academic literature gives him credit for. Although it may currently be out of vogue, the theory of List and his ideological allies (such as Alexander Hamilton) has been highly influential in economic policy, and it deserves to be given a fair hearing.

Two criteria can be used to establish whether or not an economic theory might be considered valid. Firstly, it must deal predominantly with phenomena in the field of

economics – not history, politics or philosophy, though it may be supplemented by these disciplines. Economics is understood to be the branch of knowledge concerned with the production, consumption and distribution of goods and wealth (Blaug, 2023). Secondly, the statements and predictions that the theory makes must be verifiable by real-world application. Through an analysis of List's writings on the nature of the national economy, it can be demonstrated that although his theory may be coloured by other considerations, it is not unique among economic theories in this respect, and is undoubtedly primarily concerned with economics. The second criterion of validity is established by examination of List's recommendations for the protection of infant industries, a policy position whose origin he is largely responsible for (Levi-Faur, 1997). A study of List's prescriptions for protecting infant industry will demonstrate that this theory can, and indeed has been applied in the real world to positive effect. Having satisfied both criteria for validity, this paper concludes that the economic nationalism of Friedrich List has earned its place in the debate of economic theories.

## Defining Economic Theory

Before beginning an examination of List's ideas, some discussion of the criteria for the validity of economic theories is required. As mentioned, the requirements that a theory must meet are the following:

1. It must describe a phenomenon belonging primarily to the discipline of economics.
2. It must be practically testable.

The first criterion requires more expansion than first appearances might suggest. It is included to rule out economic theories which are excessively diluted with theory from other fields. The economist's role is to produce findings consistent with economic data, and to build theories on this basis; therefore, they should be economically consistent. Consider, for example, if one were committed both to the view that increasing the minimum wage would not decrease hiring and also that increased immigration would not reduce wages. The first of these views assumes highly inelastic demand for labour, while the second assumes it to be highly elastic – therefore, they are conflicting views from an economic standpoint (Kling, 2022). One may have valid political reasons to hold both of these views concurrently, but as they are economically incompatible, they cannot be used to formulate a theory in the domain of economics.

However, this does not preclude all overlap with other disciplines, which can be desirable, as economics can learn plenty from 'spill ins' from other branches of thought (Buchanan, 1966: 173). History shows economists how to avoid repeating mistakes of the past. The arts and humanities provide an understanding of man's preference for higher goods than simply what is required for basic satisfaction. Psychology explores the deeper

---

motivations for human behaviour, which is often not as rational as economic theorists might wish (*ibid.*). Influence from other disciplines is therefore welcome in economics, and is no grounds for disqualifying an economic theory, as long as the theory deals primarily with economic concerns, and external influence is not introduced at the expense of economic consistency.

There is also a balance to be struck in the role that values have to play in economics. While the classification of economics as a science is debated, it should certainly act as such insofar as it must attempt to observe and explain the economy in the most objective terms possible. Economic theory should not stem from a particular researcher's desire to achieve an outcome in line with his own ideological preferences, but from a sincere pursuit of truth:

[T]he economist has no business playing the social engineer. He can hope that his light will ultimately be used to generate some heat, but he should live with his hope and refuse to become an activist (Buchanan, 1966: 182).

Certainly, social activism does not belong in the academic discipline of economics. That is not to say, however, that values have no place in economics. Indeed, they are inevitable, though usually concealed in assumptions that form the bases of economic theories. Adam Smith's high view of individual freedom is an example of this. Without the value judgement that people should have the ability to make their own economic decisions, since they know their own preferences better than anyone else, the rest of Smith's body of economic theory would make little sense (Weinstein, n.d.). Clearly, the importance of this value to Smith's work does not disqualify one of the founders of economics from his own discipline. The ultimate value judgement, however, must be truth and the unavoidable presence of moral presuppositions behind economic theory cannot detract from this pursuit (Buchanan, 1966).

The second criterion is more straightforward. It concerns the applicability of an economic theory to the real world. If economics is to be considered in any way scientific, the hypotheses of economists must be verifiable by experiment (Kling, 2022). For example, an economic theory which suggests increasing interest rates in order to reduce inflation is a valid one, because there is a very clear way of testing it – the central bank can raise interest rates. Naturally, theories which suggest particular policies require a government who is willing to put such theories to the test. This may not always be possible, but it is sufficient that the theory is practically testable. Note also that there is no obligation to prove that the theory in question is the best or most accurate theory available; the only requirement is that it be subject to testing. Theories which provide no clear predictions or verifiable statements are of no use, and are therefore excluded from consideration as valid economic theories.

## The Economics of List's Theory

Keeping in mind these means of validating economic theories, it is now possible to meaningfully examine Friedrich List's economic nationalism, and consider how it squares with each criterion in turn. List was dissatisfied with the prevailing attitudes of the Western political economy, which disregarded the nation in favour either of individuals or the entirety of mankind. He, on the other hand, considered the nation the most important point of reference and means of relation between people (Szporluk, 1988). Unapologetically patriotic towards his native Germany, he wanted to see his government make the necessary interventions to develop the country into a serious competitor internationally (*ibid.*). According to List:

[Nations] have received from nature an instinct of preservation, and a desire of progress. It is the mission of political institutions to civilize barbarian nationalities, to enlarge those which are small, to strengthen those which are weak, and, above all, to secure their existence and their duration. The mission of political economy is to furnish the economical education of the nation, and to prepare it to take its proper place in the universal association of the future (List, 1856: 263).

One may object at this point that List seems more a political theorist than an economic one. After all, his main interest is clearly the advancement of the political idea of nationhood, while economic considerations appear to take a back seat. However, List is simply establishing, as do all economists, a socio-political basis for his economic theory. As already mentioned, Smith does exactly this in prioritising the value of human freedom, while Karl Marx's understanding of class as the primary means of the organisation of people is a strong parallel to List's nationalism (Szporluk, 1988). Moreover, giving nationhood pride of place as the basis for economic theory is by no means unique to List. Joan Robinson, for example, would later deem nationalism the 'one solid unchanging lump of ideology' in which the 'very nature of economics is rooted' (Robinson, 1962: 117). Importantly, List did not allow his nationalistic values to unduly interfere with his economic analysis, to which he took a scholarly and unemotional approach. His allegiance was very much to Germany, but he advised his compatriots not to criticise other countries' governments for enacting policies that benefit only their own people (Szporluk, 1988). With nationalism as the political basis for his theory, List makes economic recommendations to this end.

The concept of productive powers is an important component of List's theory. He uses this term to refer to the ability to replace through production what has been lost through consumption:

---

An individual may possess wealth ... but if he is not able to produce more values than he consumes, he will be impoverished. An individual may be poor, but if he can produce more than he consumes, he may grow rich. The power of creating wealth is then vastly more important than wealth itself (List, 1856: 208).

List divides productive powers into three forms of capital: natural capital (the resources of the land), material capital (raw materials and technology used in production), and mental capital (the intellectual, physical and entrepreneurial skills of the population). As the means by which production can be sustained and increase in quality and efficiency in the long term, mental capital is the most important of these three in terms of its effect on economic growth. The government should therefore prioritise its development (Levi-Faur, 1997).

In order to foster economic growth, the state plays a significant role in encouraging national unity. The division of labour is one powerful driver of growth in that it speeds up the production process, but it requires a strong sense of common purpose and efficient communication. Using Smith's example of the production of pins, List (1856: 231) explains that '[h]e who makes the heads of pins must count upon the labors of him who makes the points, so that he may not lose his labor by manufacturing heads which would be useless'. To avoid a 'Tower of Babel' situation, in which the task is made far too complex by the inability to communicate, the division of labour requires that workers share a common language and goal in the production process (Levi-Faur, 1997: 162). Furthermore, the divergence of interests caused by increased specialisation through the division of labour, which splits society into various different economic sectors, could eventually threaten the effectiveness of the process. As the economy develops and becomes more industrialised, the importance of coordination only becomes greater, and each individual relies on the cooperation of all other members of society. It is therefore in the interests of the state to promote national unity in order to avoid the damage that social conflicts could deal to the productive system (ibid.).

List's essential point here is that the idea of nationhood is indispensable in building a strong economy. This part of his theory wades into the realm of sociology, as he examines the expected behaviour of individuals under certain societal conditions, but List uses this knowledge to supplement his economic theory. The work of sociologist Émile Durkheim finds much in common with List's analysis here. Durkheim believed that individuals pursuing their own personal interests, as they do under economic liberalism, would not be capable of achieving social harmony. A sense of patriotism and common values, proceeding from the state, are required in order to bring about this unity (Nakano, 2004). List's concern here is chiefly economic, however, as he believed that the full benefits of the division of labour could not be reaped without the unity provided by the nation-state. In

addition, List's analysis of the importance of mental capital is a major original contribution to economics, for which he has not always been duly recognised (Levi-Faur, 1997). It is clear, therefore, that although List may wander into other disciplines in developing his thought, his theory is economic at its core, and is not compromised by external theories or his personal allegiances. The first criterion for the validity of economy theories is therefore satisfied.

## **Economic Nationalism in Action**

It remains now to give some attention to the second criterion, and demonstrate that Friedrich List's economic nationalism makes proposals which can be applied to the real world, and hence be critically examined. In order to provide sufficient detail within the limits of this paper, only one of List's policy proposals will be assessed, namely that of the protection of infant industries. This is one of the signature policies of the economic nationalist, and List was one of its strongest and earliest proponents (Shafaeddin, 2000). Reasoning from his theory of productive powers, which prioritises the capacity to create wealth over the possession of wealth, List believed that individual countries should be able to produce manufactured goods for themselves, before selling them internationally as exports. The problem with this is that different countries are at different stages of development, and some do not yet have the capacity to effectively produce their own goods at a sufficient scale to be competitive internationally. In order to progress they must industrialise, moving from a purely agricultural society to one which also engages in manufacturing and commercial activities (Shafaeddin, 2000). During this stage, List proposes introducing protective measures (chiefly duties on imports) for nascent industries, in order to incentivise their development (List, 1856). Otherwise, the competition from foreign producers in more developed countries will inhibit the home country's industrialisation process. This practice is in contrast to the theory of comparative advantage, which states that countries should only produce goods for which they have a lower relative opportunity cost than their trading partners. The problem with such a system, however, is that it never affords countries the possibility to develop the areas in which they are comparatively weaker. This is counterproductive to the industrialisation process, for 'to industrialise is, by definition, to develop sectors in which a country currently is not competitive' (Mason, 2017: 26).

List is very explicit in describing how duties should and should not be applied. Firstly, he does not argue, as has been ascribed to him, for the 'general protection of the whole manufacturing sector' (Corden, 1974: 147). Rather, he proposes a dynamic approach of protecting certain industries until they are sufficiently developed, before reducing their protection and turning attention to other sectors. He also suggests that duties on the import of raw materials and other industrial inputs should be modest or not

---

applied at all (Shafaeddin, 2000). With regard to the extent of import taxes, List stipulates that they should be high enough to preserve national industry, but not so high as to exclude foreign competition entirely, which would ‘encourage indolence’ in the domestic manufacturer (List, 1856: 79). He assures policymakers that there is still significant competition under his brand of protectionism, the only difference being that protected industries compete internally, rather than with foreign producers. Protection, therefore, does not grant domestic manufacturers a monopoly; ‘it only furnishes a guarantee against losses to those who devote their capital, their talents, and their exertions to new branches of industry’ (ibid.: 81). List’s ultimate intent for these policies is that nations will engage freely in the mutually profitable exchange of goods. He lauds international trade as ‘one of the mightiest instruments of civilization’ (ibid.: 71). The protectionist policies which he proposes are in place to ensure that this exchange will maximise the benefit for all nations involved.

It is clear from what is described above that List’s proposals are highly practical and specific in nature; he makes clear recommendations and predictions of the expected outcome of his suggested policies. This makes his theory easy to verify. Again, there is no need to prove that List’s nationalist theory of trade is better than every other such economic theory, but only that it is testable. Policies such as those recommended by List have indeed been subject to real-world testing, however, and have yielded great benefits. According to Mehdi Shafaeddin (1998), Great Britain applied various selective protections to her infant industries in the late 18th Century, and gradually relaxed these policies until the 1850s, by which point a strong industrial base had been established. Similar measures were taken in the United States, which was ‘the motherland of infant industry protection’ (Shafaeddin 1998: 25). Evidently, therefore, economic nationalism as advocated by Friedrich List is an economic theory which readily presents itself for real-world evaluation, and as such, satisfies the second criterion.

## Conclusion

This paper has proposed a two-pronged method for evaluating whether or not an economic theory can be considered valid. The method stipulates that a valid economy theory must firmly belong to the discipline of economics, and must be practically testable. Friedrich List’s economic nationalism is then evaluated on this basis. First, it is shown that although List is a patriotic German nationalist whose interests stretch far beyond the field of economics, his theory deals fundamentally with the workings of the economy, and thus can rightly be characterised as economic. Importantly, his own predictions do not create inconsistencies or contradictions which would disqualify his theory from this classification. Following this, List’s policy on the protection of infant industry is presented to demonstrate the real-world testability of his theory. Providing a clear

framework for protectionism and the expected outcomes thereof, List certainly puts forward a policy which is open to practical verification. Therefore, his economic theory convincingly satisfies both criteria, and must be considered valid.

The economic nationalism of Friedrich List has been tried and found effective on numerous occasions throughout history, and it is regrettable that it is now discarded so readily by economists. Many poorer countries abounding in natural resources, particularly in Africa, could benefit greatly in the long term from protecting and developing their domestic industry (Mason, 2017). Perhaps policies modelled after List's theory are what is required for these nations to unleash their full economic potential.

## References

1. Blaugh, M. 2023. economics, <https://www.britannica.com/topic/economics>, accessed 3 March 2023.
2. Buchanan, J. 1966. *Economics and its Scientific Neighbors*. Michigan: Upjohn Institute Press.
3. Corden, W.M. 1974. *Trade Policy and Economic Welfare*. Oxford: Oxford University Press.
4. Gilpin, R. 1987. *The Political Economy of International Relations*. New Jersey: Princeton University Press.
5. Kling, A. 2022. 'How Effective is Economic Theory?', *National Affairs*, 54.
6. Levi-Faur, D. 1997. 'Friedrich List and the political economy of the nation-state'. *Review of International Political Economy*, 4:154-178.
7. List, F. 1856. *The National System of Political Economy*, Philadelphia: J. B. Lippincott & Company.
8. Mason, J.W. 2017. 'A Cautious Case for Economic Nationalism'. *Dissent*, 64:24-32.
9. Nakano, T. 2004. 'Theorising economic nationalism'. *Nations and Nationalism*, 10:211-229.
10. Robinson, J. 1962. *Economic Philosophy*. Oxford: Routledge.
11. Shafaeddin, M. 1998. 'How Did Developed Countries Industrialize? The History of Trade and Industrial Policy: The Cases of Great Britain and the USA'. UNCTAD Discussion Papers, [https://unctad.org/system/files/official-document/dp\\_139.en.pdf](https://unctad.org/system/files/official-document/dp_139.en.pdf) accessed 9 March 2023.
12. Shafaeddin, M. 2000. 'What did Frederick List Actually Say? Some Clarifications on the Infant Industry Argument'. UNCTAD Discussion Papers, [https://unctad.org/system/files/official-document/dp\\_149.en.pdf](https://unctad.org/system/files/official-document/dp_149.en.pdf) accessed 9 March 2023.



- 
13. Szporluk, J.R. 1988. *Communism and Nationalism: Karl Marx Versus Friedrich List*, Oxford: Oxford University Press.
  14. Weinstein, J.R. The Internet Encyclopedia of Philosophy, Smith, Adam | Internet Encyclopedia of Philosophy (utm.edu), accessed 9 November 2022.

# WHY DID THE ECONOMIC IDEAS OF MARX DIFFER FROM THOSE OF THE UTOPIAN SOCIALIST THINKERS OF HIS TIME?

MARK MITCHELL  
SENIOR SOPHISTER

*“This essay offers several arguments on why the economic views of Karl Marx and utopian socialist Robert Owen differed, and uses these arguments to derive ideas on why the economic theories of Marx differed from those of the utopian socialists as a whole. It gives a brief contextual overview of Marx and Owen, and then focuses on how the two thinkers’ ideas differed, discussing their theories on wages, the relationship between the worker and the capitalist, and class struggle. This essay then argues that the differences in their economic ideas arise from their interpretations of the inevitability of socialist change, their interpretations of the individual and the individual’s responsibility for their actions, and the two thinkers’ respective backgrounds. It concludes by suggesting that more analysis should be carried out in order to create a more generalisable theory on the distinctions between Marx and the utopian socialists.”*

## Introduction

This essay will offer several arguments on how and why the economic ideas of Karl Marx and Robert Owen differed, and in doing so, try to establish why the differences in economic ideas emerged between Marx and the utopian socialists as a whole.

Karl Marx and his work remain very salient in the realm of politics today, and as such, it seems important to understand what his views were, and how they were derived (Singer, 2018). One useful way to do this may be to compare the views of Marx to other socialist thinkers and see how and why differences in their lines of thought emerged. The

---

utopian socialists, on the other hand, may not be as salient today, with much of utopian socialist thought being resigned to history, considered to be naïve and only capable of producing ‘dream-worlds’ (Screpanti and Zamagni, 2005: 137). However, some of the ideas of utopian socialist Robert Owen were arguably ahead of their time, with his views on the fairer treatment of workers to improve productivity not emerging on a wide-spread scale until the Fordist practices of the 20th century began to be utilised (Raff and Summers, 1987). This essay argues that the persisting relevance of some of Owen’s ideas makes him a good candidate for comparative analysis with Marx, and for understanding why the differences in views between Marx and the utopian socialists emerged.

The degree to which Marx and other utopian socialist thinkers were at odds seems to be inherently ambiguous, as many of the thinkers who are considered to be utopian socialists often had very different and at times mutually exclusive views (Paden, 2002). As such, while there exists literature on Marxist critique of utopian socialism, there is not much literature comparing and explaining the differences between Marx and the utopian socialists as a whole. This essay aims to contribute new insight into distinctions in the economic ideas of Marx and the utopian socialists, and how these distinctions in thought emerged. Due to the greatly varying nature of the beliefs of all those categorised as utopian socialists, this essay will focus on contrasting Marx and Robert Owen, and derive arguments on how and why Marx and the utopian socialists differed more generally from this comparative analysis of the two thinkers, while acknowledging that this alone is not sufficient to explain every difference between Marx and the utopian socialists.

## **How Their Views Differed**

This essay will first outline three differences in the economic views of Marx and Owen, relating to their views on wages, exploitation and the relationship between the worker and the capitalist, and their views on the need for class struggle to bring about economic and socialist change. This essay does not claim that these are the only differences in economic views between the two thinkers, rather it argues that they are among the most critical.

Firstly, one way in which the economic views of Marx and Owen differed is their differing views on the ability of real wages to increase in the long run. Marx (1891) believed in the idea of the ‘Iron Law of Wages’, the idea that real wages would never increase in the long run, and that workers would always be paid a subsistence wage, the wage at which workers would just be able to survive, and no more (Screpanti and Zamagni, 2005).

Owen did not subscribe to this idea, and in fact defied it by increasing the wages of his workers with the expectation that this increase would potentially improve the quality of their work to a point which the efficiency gain would pay off the cost of increasing the

wages, in what he referred to as the 'economy of high wages' (Cole, 1930). This is what would perhaps today be considered as efficiency wages; the idea that paying workers above a subsistence wage will increase the productivity of the worker to such a point that it is more efficient and profitable to do so (Blanchard, Amighini and Giavazzi, 2017).

Secondly, another way in which the economic views of Marx and Owen differed is their views on the exploitation of the worker, and the relationship between the worker and the capitalist. Marx viewed the relationship between the worker and the capitalist as inherently exploitative; workers create surplus for the capitalist through their labour, and given that their wages are fixed at a subsistence wage, the capitalist has an incentive to exploit the worker as much as possible to maximise their surplus (Screpanti and Zamagni, 2005). The worker, according to Marx, has a disincentive to try and seek a higher wage in order to be compensated for this increased workload, due to what Marx called the 'reserve army of labour', the idea that there are always unemployed people in society looking for work, and that these people could replace any worker looking to be paid above a subsistence wage at any time (Bernards and Soederberg, 2021: 412). As such, the worker can either be paid a subsistence wage and be exploited by the capitalist or face losing their job and be paid nothing at all, which is a worse outcome. This allows the capitalist to exploit the worker, according to Marx.

Owen, in contrast, did not believe that the capitalist had this incentive to exploit the worker as much as they could, and instead believed that the way to increase the productivity of individual workers was better achieved through improving working conditions, as well as improving the machinery and technology the worker used (Screpanti and Zamagni, 2005).

Finally, one other way in which the economic views of Marx and Owen differed is their stances on whether or not revolution was required to bring about socialist economic change. Marx believed that a revolution of the workers would eventually occur, replacing the capitalists, and establishing a socialist (and eventually communist) society as a result of what he called the 'laws of movement', the process by which capitalist society degrades, with rates of profit and welfare of the workers decreasing over time (Screpanti and Zamagni, 2005: 157).

For Owen, there was no need for a revolution to bring about the kind of socialist change that he desired, and he demonstrated this through the creation of his worker communities (Cole, 1930). In this way, Owen believed socialism could be achieved through changes in policy within our current system, rather than doing away with the system entirely via revolution.

---

## Why Their Views Differed

Having discussed several ways in which the economic views of Marx and Owen differed, this essay will now try to present three arguments, predicated on these aforementioned theories, on why these different views emerged between the two thinkers, to better understand why Marx and the utopian socialists had differing views.

The three arguments this essay will present are as follows: firstly, their views differed on account of Marx's belief in dialectic materialism, which created a sort of inevitability about socialist economic change which is not present in the writing of Owen; secondly, they differed due to their interpretation of the responsibility of the individual for their own actions and economic outcomes, and finally, their views differed as a result of the two thinkers' respective backgrounds and occupations.

### Dialectic Materialism

Firstly, this essay argues that the views of Marx and Owen differed because of their differing beliefs in the inevitability of socialist change in society. Marx subscribed to the idea of dialectic materialism, the idea that history is determined through conflicts over material goods and their resolutions (Cornforth, 1971). Marx believed that conflict brought about change in the ruling class in society; the feudalists could be seen as one ruling class, who were eventually replaced by the merchant ruling class, who themselves were replaced by the capitalist ruling class. At the time of his writing, Marx thought that the capitalist ruling class were at odds with the working class, and that as a result of this, conflict, eventual revolution, and rise of the working class to the ruling class were inevitable (Screpanti and Zamagni, 2005). This essay argues that this is why Marx believed that socialism could only be achieved through revolution, and by the replacement of the capitalist ruling class with the working ruling class. The history of societal change and the patterns that have emerged dictated for Marx that this must be so. It could also be argued that this belief itself proceeds Marx's interpretation of the exploitative nature of the capitalist towards the worker; if revolution is inevitable, and the capitalists aren't the final ruling class, then they must be exploiting, or at least at odds with, the worker in some way, because their conflict is inevitable due to this historical pattern and process of change.

Owen did not think in terms of dialectic materialism, or in terms of socialism being inevitable (Cornforth, 1971). It could be argued that this prevented him from both thinking as cynically about society in its current state and from believing in exploitation in the way Marx did. The lack of inevitability of socialism, this essay argues, made Owen more inclined to believe that socialism could be achieved through policymaking, rather than revolution.

A distinction emerges here between Marx and Owen which also seems to be apparent between Marx and all of the utopian socialists: Marx wrote about what he expected to happen and derived theories from that, but Owen and the other utopian socialists wrote about what they wanted to happen, rather than writing about how to get there (Paden, 2002), and these differences in mindset gave rise to differing economic ideas between Marx and the utopian socialists.

### **Responsibility of the Individual**

Secondly, this essay believes that the views of Marx and Owen differed due to their different interpretations of whether or not the individual is responsible for their actions and economic outcomes.

Owen had quite a pessimistic view of man's ability to make his own decisions and determine his destiny (Screpanti and Zamagni, 2005). Indeed, in contrast with many other thinkers of his time, Owen believed that the individual did not form their own character, but was instead conditioned to be a certain way, and as a result of this could not be considered responsible for his actions (Miliband, 1954). This belief held by Owen manifests itself in his approach to socialism; the government needs to implement reforms in how society is organised, as well as how individuals are educated and treated, in order to achieve his version of socialism, as opposed to there being a revolution of the workers (Cole, 1930).

Marx, on the other hand, did not hold this same pessimistic view of man. Marx believed that individuals could determine their future themselves, and had responsibility for their actions, but they have to do this within a predetermined circumstance, resulting from events of the past (Sherman, 1981). This essay argues that this connects to Marx's belief in dialectic materialism; individuals and conflicts between groups are the drivers of change in society, but there is a set structure within which this conflict occurs as a result of past events. Individuals are free to determine their history within the confines of the society that history has allocated them.

This distinction between Marx's belief that the workers will drive the shift to socialism, and Owen's belief that it is ultimately the capitalists, pushed by the state, who will drive the shift to socialism, is another distinction that this essay argues could be drawn between Marx and utopian socialists as a whole. The utopian socialists believed that capitalists could be convinced to adopt more socialist practices, and that socialism could be achieved without having to overhaul the system entirely via revolution (Draper, 1990), while Marx believed that revolution was necessary to achieve socialism, and that this shift would be driven by the workers themselves overthrowing the capitalists (Screpanti and Zamagni, 2005).

---

## Backgrounds and Occupations

Thirdly, and finally, this essay believes that the views of Marx and Owen differed due to their different backgrounds and occupations. Marx was primarily a philosopher and a thinker, who was not personally involved in factory work himself (Wolff and Leopold, 2003). Owen, by contrast, was himself a factory owner, and a reasonably successful one at that (Cole, 1930). A simple contrast emerges here: Marx developed a view of the capitalist being someone who exploits his workers, detached from factory life himself, while Owen himself demonstrated that this didn't have to be the case, that factory owners were capable of being benevolent, and that factory work didn't have to always be exploitative in nature (Cole, 1930). Indeed, Owen was not the only benevolent factory owner, as many of the early proponents of reducing working hours for factory labourers were factory owners themselves (Booth, 1978).

Owen having experience managing factories allowed him to see first-hand that engaging in more benevolent managerial practices, whether it be improving the conditions for the workers or improving the technology used by the workers, allowed overall efficiency to increase, which in turn gave rise to Owen's economic ideas on the optimal treatment of the worker. In contrast, Marx had no experience managing factories. Marx's view that it is rational for the capitalist to exploit the worker is in direct contrast with Owen's belief in fair treatment of the worker to boost overall productivity, and this essay argues that Owen was able to achieve this insight, while Marx was not, due to Owen's greater exposure to factory work and management. These differences in interpretation of whether or not the factory owner was capable of empathy for their workers, and whether or not the relationship between the capitalist and the worker was always exploitative, perhaps came about, this essay argues, as a result of Marx's lack of exposure to, and Owen's involvement in, factory settings, and thus gave rise to differing economic views.

Although less generalisable, differences in their backgrounds could be one further reason why Marx's views differed from that of the utopian socialists, as many of the utopian socialist's interpretations of what utopia would be like seem to have been influenced by their own backgrounds. For example, one of the first utopian thinkers, Thomas More, who was a devout Catholic, wrote about creating a utopia where people lived an almost monastic life, living in equality and harmony with each other, and living a life bound by an understanding of morality as thought by the Catholic church (Baker-Smith, 2014). Charles Fourier, another utopian socialist, was similar to Owen in the sense that he too was a wealthy capitalist, but through living life as a capitalist he grew to dislike what he perceived as the immorality and vice that arises in a capitalist society, and derived his utopian ideas from this (Beecher, 1986).

## Conclusion

This essay has attempted to outline some of the differences in thought and economic ideas of Karl Marx and Robert Owen, to better understand why Marx's views differed from those of the utopian socialists as a whole. This essay first outlined previous writing on Marx and the utopian socialists, and the apparent gap in the literature on this specific matter. It then went on to outline how the economic views of Marx and Owen differed. Having elucidated this, this essay then gave three arguments as to why these differences emerged: Marx's belief in dialectic materialism and the inevitability of socialism; the two thinkers' differing interpretation of the individual's responsibility for their actions and their economic outcomes; and the two thinkers' different backgrounds and occupations, and from these points, three distinctions between Marx and the utopian socialists were drawn to explain why their economic views differed, relating to their thoughts on the inevitability of socialist change, the degree to which man is responsible for their actions, and their differing backgrounds.

This essay acknowledges that this analysis and the arguments presented are by themselves not sufficient to fully explain all the reasons why the views of Marx and the utopian socialists differed, and suggests that more research should be conducted on this matter, with different individual utopian socialist thinkers being compared to Marx. This is with a view to furthering our understanding of the differences between the two, as well as to better understand Marx and the utopian socialists overall.

## References

1. Baker-Smith, D. 2014. Thomas More. The Stanford Encyclopedia of Philosophy.
2. Beecher, J. 1987. Charles Fourier: The visionary and his world. Berkeley: University of California Press.
3. Bernards, N. and Soederberg, S. 2021. Relative surplus populations and the crises of contemporary capitalism: Reviving, revisiting, recasting. *Geoform*. 412-19.
4. Blanchard, O., Amighini, A., and Giavazzi, F. 2017. *Macroeconomics: A European Perspective* (7th ed). Pearson, 141.
5. Booth, D. 1978. Karl Marx on State Regulation of the Labour Process: The English Factory Acts. *Review of Social Economy*, 36:2:137–57.
6. Cole, G. 1930. *The Life of Robert Owen*. London: Macmillan.
7. Cornforth, M. C. 1971. *Materialism and the dialectical method*. International Publishers.



- 
8. Draper, H. 1990. Karl Marx's Theory of Revolution. Monthly Review Press. New York.
  9. Lovell, D. 1992. Socialism, Utopianism and the 'Utopian socialists', History of European Ideas. 14:2:185-201.
  10. Marx, K. 1891. Critique of the Gotha Programme. Die Neue Zeit. 1:18
  11. Miliband, R. 1954. The Politics of Robert Owen. Journal of the History of Ideas, 15:2:233-45.
  12. Paden, R. 2002. Marx's critique of the utopian socialists. Utopian Studies. 13:2:66-91.
  13. Raff, D. and Summers, L. 1987. Did Henry Ford Pay Efficiency Wages? Journal of Labor Economics, 5:4:57-86.
  14. Screpanti, E. and Zamagni, S. 2005. An Outline of the History of Economic Thought. Oxford.
  15. Sherman, H. 1981. Marx and Determinism. Journal of Economic Issues, 15:1:61-71.
  16. Singer, P. 2018. Is Marx still relevant?. Marx: A Very Short Introduction, 101-18.
  17. Wolff, J. and Leopold, D. 2003. Karl Marx. The Stanford Encyclopedia of Philosophy.

# DEVELOPMENT ECONOMICS



---

# TRAPPED IN THE TRADE-OFF: PRICE SIGNALLING AND EXPORT RESTRICTION IN INFLATIONARY GLOBAL FOOD MARKETS

JANE HAYES NALLY  
SENIOR SOPHISTER

*“This essay examines the imposition of export restrictions by developing countries as a candidate solution to rising global food prices. It demonstrates the theoretic benefits of this policy and posits that, for those reasons, it was widely adopted in by countries during food price crises historically. However, this essay submits two findings borne of empirical observation of protective trade policy; firstly, that this behaviour has led to a multiplier effect in global markets, upon which it recommends that countries ought remain upon to trade and, secondly, that price insulation disincentivizes economic change, and that countries ought improve supply elasticity.”*

## Introduction

This essay will examine ways in which developing countries can ensure food security in the face of rising global food prices. This line of enquiry begins by accounting for food's substitutability and income effects, determining that within the scope of consumer theory that we can expect that those worst affected by price increases will be developing countries. It provides context for the international food market in 2022, in particular the rising price levels for commodities which most critical to developing countries, an escalating situation which implores policy intervention by governments for the protection of consumers. This essay provides a theoretical exposition for a candidate trade policy, namely export restrictions, with a partial equilibrium analysis. While this policy convention is widely employed by developing countries, there are clear grounds for contestation of the theoretical benefits of export restriction in times of crisis. Two arguments against this policy convention arise from empirical research on historical periods of food infla-

tion over the last 25 years. This essay contributes to existing literature as follows; 1) it posits that the multiplier effect of trade policy further exacerbates prices, and given this, developing countries ought to remain open to trade, and 2) it exposes cases where price insulation disincentivises economic change, and advocates for food supply elasticity in developing countries.

## Food as a Necessity and the Global Food Market in 2023

Across the spectrum of consumer goods, food is a necessity. A rise in staple food prices, unlike other consumer goods, does not afford consumers an ability to substitute one relatively more expensive good for a cheaper alternative (Hicks and Allen, 1934). It is in this way that staple foods transgress from consumer value theory, and demand for the good does not fall in the face of prices increases. Extending to Slutsky's writings on the income effect, this rise in price erodes the purchasing power of the consumer as a result of the price increase. In developing countries consumers spend more on food, leaving them relatively most affected when staple foods rise, reflected in the Consumer Price Indexes of the world's lowest income countries, with food in sub-Saharan Africa comprising 40% of the CPI, 27% in Central & Eastern Europe, Middle East North Africa, 25% in Emerging Asia, 22% in Latin America. This is in contrast to Advanced Economies whose consumer basket is only made up of 16% food (Bogmans, Kearns, Pescatori, and Prifti, 2022).



Figure 1.

---

The historical movements of staple commodity foods, and the periods of price changes which this essay will refer to, are exhibited in Figure 1. Russia and Ukraine, exporters attributable for almost 12% of food calories traded globally (FAO, 2022), had trade abruptly obstructed in March 2021 when Russia invaded Ukraine, with the price of the Teucrium Wheat ETF surging 39% between February and March 2022, a premium of 7.5% above its net asset value. This was the highest premium ever recorded, having only closed at an all-time high of 1.4% since 2011 (Johnson, 2022). The conflict sent a signal to staple cereal markets, on which developing countries rely heavily, that supply was about to decrease drastically. This shock to the global food market happened amidst a trend of rising food prices, with the COVID-19 recovery driving economic. The supply side was exacerbated by higher freight costs as the result of logistic delays, followed by a sharp rise in fuel prices. 2022's precarious price situation motivates our enquiry into how developing countries can respond to it, and compels us to investigate past trade policy responses to rising global food prices.

## Empirical Approach

This analysis, in the context of the building crisis at play above, will not look to terms-of-trade considerations as a key determinant of the overall satisfactoriness of a trade policy. The policy imperative for states at the point of crisis is protection; that is, food security and final consumption price. Freund and Özden, (2008) posit that behavioural elements, such as loss aversion, determine the trade reactions of countries when faced with exogenous shocks like the surge in prices as above. So, self-protection of developing countries tends to take the form of domestic price insulation, where the consumer does not bear the brunt of international price fluctuations for staple foods (Anderson and Martin, 2011). To insulate domestic prices is to create a gap between the price a consumer pays for a good in the domestic market and the price of the good on the international market. A popular candidate for the protection of consumers in home markets is an export cap. An export cap lowers the price of domestic goods by ensuring those goods stay within the domestic market and cannot be exported internationally.

In what follows, I provide an exposition of Bouët and Debucquet's partial equilibrium analysis of export restriction. In January 2021, Argentina imposed a cap on maize exports in an attempt to protect their own consumers from rising maize prices. Argentina is the world's second biggest exporter of maize (Jadhav, Heath, and Hunt, 2022). Figure 2 shows the theoretical effects of Argentina's 2021 export cap on maize to the international market for the 2021/22 cycle.

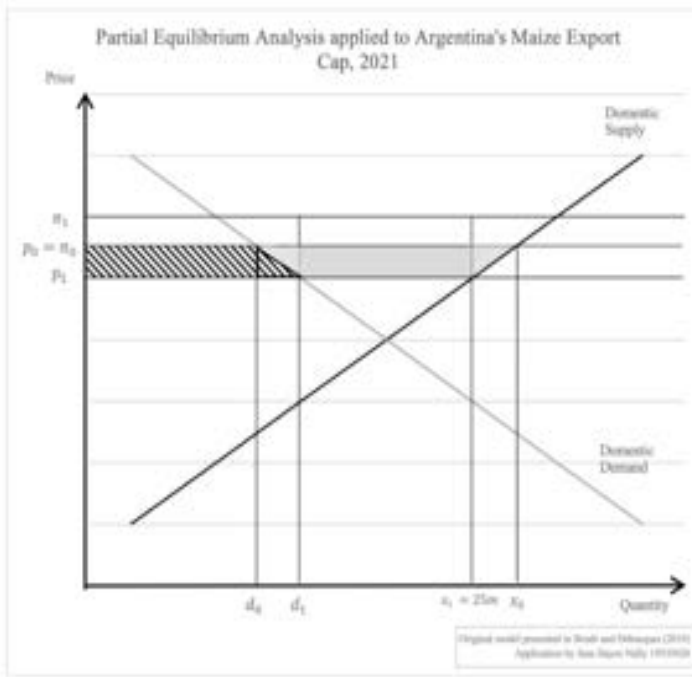


Figure 2

The initial domestic price in Argentina is  $P_0$ , the same as the international price of maize ( $\pi_0$ ) in March 2021, which was \$247 per tonne, a price increase of 166% year on year (Federal Reserve Economic Data, 2022). At this price, Argentinian domestic demand is  $d_0$  which is less than domestic supply 0. The difference is exported to the world market, and in Argentina's case, 42% to South America, 22% to Asia, and 14% to Africa (Terré and Sigaudó, 2022). When Argentina set an export cap of 25 million tonnes, domestic producers were forced to export a lower quantity, such that the domestic supply was increased, reducing the domestic price to  $P_1$ . Argentinean consumers benefited, as they could consume more ( $d_1 > d_0$ ) at a lower price ( $P_1 < P_0$ ). Their surplus can be seen in the blue area. Though domestic consumption is changed with a larger share of domestic produce bought, the local consumer price is now lower. Home consumers are insulated from the rising food inflation internationally. For Argentinian policy makers; the results of the export restriction are satisfactory. Argentinian consumers have been protected from international price rises by limiting the amount of maize which can be exported out of the state (Piermartini, 2004).

---

## Empirical Approach

### 1. The Multiplier Effect and the Need to Remain Open to Trade

Let us return to Figure 2. Argentina exports a significant share of world maize exports, so that when their supply to the world market is reduced, world supply reduces and the world price increases. The world price moves from  $\pi_0$  to  $\pi_1$ . Empirical evidence is consistent with the global price rises that the in domestic restriction in Figure 2 brings about. Trostle (2008) delineates a series of parallel forces which endured the period from 1996 to 2008 leading to high food commodity prices peaking in 2008; strong growth in demand based on increasing population and rapid economic growth, which as well as being a demand side exacerbator, led to the slowing growth in agricultural production, depressing the supply side. This is combined with critical supply factors such as the escalating crude oil price, the rising farm production costs seen in 2005, and a bout of adverse weather spanning 2006 to 2008 which dampened production of grains and oilseeds. States were spurred to restrict exports and contract aggressively for the procurement of future imports, many of which through subsidies to their domestic markets, exerting upward pressure on global prices as I exposed above. This was undertaken to protect home consumers, but Giordani, Rocha, and Ruta (2016) find evidence that these defensive trade policies actually exacerbated initial price shocks, because they sent signals to the international market that supply was about to contract, thus inducing further defensive trade policy from other states. This phenomenon is not captured by the partial equilibrium analysis in our theoretic approach above. The authors posit that this unilateral trade policy activism gives rise to a ‘multiplier effect’.

The authors test the existence of their multiplier effect by analysing the impact of export and import policies of trading partners on the probability of the imposition of a trade measure in a home country. By their estimation, a one standard deviation increase in global trade policy, (the kind which would be employed in response to a food inflation crisis), led to a 7.75 to 8.55% increase in the probability of implementing a trade policy in the home country. Furthermore, the authors find the lower the level of per capita income of a country, the more likely that country is to use trade policy after other countries introduce them, in other words, that this is a significant observation on the behaviour of developing countries in the data, and how often they respond to other countries trade restrictions out of fear that home consumers will bear the brunt of spiralling prices. When all countries act unilaterally, the world supply curve shifts in, and the world demand curve shifts out. Cumulatively, unilateral global trade policy has both a positive and significant impact on international prices – specifically that a 20% increase in global trade restrictions caused a 22 to 56% rise in staple food prices. From this it is clear - when states react, not to the initial shocks that caused price increases, but actually

to price increases brought about by restrictive trade policies of exporters, they are responding to each other and not to market fundamentals.

The importance of market signals cannot be understated. When the US announced that it would allow Japan to sell rice stocks on the open market in 2008, it sent a resounding signal which is credited with reversing the price crisis, even though those stocks were never actually released (Watson, 2015). In the international food market equilibrium, the total policy response from one country's response to shock is larger than the initial response to a fundamental shock. This is the authors' posited 'multiplier effect'. Other empirical studies corroborate this. Bouët and Laborde Debucquet (2010) estimate export restrictions caused 30% of the increase in the international price for wheat was caused by export restrictions concurs with those estimates for the wheat market, finding that around 30% of the observed change in the global price of whether during 2006-08 can be explained by border protection rates, and also suggests that insulating policies in the market for rice accounted for 45% of the increase in the international price rise.

By not keeping trade open, developing countries attempt to keep high prices from transmitting to their consumers, but in the long run are those increasing global prices. Where countries do not export the goods in question, they implement import subsidies, putting the state at a significant fiscal distress, when countries like Mozambique increased food & fuel subsidies by 967% in 2009 (Bryan, 2015). The WTO does not have any directive control the implementation of export taxes. This means that it is the onus of developing countries themselves to decline to respond drastically to rising food prices with efforts to insulate prices, and to instead keep trade open.

## 2. The Disincentives of Price Insulation and the need for Food Supply Elasticity

I return to the partial equilibrium analysis illustrated in Figure 2. According to theory, domestic producers in Argentina would face losses given a state enforced export cap. They produce less and sell less ( $Q_1 < Q_2$ ) and they do so at a lower price ( $P_1 < P_2$ ), such that the accumulation of their supplier surplus loss is given by the area in grey (Bouët and Debucquet, 2010). This has further market consequences globally. When the food price is not allowed to increase; a signal is sent to producers that it should not increase production. This in turn keeps supply low and leads to ongoing price increases for the consumer, which works against efforts to keep prices low. Farmers are not enticed to produce more, as they cannot export it. There is also risk that when high global prices cannot transmit because foreign trade has closed, there is no stabilization of domestic prices when the international market normalizes. Maize prices in Kenya and Mozambique rose substantially during the food crisis period but as the international and South African prices collapsed in the second half of 2008, domestic prices stayed at a high



---

level. In the case of Mozambique, maize prices peaked half a year after the global crisis (Baltzer, 2015). It has been remarked that when the world market sees slumps in food price, public investment in increasing the elasticity of food supply in developing countries is neglected. When these commodities do not command high prices internationally, such as during the depressed period for food prices during 1975-2000 in Figure 1, governments, development banks, and bilateral donors had no incentive to invest in developing countries agriculture, rural infrastructure, and agriculture research. Unfortunately, when price levels begin to rise again, there exists no capacity to increase supply and instead these economies are protected, rather than have domestic producers benefit from windfall profits. Ganguly and Gulati (2015) submit that the Indian government's heavy emphasis on policy interventions, such as food subsidies and rural employment guarantee programmes designed to have a protecting effect on consumers, diverted public funds away from investments in agriculture enhancement, technology in food production, and rural infrastructure. These investments would have a greater impact on the alleviation of poverty longer term growth economic growth.

Measures which can enhance developing countries in preparation for price rises must be designed and managed before a price trend begins. Ethiopia's Emergency Food Security Reserve, which was restructured in 2000, released 190,000 tons of wheat to the domestic economy beginning in 2007, while allowing exports to flow out of the country, which successfully lowered the price of wheat in the country during the 2008 price crisis (Admassie, 2015). This pre-emptive measure has been cited as best practice during the development of low-income countries. Furthermore, despite the price of rice increasing in Bangladesh in 2008, the state managed to secure a steady supply of half a million tons of Indian rice in February 2008, before the international price skyrocketed. This strategic procurement is said to have been paramount to the Bangladesh price response (Hossain & Deb, 2010). Developing countries ought to concentrate on developing sophisticated forecasting methods for international food markets, and look to procuring reasonable stocks with management, while promoting domestic production and creating elastic and efficient supply.

## **Conclusion**

This essay has suggested that although developing countries can and do respond to rising global food prices by imposing restrictive trade policies in an effort to avert losses and protect consumers, this solution is unsatisfactory. As has been shown theoretically, the restriction of exports can insulate consumers from price rises in staple foods. However, this essay has found that restrictive trade policy gives rise to a multiplier effect further exacerbating rising food prices, by responding to market signals rather than market fundamentals. It has also found that restrictive trade policy hampers domestic production

and the improvement of domestic food supply. This essay has instead suggested that developing countries remain open to trade, and focus instead on developing food supply elasticity and preparing public sector stock reserves in anticipation of, rather than in reaction to, rising global food prices.

## References

1. Admassie, A. 2015. The Political Economy of Food Price Policy in Ethiopia. In P. Pinstrup-Anderson (Ed.), *Food Price Policy in an Era of Market Instability*. Oxford: Oxford University Press.
2. Anderson, K., and Martin, W. 2011. Export Restrictions and Price Insulation during Commodity Price Booms. The World Bank Development Research Group, Agriculture and Rural Development Team. The World Bank.
3. Baltzer, K. 2015. International to Domestic Price Transmission in Fourteen Developing Countries during the 2007-8 Food Crisis. In P. Pinstrup-Anderson (Ed.), *Food Price Policy in an Era of Market Instability*. Oxford University Press.
4. Bogmans, C., Kearns, J., Pescatori, A., and Prifti, E. 2022. War-Fueled Surged in Food Prices to Hit Poorer Nations Hardest. *Commodities*: IMF.
5. Bouet, A., and Debucquet, L. 2010. Economics of export taxation in a context of food crisis. IFPRI Discussion Paper 994.
6. Bryan, S. 2015. A Cacophony of Policy Responses: Evidence from Fourteen Countries during the 2007-8 Food Price Crisis. *Food Price Policy in an Era of Market Instability*, 51.
7. Data, F. R. 2021. Global Price of Maize Data.
8. FAO, U. 2022. March & April Global Food Data Sets, 2022. United Nations Food and Agricultural Organisation, Agricultural Market Information System. FOASTAT & AMIS.
9. Freund, C., and Özden, Ç. 2008. Trade Policy and Loss Aversion. *American Economic Review*, 98:4: 1675-91.
10. Ganguly, K., and Gulati, A. 2015. The Political Economy of Food Price in India. *Food Price Policy in an Era of Market Instability*, 339-359.
11. Giordani, P. E., Rocha, N., and Ruta, M. 2016. Food prices and the multiplier effect of trade policy. *Journal of International Economics*, 101: 102-122.
12. Hicks, J. R., and Allen, R. G. 1934. A Reconsideration of the Theory of Value. Part I. *Economica*, 1:1: 52-76.

- 
13. Hossain, M., and Deb, U. 2010. Volatility in Rice Prices and Policy Responses in Bangladesh. In D. Dawe (Ed.), *The Rice Crisis: Markets, Policies and Food Security*. London and Washington: Food and Agriculture Organisation, Earthscan.
  14. Huellen, v. 2018. How financial investment distorts food prices: Evidence from US grain markets. *Agricultural Economics*, 49:2: 171-181.
  15. Jadhav, R., Heath, M., and Hunt, N. 2022, July 27. Analysis, Food export bans, from India to Argentina, risk fueling inflation. Retrieved from <https://www.reuters.com/markets/commodities/food-export-bans-india-argentina-risk-fueling-inflation-2022-06-27/>
  16. Johnson, S. 2022, March 8. WEAT price soars above ETF's underlying value. Retrieved from Financial Times: <https://www.ft.com/content/54a1c522-7141-4794-8b5c-1b5fdd47d968>
  17. Piermartini, R. 2004. The role of export taxes in the field of primary commodities. Geneva: WTO Discussion Paper, World Trade Organization.
  18. Pinstrup-Andersen, P. 2015. Key Policy-related Lessons. In *Food Price Policy in an Era of Food Market Instability* (pp. 479-487). Oxford: Oxford University Press.
  19. Terré, E., & Sigaudó, S.(2022). Contribution of Corn to the Argentinian Economy. Santa Fe: Bolsa De Comercio de Rosario (Rosario Stock Exchange).
  20. Watson, D. D. 2015. A Political Economy Synthesis: The Food Policy Crisis. (P. Pinstrup-Andersen, Ed.) *Food Price Policy in an Era of Market Instability*, 120.

# SELF-EMPLOYMENT AND CLIMATE LABOUR MARKET VULNERABILITIES IN DEVELOPING COUNTRIES: EVIDENCE FROM INDIA

CHIARA MARINO

JUNIOR SOPHISTER EXCHANGE STUDENT

*“This paper contributes to the existing literature on labour market characteristics in developing countries, with a focus on their vulnerabilities to climate shocks. Concentrating on the prevalence of the informal sector self-employment, the analysis has been conducted with particular reference to the Indian labour market structure, based on individual survey data from the Indian Human Development Survey (IHDS). The conclusive section of this piece is dedicated more precisely to the effects of various types of climate shocks on developing countries’ labour markets and potential adaptation mechanisms for workers.”*

## Introduction

Within the broad domain of economics and, in particular, regarding labour market structures, there are several aspects that individuals living in developed countries have been accustomed to - characteristics that might become almost dogmatic over time. Yet, what is particularly striking in the study of development economics is that one must abandon almost any certainty about how the labour market, credit market, and economy work. This aspect is crucial for any organisation, political system or country of the Global North which would like to contribute to the development of low and middle-income economies, but also for any economist to deeply investigate this economic domain and for any student to concretely grasp the field of economics.

This essay aims to provide an extensive account of labour market mechanisms in developing economies and to investigate their susceptibility to a particular type of idiosyncratic shock. With this end in mind, the first section will outline developing countries’ labour market characteristics and their differences from those of developed economies.

---

The discussion will focus on developing countries' labour market vulnerabilities originating especially from the central role played by the informal sector (Campbell and Ahmed, 2012). In particular, the first section will discuss informal self-employment in developing economies and its negative consequences for individuals and the labour market itself (Banerjee and Duflo, 2007; Fields, 2014). Henceforth, considering the uncertainty provided by the informal sector and its inability to insure individuals against different kinds of idiosyncratic shocks (Srija and Shirke, 2014), the third section of this essay will investigate the existing literature on labour market exposure to climate shocks in developing countries. The choice of such shocks is dictated primarily by the severity of climate change in those countries. Thus, research and data collection on this topic proves to be of fundamental importance in order to improve the effectiveness and punctuality of policy responses in these developing countries (Mendelsohn, 2007).

In between the above-mentioned sections, the second part of this essay will give a more thorough account of emerging economies' labour market features concentrating on a developing, lower-middle-income yet fast-growing economy: India (United Nations, 2022). To do so, I will conduct an analysis of the Indian Human Development two-round survey (IHDS) while building on the existing literature. This country's choice lies in India's quasi-unique character in the group of developing economies. Indeed, despite being for many the 'fastest-growing big economy', India is still plagued by inequality and poverty, which makes it an interesting case for debate (The Economist, 2022). Such paradoxical features of development are quite evident if one looks more closely at both the national Gross Domestic Product (GDP) and the variation in Gross State Domestic Product, discussed in the 'Indian Labour Market' section below, accounting for an unequal distribution of such growth.

In sum, building on the vast literature on developing countries' labour market structures and their vulnerability to climate shocks, this essay contributes to the existing literature by connecting these two topics starting from data on individuals' socio-economic conditions. By utilising both survey and aggregated data, this paper provides an individual-based perspective to concretely understand people's labour market experiences and overall lives in such countries.

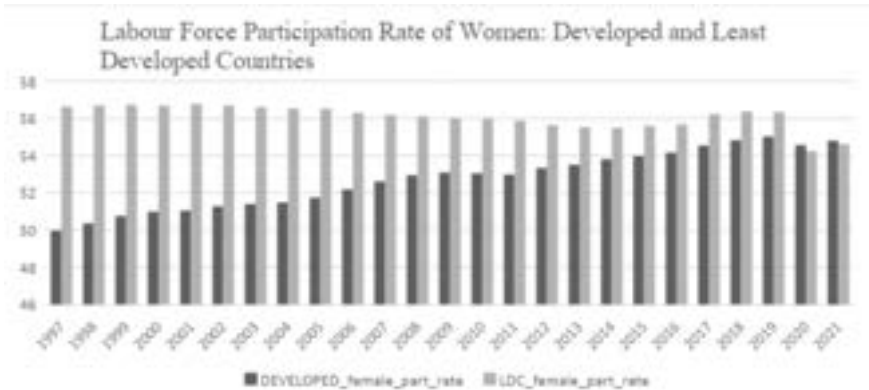
## **Labour Market Categorisation**

Considering the stark differences between developing and developed countries' economic structures, this first part will describe the labour market characteristics of developing and emerging economies. It is relevant to notice that, as Fields (2011) recalls, by including middle-income as well as low-income countries, the term 'developing countries' represents a sort of euphemism, as some of them are likely to undergo a path of development yet, for others, the opposite is true. Nonetheless, this essay will rely on

the official classification of the World Economic Situation and Prospects (WESP) annexe, prepared by the Economic Analysis and Policy Division (EAPD) of the Department of Economic and Social Affairs of the United Nations Secretariat (United Nations, 2022). Firstly, as Campbell and Ahmed (2012) argue, the labour market structure in developing countries may be well defined using two ‘umbrella’ concepts based on stylised observation: economic fragmentation or dualism and the abundance of labour and scarcity of capital. The first term, dualism, refers more specifically to the distinction between the informal and formal sectors of the economy (Reddy, 2006). Indeed, the literature has clearly outlined how workers in such countries rely heavily on informal employment, which implies lower wages and less favourable conditions for employment protection (Campbell and Ahmed, 2012; Reddy, 2006, Lambert et al. 2020). Indeed, unlike developed countries, a substantial fraction of workers in developing economies choose to be self-employed to respond to the lack of adequate employment opportunities in the formal sector (Banerjee and Duflo, 2007; Fields, 2014). However, with its unfavourable conditions regarding employment protection and wages, the informal self-employment solution does not provide insurance against different types of shocks (Srija and Shirke, 2014). In particular, the third section will revise the existing literature on the effects and adaptation mechanisms of individuals facing climate shocks in developing countries, starting precisely from the labour market categorisation outlined in this first part.

Considering the unfavourable conditions of informal employment, the same workers choose to hold multiple jobs to cope with the uncertainty provided by the informal sector (Banerjee and Duflo, 2007). A consequence of holding more than one job has to do with the increasing lack of specialisation leading to unskilled labour which cannot remotely compete with that of developed countries on the global market (Banerjee and Duflo, 2007). Another distinctive aspect of developing countries’ labour markets is the crucial role of agriculture and the rural economy, their predominant sector (Campbell and Ahmed, 2012). Lastly, it is interesting to investigate more deeply the labour market participation rate (LFPR), defined as the proportion of the population who supply labour for the production of goods and services (World Bank Development Indicators, 2021), by gender and among countries. One particularly relevant point made by Campbell and Ahmed (2012) refers to the shape of female LFPR across different levels of development or income which, as they argue, follows some sort of parabole, or U-shaped curve. Starting from poor levels of development, LFPR reaches relatively high values and gradually declines as economic development rises, reflecting the possibility for women to withdraw from the labour market, with the source of this in some cases arising from social norms (Campbell and Ahmed, 2012). This trend tends to increase at the developed countries’ levels, nearly matching the male counterpart for some countries (Campbell and Ahmed, 2012). However, looking at average values for developed economies, figure 1 shows that, until 2019, female LFPR in the least developed countries (LDC) reached

higher values than those in developed economies. The latter category seems to match such values only since 2020.



*Figure 1. Labour Force Participation Rate (LFPR) of Women in Developed and Least Developed Countries (LDC)*  
*Source Data:World Bank,World Development Indicators. (2021).*

## The Indian Labour Market

India, on par with China, is the most populous country in the world with its 1.4 billion people (Armstrong and Richter, 2022). More importantly, in recent years India has undertaken a path towards exponential economic growth, shown in figure 2, earning the attribute of ‘fastest-growing big economy’ (The Economist, 2022). Regarding figure 2, it is important to note that the year 2020 represents a special year for India since the country was especially badly hit by COVID-19, undermining the ongoing economic growth for that particular year. Despite such promising economic growth, India still faces many challenges regarding its inhabitants’ socio-economic conditions, originating mainly from the unequal distribution of such development by State-Union Territory. As Sachs et al. (2002) recall, the variation across states and territories for economic conditions is indeed enormous. Such variability in economic development is captured in figure 3, representing all the thirty-three Indian States and Union Territories and their respective Gross State Domestic Product between 2018 and 2019, a year before Covid hit.

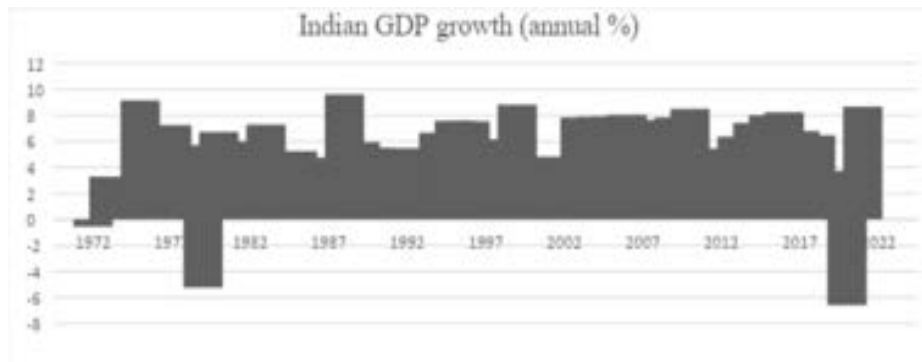


Figure 2. SEQ Figure \\*ARABIC 2: Indian GDP growth (annual %)

Source Data: World Bank, World Development Indicators. (2021).

Source Figure: own illustration

Considering India's cross State variability vis-à-vis its national GDP, it seems evident that Indian development has not a clear and linear upward trend. Consequently, the remaining part of this section is dedicated to a more detailed discussion of the Indian labour market characteristics and vulnerabilities. With this end in mind, this paper employs a two-round nationally representative survey spanning the periods 2004-05 and 2011-12 - the Indian Human Development Survey (IHDS). IHDS provides a comprehensive picture of Indian socio-economic conditions.

According to the 2004-5 survey, 23.4% of people lived below the poverty line (IHDS, 2022). This aspect is particularly relevant for the labour market analysis as it has been found that poor people living in rural areas are more likely to be self-employed in agriculture than working for a wage or a salary (Banerjee and Duflo 2007). More precisely, as Marjit and Kar (2009) recall, more than 90% of the Indian population's livelihood is provided by the informal sector which is characterised by a prevalence of self-employed and casual workers (Srija and Shirke, 2014). Moreover, although the share of agriculture in total employment has gradually decreased over time, from 58.50% in 2004-05 to 48.90% in 2011-12, agriculture retains its position as the largest sector of employment in India (Srija and Shirke, 2014). Consequently, as discussed in the previous sections, the informal self-employment feature together with the heavy reliance on the agricultural sector greatly exposes poor people's income to idiosyncratic shocks, especially climate ones. Focusing more precisely on income vulnerability to self-employment in agriculture, the 2004-5 survey registers substantial negative values for family farm income and higher average income values from wages and salaries coming both from the agricultural and non-agricultural fields.

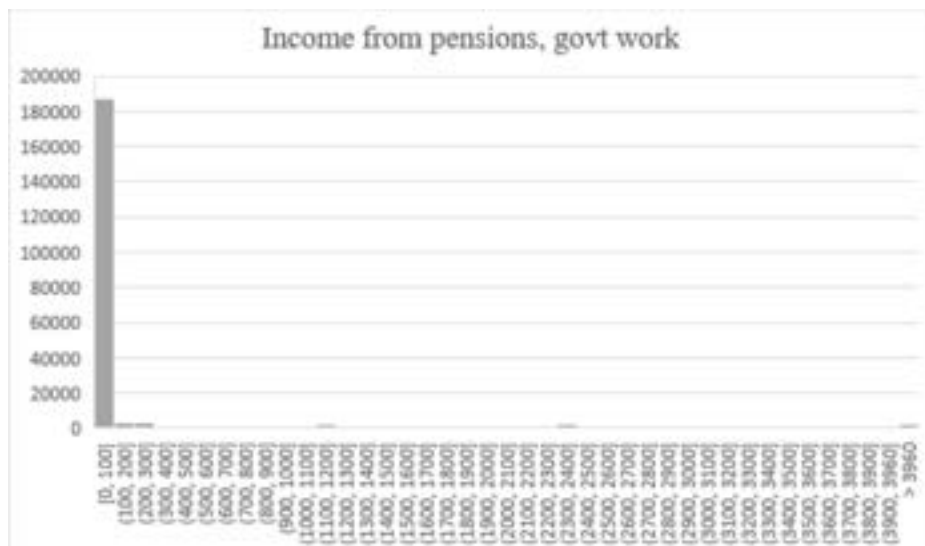




Figure 3.

In addition to that, it is interesting to analyse the magnitude of employment protection and benefits provided by the Indian government. Broadly speaking, the history of Indian labour laws is rich in reforms towards increasing employment protection. More recently, from the Child Labour (Prohibition and Regulation) Amendment Act of 2016 to the Payment of Wages (Amendment) Act and the Maternity Benefit Amendment Act of 2017, the government is constantly active in building a more comprehensive employment protection system (Ministry of Labour and Employment, 2023). Additionally and importantly, India possesses a fully-fledged Employees Pension Scheme with a pension age of fifty-eight and a minimum of ten years of contributions. However, such extensive legislation and structured system while providing for social security, standards of employment and occupational protection overall, formally covers just a minimal part of the workforce (Mitchell et al., 2014). This applies to the pension scheme system, where just about 12% of the workforce is covered according to the 2011 census, in addition to Employment Protection Laws (EPL) more generally, where in 2005 457 million people in the total workforce of 395 million were engaged in the informal sector and were therefore not benefiting from employment protection (OECD, 2021; Sankaran, 2010;

Mitchell et al., 2014). In sum, as Mitchell et al. (2014: 439) highlight, it appears that ‘well over 90% of the employed workforce falls outside the law’s protection’. In line with the aforementioned explanation, an analysis of the 2004-5 IHDS INCGOVT variable shows exactly how employment benefits from the government such as pensions cover a minuscule number of people when compared to the whole sample.



*Figure 4. Income from pensions and government work*

*Source Data: IHDS 2004-5*

*Source Figure: own illustration*

Thus, the discrepancy between the vast legislation on employment protection and the limited application of the same leaves crucial questions to be answered and challenges to be faced. Consequently, an examination of the narrow coverage of Indian labour law together with innovative ideas on how to extend labour law towards marginal and precarious labour is in order (Mitchell et al., 2014). Further policy solutions may also imply a reduction in the informal labour market sector through the increase in labour market opportunities in the formal sector to ultimately foster the expansion of the latter. Such an increase in opportunities may be achieved by providing training to unemployed or informally employed people, thus addressing the issue of lacking specialization of labour, and by giving them better access to formal credit to improve their economic conditions.

To conclude, a more detailed analysis of labour markets would have included the time spent in terms of days/years and hours/day spent working on the farm compared to any other type of occupation. Yet, due to the large number of missing values for these variables in the 2004-5 survey, they would not be discussed in this paper.

---

## Labour Market Vulnerability to Climate Shocks

In the context of developing countries' labour market, climate change has acquired increasing visibility and importance, becoming a cause for deep concern within the global community. As Moshoeshoe et al. (2021) highlight, global warming has increased the frequency and risk of weather shocks such as floods, drought and heat waves. As a result, an increasing public interest has developed in measuring its impacts from various perspectives, primarily environmental and socio-economic (Mendelsohn, 2007). Following this, it has been acknowledged that weather shocks' effects are not equally distributed between developing and developed countries (Wijaya, 2014). Indeed, they are especially severe in developing, low-income countries despite the relatively minimal contribution of these countries to climate change (International Monetary Fund, 2017; Moshoeshoe et al., 2021). A graphical representation of this is provided in figure 5 in the following page, built on Statista database, which shows the global risk of drought in 2020. Thus, looking at the African continent in particular, it seems clear how the least responsible actors for climate shocks are the most affected by the same.

Responding to the growing need for data on climate shocks' effects, an extensive body of research has analysed the impact of these phenomena on the labour market of low-income countries. Notably, Branco and Féres (2021) have studied the effects of rainfall shocks on households' work decisions in Brazil. Thus, they have found that households alter their labour decisions to mitigate the consequences of droughts by holding more than one job, and spending more time performing that secondary job preferably an off-farm one, thereby decreasing the supply in the agricultural sector work (ibid.). A similar account of the response to weather shocks is provided by Neog's analysis of temperature shocks in the rural labour market in India (2022). Differently from Branco and Féres (2021), Neog (2022) focuses more specifically on commuting and migration, finding positive and statistically significant effects for both variables of labour mobility in the presence of adverse temperature shocks. In addition, Moshoeshoe et al. (2021) interestingly introduce gender dynamics in the analysis of labour markets, focusing on the labour supply of women and their coping strategies in the presence of weather shocks in Lesotho. As a result of the study, they have found considerable gender differences as women tend to be more vulnerable to such shocks and have a limited number of strategies to cope with them with respect to men (Moshoeshoe et al., 2021).



*Figure 5*

## Conclusion

The labour market plays a fundamental role in the economic field and as such, it has been amply modelled and researched. Yet, as part of the global economy, individuals living in developed countries may run the risk of taking most of their labour market features for granted. Approaching the domain of development economics, one should ideally question his or her knowledge of the economic mechanisms and recognise that low and middle-income economies possess their peculiarities. Such acknowledgement is crucial to any initiative or campaign aimed at reducing the socio-economic gap between developing and developed countries.

This essay has, thus, taken up the challenge by defining labour market characteristics specifically of India as a developing country vis-à-vis developed countries. In addition to that, the digression on India has contributed to deepening the analysis of labour market structures in a lower-middle-income yet fast-growing economy. By showing its features, the paper has further highlighted the potential frailties of the developing countries' labour market, focusing on their vulnerability to climate shocks. This topic's choice has been dictated by the growing concern towards climate change which has become one of the most crucial challenges the global community need to confront. Thus, measuring the effects of such shocks represents a first step towards the adaptation and mitigation of developing countries to the climate crisis and a first contribution to the formulation of new policies concerning the labour market in developing countries, and in the specific case of India.

---

## References

1. Armstrong, M., and Richter, F. 2022. Infographic: World population reaches 8 billion. Statista Infographics. Retrieved March 4, 2023, from <https://www.statista.com/chart/28744/world-population-growth-timeline-and-forecast/>
2. Banerjee, A. V., and Duflo, E. 2007. The economic lives of the poor. *Journal of Economic Perspectives*, 21:1: 141-167.
3. Branco, D., and Féres, J. 2021. Weather shocks and labor allocation: Evidence from rural Brazil. *American Journal of Agricultural Economics*, 103:4: 1359-1377.
4. Campbell, D., and Ahmed, I. 2012. The labour market in developing countries. *Perspectives on Labour Economics for Development* (ILO, 2013).
5. Desai, Sonalde, Vanneman, Reeve, and National Council of Applied Economic Research, New Delhi. India Human Development Survey (IHDS), 2005. Inter-university Consortium for Political and Social Research [distributor], 2018-08-08. <https://doi.org/10.3886/ICPSR22626.v12>.
6. Fields, G. S. 2011. Labor market analysis for developing countries. *Labour Economics*, 18: S16-S22. <https://doi.org/10.1016/j.labeco.2011.09.005>.
7. Fields, G. S. 2014. Self-employment and poverty in developing countries. *IZA World of Labor*. <https://doi.org/10.15185/izawol.60>
8. Ian Tiseo. 2023, February 6. Drought risk globally by country 2020. Statista. Retrieved February 23, 2023, from <https://www.statista.com/statistics/1099051/drought-risk-by-country/>.
9. IHDS Data. Home. 2022. Retrieved February 23, 2023, from <https://ihds.umd.edu/data>.
10. International Monetary Fund. 2017. Seeking Sustainable Growth: Short-Term Recovery, Long-Term Challenges. Washington, DC, October.
11. India's Central Bank. n.d.. Reserve Bank of India - Publications. Retrieved March 4, 2023, from <https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=20677>
12. Lambert, F. J., Pescatori, A., and Toscani, F. 2020. Labor market informality and the business cycle.
13. Marjit, S., and Kar, S. 2009. A Contemporary Perspective on the Informal Labour Market: Theory, Policy and the Indian Experience. *Economic and Political Weekly*, 44:14: 60-71. <http://www.jstor.org/stable/40278702>.
14. Mendelsohn, R. 2007. Measuring climate impacts with cross-sectional analysis. *Climatic Change*, 81:1: 1.

15. Ministry of Labour & Employment. 2023, January. Initiatives of Central Government . Ministry of Labour & Employment: **श्रम एवं रोजगार मंत्रालय**. Retrieved March 5, 2023, from <https://labour.gov.in/initiatives-central-government>.
16. Mitchell, R., Mahy, P., and Gahan, P. 2014. The Evolution of Labour Law in India: An Overview and Commentary on Regulatory Objectives and Development. *Asian Journal of Law and Society*, 1:2, 413-453. <https://doi.org/10.1017/als.2014.8>.
17. Moshoeshoe, R., Nchake, M. A., and Tiberti, L. 2021. The Effect of Weather Shocks on Women's Labor Supply and the Income of Women-headed Household in Lesotho.
18. Neog, B. J. 2022. Temperature shocks and rural labour markets: evidence from India. *Climatic Change*, 171:1-2: 16.
19. OECD. 2021. Pensions at a Glance 2021: COUNTRY PROFILES – INDIA, OECD publishing.
20. Reddy, S. G. 2006. Globalisation, labour markets, and social outcomes in developing countries. Available at SSRN 942087.
21. Sachs, J. D., Bajpai, N., and Ramiah, A. 2002. Understanding Regional Economic Growth in India. *Asian Economic Papers*, 1:3: 32-62. <https://doi.org/10.1162/153535102320893983>.
22. Sankaran, K. 2010. Labour Law in South Asia: The Need for an Inclusive Approach. *Labour Law and Worker Protection in Developing Countries*, Oxford and Geneva: International Labour Office/Hart Publishing, 225–60.
23. Srija, A., and Shirke, S. V. 2014. An analysis of the informal labour market in India. *Economy Matters*, 45:12: 28-29.
24. The Economist Newspaper. 2022, May 14. India is likely to be the world's fastest-growing big economy this year. *The Economist*. Retrieved February 23, 2023, from [https://www.economist.com/briefing/2022/05/14/india-is-likely-to-be-the-worlds-fastest-growing-big-economy-this-year?gclid=Cj0KC-QiA3eGfBhCeARIsACpJNU\\_i3VBtRNgZ4YlXblRsZgj\\_rq3kvkIraeFNaRjX-3aOzHXcTwIVcqwaAnVDEALw\\_wcB&gclsrc=aw.ds](https://www.economist.com/briefing/2022/05/14/india-is-likely-to-be-the-worlds-fastest-growing-big-economy-this-year?gclid=Cj0KC-QiA3eGfBhCeARIsACpJNU_i3VBtRNgZ4YlXblRsZgj_rq3kvkIraeFNaRjX-3aOzHXcTwIVcqwaAnVDEALw_wcB&gclsrc=aw.ds).
25. United Nations 2022. World Economic Situation and Prospects 2022. New York.
26. Wijaya, A. 2014. Climate change, global warming and global inequity in developed and developing countries (Analytical perspective, Issue, Problem and Solution). IOP Conference Series: Earth and Environmental Science.
27. World Bank. World Development Indicators. 2021. Retrieved February 23, 2023, from <https://databank.worldbank.org/source/world-development-indicators?l=en>

---

# NO REFORM WITHOUT REPRESENTATION: REVISING THE ROLE OF FOREIGN AID IN POLICYMAKING AND SUSTAINABLE GROWTH

ELLA HENSEY  
SENIOR SOPHISTER

*“Foreign aid is a powerful tool with the potential to support long-term economic growth in developing countries. However, foreign aid projects are often overpowered by ignorance and coordination failure, contributing to the endless poverty trap faced by recipient countries. This paper acknowledges how a ‘one-size-fits-all’ approach, as promoted by the Washington Consensus, is an ineffective method of promoting growth in developing countries. Rather, this paper will discuss a policy approach using the Growth Diagnostics framework and self-discovery that highlights where countries can best specialize their industries. With respect to the role of foreign aid institutions, this paper supports the provision of initial broad investment into local entrepreneurship and innovation projects rather than tied and food aid projects.”*

## Introduction

‘We live in a culture in which those who are better off subscribe—both mentally and financially—to the notion that giving alms to the poor is the right thing to do’ (Moyo, 2009: 3). Zambian economist Dambisa Moyo accurately captures the misconceptions that western nations hold regarding developing countries and how failures in financial aid reflect these shortcomings. Foreign aid has repeatedly failed to achieve its objectives of promoting economic convergence due to fragmentation, corruption, and

ineffective aid channels (Easterly and Pfutze, 2008).<sup>1</sup> This paper examines the origins of these failures in the Washington Consensus and how alternative, more specific policies determined using the Growth Diagnostics framework can lead to long-term growth. Further to this, this essay argues that while Growth Diagnostics is an influential framework, its own binding constraint is nested in its exclusion of local populations in the policy-making process; while donors can help to identify binding constraints to growth, the policies they implement must facilitate self-discovery in developing economies for substantial and sustained economic growth to be enjoyed. The conclusion of this analysis supports the creation of an improved policy space by foreign aid institutions through the use of Growth Diagnostics and engaging in the self-discovery process by promoting enterprise facilitation and providing initial investments. Finally, this paper will discuss potential solutions to reducing long-term dependency on foreign aid and support sustainable growth.

## History and Perspectives on Foreign Aid

Foreign aid is a heavily debated topic, as its methods and intentions often do not hold the best interest of the recipient country. Currently, foreign aid institutions are swayed by ignorance and coordination failure that can often leave recipient countries worse off than they began (Birdsall, 2004). In theory, aid should be granted in terms of demand and be motivated by non-commercial incentives (Todaro and Smith, 2012). However, many countries that have been the biggest recipients of aid—namely in Sub-Saharan Africa and Latin America—have not seen the desired growth. As of 2019, Sub-Saharan Africa is the biggest recipient of foreign aid by DAC countries, accounting for 22.9% of total aid while Latin American accounts for 6.4%.<sup>2</sup> Despite receiving billions of dollars in aid each year, Sub-Saharan Africa is still the poorest region in the world. Tied aid is ineffective as it benefits donors more than the recipients.<sup>3</sup> Tied food aid costs recipient countries almost 50% more than if they had purchased the same food locally (OECD, 2006). Measuring aid effectiveness is difficult due to a lack of transparency about how

---

1 For the purpose of this paper, foreign aid refers to the OECD definition of ‘Official Development Assistance, (ODA)...which in very basic terms is aid from governments in developed countries to developing countries’ (Keeley, 2012). The term ‘foreign aid’ can be assumed to be the economic transfer of

goods and services from government aid agencies or NGOs. The bulk of development aid comes from the OECD’s gross bilateral ODA by Development Assistance Committee (DAC) countries; however, NGOs and multilateral donors such as the World Bank and United Nations also contribute to development aid (Keeley, 2012). Other forms of foreign aid, such as military or emergency humanitarian relief will be omitted in our exploration of aid reforms, as the conditions which render this type of aid necessary relate to a different set of circumstances.

2 These figures were obtained from the OECD (2021) Aid at a Glance charts.

3 Tied aid can be described as a form of foreign aid in which recipients must procure a proportion of goods from the donor country (OECD, 2006).



---

aid agencies spend their money, resulting in low incentive for donors to untie aid. Additional faults in foreign aid include fragmentation of aid among too many sectors and high overhead costs in proportion to the actual amount of aid provided (Easterly and Pfutze, 2008). Motivations behind aid can be non-altruistic and hold political or economic interests. In recent times, foreign aid has been subject to popular cultural appropriation, where celebrities engage with or donate to foreign aid institutions to enhance their image (Moyo, 2009). While the origins of aid may have been altruistic, the current practices are futile and in need of reform to achieve long-term growth in developing countries.

The Washington Consensus is a ten-point regime created in 1989 by the United States in an attempt to increase growth in Latin American countries.<sup>4</sup> However, the Consensus is too general in its approach and has ultimately had adverse effects. The Consensus focuses too heavily on raising GDP, while ignoring social issues such as education and inequality that can have large implications to growth. In the case of Brazil, where the only principles of the Consensus that were fully adopted related to real interest rates, exchange rates and FDI, the effort was insufficient to create the drastic change needed for sustainable growth (Goldfajn, et al., 2021). The over-generalized approach was met with half-hearted adoption and underwhelming outcomes. While inflation in Brazil was lowered, the country may have seen more viable results in an approach that was catered specifically to their binding constraints to growth.

## Perspectives on the Relationship between Aid and Growth

There are three hypotheses regarding aid and growth, the third of which will be supported by this paper. The first states that there is a substantial positive relationship between aid and growth—compared to other variables—by filling the foreign exchange and savings gaps (Papanek, 1973). This explanation is reasonable when arguing for countries stuck in poverty traps in which they do not have the means to initiate the growth process (Sachs, et al., 2004). However, aid does not always encourage growth, as countries are all bound by different institutional, geographic and capital factors. In the example of El Salvador, discussed later in this paper, there is no evidence that growth is constrained by lack of resources to save and invest, rather growth is limited due to low perceived returns on investment (Hausmann and Rodrik, 2005). This perspective suggests foreign aid in-

---

4 The origin of the Washington Consensus is attributed to the diverging amounts of growth between East Asia and Latin America in the period after World War II. Although both regions employed import-substituting strategies in the post-war period, East Asia took off in growth after moving towards more of an export-oriented approach in response to recurring balance-of-payment issues. The divergence between the two regions deepened even further following the oil shocks of the late 1970s. In response to the negative shocks, East Asia maintained their growth by exporting more while Latin America continued to rely on external borrowing. Following the 25-year period ending in the early 1980s, Latin America averaged 1.2% annual economic growth compared with 5.6% in East Asia (Jaspersen, 1997).

stitutions provide recipients with the resources to save and invest, when in El Salvador the actual issue is the absence of new ideas that will increase the returns to investment.

The second hypothesis states that aid has no effect on growth due to its high volatility and procyclicality (Bulir and Hamann, 2003). This volatility and procyclicality increase as aid dependency increases, making recipient countries more vulnerable to external shocks. When implemented poorly, foreign aid will have no effect on growth and in the long run may even make the country worse off, promoting corrupt governments and welfare dependency (Easterly and Pfutze, 2008). However, when donors are patient with building the institutions and policies needed to support higher savings and investment, foreign aid can have positive impacts. Thus, the third hypothesis suggests that there is a conditional relationship between growth and aid. The effectiveness of aid is dependent upon the policies of the recipient countries and the activities of the aid donors (Burnside and Dollar, 2000).

## Model Overview

Growth Diagnostics is a framework developed by Ricardo Hausmann, Dani Rodrik, and Andrés Velasco (2005) which attempts to develop growth strategies and policy reform by identifying the most binding constraints to growth. The model is represented through a decision tree framework seen in Figure 1. Under this framework, a country's growth remains stagnant for two main reasons: low return to economic activity or high cost of financing.<sup>5</sup> After determining the main inhibitor of growth, one moves down the decision-tree, and it becomes clear what the specific binding constraints to growth are for that given country.

Contrary to the implications of the Washington Consensus, this model posits that undertaking as much reform as possible is not economically efficient. The assumption that all reform is good is impractical as it ignores that policymakers are operating in a 'second-best' environment. Given economic distortions, reform is not guaranteed to increase welfare within a developing country. 'Second-best' policies better suit the political environment of developing countries as they take into consideration prevailing conditions, unlike the Washington Consensus which based its reforms on past successes of Western industrialized countries (Mukand and Rodrik, 2005). Functional policy proposals should therefore not only consider the country's binding constraints to growth,

---

5 Low return to economic activity can be due to either low social return or low appropriability.

Low social return reflects on the circumstances of the society of a whole, considering factors such as geography, low human capital and bad infrastructure. On the other hand, low appropriability limits the ability for investors to reap the rewards of potentially profitable investments (Todaro and Smith, 2012).