Marc Diederichs

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Education

04/2022 - 07/2022: **Research visit to Joshua Angrist** *Massachusetts Institute of Technology*.

09/2018 - Present: **Ph.D. in Economics** *Goethe University Frankfurt*, Graduate School of Economics, Finance and Management. Supervisor: Reyn van Ewijk (Johannes Gutenberg-University).

10/2015 - 11/2017: **M.Sc. in International Economics and Public Policy** *Johannes Gutenberg-Unversity Mainz*, Title of the master's thesis: "The Effect of Parental Age at Birth on Education Outcomes and Wages: An Empirical Analysis with the German SOEP".

10/2012 - 08/2015: **B.Sc. in Management and Economics** *University Ouest Nanterre la Denfense Paris; Johannes Gutenberg-Unversity Mainz*, French-German double degree with a bachelor thesis in the domain of behavioral economics.

Work Experience

04/2018 - Present: **Doctoral Researcher** *Johannes Gutenberg-Unversity Mainz*, Chair of Statistics and Econometrics (Reyn van Ewijk).

10/2015 - 05/2017: **AIESEC** *Johannes Gutenberg-Unversity Mainz*, Member of the non-profit student's organization AIESEC. Tasks: contact with businesses from Mainz, organization of a conference with 100 participants.

08/2016 - 08/2016: **Voluntary Service** *Kenya*, Volunteering work in an orphanage.

05/2015 - 07/2015: **Internship at Taxeo** *Paris*, Tasks: building up a database about customers, contact with potential new customers and affiliates via telephone.

07/2012 - 09/2012: **Internship at the University of Constance** *Constance*, Tasks: editorial work, education and training administration.

03/2012 - 06/2012: **Voluntary Service** *Kenya*, Work as a volunteer in an orphanage for HIV orphans. Tasks: Coaching of homework and German classes, organization of activities.

08/2011 - 10/2011: **Internship at Ekkharthof** *Swiss*, Tasks: supervision and guidance of handicapped children.

Publications

04/2021 - Present: **Is large-scale rapid CoV-2 testing a substitute for lockdowns? Published in PLOS ONE** *Joint work with René Glawion, Peter G. Kremsner, Timo Mitze, Gernot J. Müller, Dominik Papies, Felix Schulz and Klaus Wälde.* Various forms of contact restrictions have been adopted in response to the Covid-19 pandemic. Around February 2021, rapid testing appeared as a new policy instrument. Some claim it may serve as a substitute for contact restrictions. We study the strength of this argument by evaluating the effects of a unique policy experiment: In March and April 2021, the city of Tübingen set up a testing scheme while relaxing contact restrictions. We compare case rates in Tübingen county to an appropriately identified control unit. We employ the synthetic control method. We base interpretations of our findings on an extended SEIR model. The experiment led to an increase in the reported case rate. This increase is robust across alternative statistical specifications. This is also due to more testing leading initially to more reported cases. An epidemiological model that corrects for 'more cases due to more testing' and 'reduced testing and reporting during the Easter holiday' confirms that the overall effect of the experiment led to more infections. The number of rapid tests were not sufficiently high in this experiment to compensate for more contacts and thereby infections caused by relaxing contact restrictions.

Work in Progress

09/2021 - Present: **Schools under mandatory testing can mitigate the spread of SARS-CoV-2. Revise and resubmit at PNAS.** *Joint work with Reyn van Ewijk, Ingo Ishpording and Nico Pestel.* In this paper, we provide the first causal evidence on the impact of opening schools in a situation under virus variants and substantial vaccination rates in the adult population. We show that schools under regular and mandatory rapid testing of the studentship mitigated the growth in case numbers leading to Germany's fourth pandemic wave in Autumn 2021. Our results have important implications for the design of future non-pharmaceutical interventions to mitigate the spread of SARS-CoV-2, but also comparable future diseases. Keeping schools open under mandatory testing rules can provide a means to keep track of infection rates. Our results suggest that school closures, given substantial economic and societal costs, should be thought of as the "last resort", even if inevitable at some point.

11/2020 - Present: **Does interdisciplinarity in economic research lead to a higher citation impact?** *Joint work with Tristan Stahl and Stefan Lobin.* Reading through economic research grant postings, one can notice a frequent and stong emphasis on the importance of interdisciplinarity in research teams. Our project evaluates if this is justified by higher quality research output resulting from interdisciplinary collaborations. We build a theoretical model that facilitates to think about different mechanisms through which interdisciplinarity can lead to better or worse research quality. We identify researchers fields of expertise by their publication histories and measure the quality of publications by their citation count. Using different measures of interdisciplinarity on the paper and the team level we find an inverted U-shape relationship between citation impact and interdisciplinarity of economic research articles.

06/2020 - Present: **What can we learn from Editor Rotations?** *Single authored project.* Does every economic researcher have the same chances to publish in highly ranked economic journals or are those with an editor connection at an advantage? Who are the researchers that profit most from their networks and what are the underlying mechanisms? This paper uses panel data on a sample of researchers who were at some point connected to an editor. The data cover the last 30 years of economic publishing of 28 renowned economic journals to analyse how a researcher's number of publications is affected by his/her connections to the editor. Such connections could be prior co-authorships or affiliations to the same institutions. Under the assumption that the timing of editor appointments is exogenous conditional on author experience, this study provides causal estimates. The findings suggest that editors' past coauthors and current affiliation colleagues increase their publication rate by 17% during years of their connected editors' appointment. Multiple heterogeneity analyses with respect to proximity between authors and editors, time and differences in journal type are conducted. Editorial favoritism is not found to be a relevant mechanism while a change in journal focus and a changed submission behaviour of

connected authors are likely explanations.

04/2018 - Present: **Evaluation of a medical emergency call software.** *Joint work with Reyn van Ewijk.* While much is known about emergency health care provision in hospitals, research about the time before patients enter hospitals is scarce. Using the introduction of electronic dispatch protocols (EDP), a software for supporting dispatchers in structuring and standardizing their calls, this research evaluates potential benefits of EDP software. We have dispatch center specific data on emergency call and vehicle allocation and registry data on death causes at our disposal. With a staggered differences in differences approach with county and time fixed effects and allowing for county specific time trends, we find that EDP software (i) increases the time until an emergency vehicle gets alarmed by 4.3% (ii) does affect the accuracy with which emergency vehicles and staff are allocated (iii) does lead to a significant reduction of fatalities from acute myocardial infarction.

Teaching Experience

Winter term 2020/21: **Lecture on Introductory Econometrics** *Statistics and introduction to simple and multiple regression analysis for first year master students.*

Summer term 2018 - Present: **Supervision of 4 Master Theses** *Topics: Replication of "Did austerity cause Brexit?" by Thiemo Fetzer using specification-curve analysis; The effect of lecture-style teaching on student test scores, an empirical analysis using specification-curve analysis; Evaluation of a medical emergency call software.*

Summer term 2018 - Present: **Supervision of about 50 Bachelor Theses** *Topics: Attitudes towards climate change; Determinants and consequences of obesity; Favouritism in academic peer review; The effect of technology on education outcomes.*

Summer term 2016: **Tutor in Econometrics** *teaching activity in the most advanced undergraduate econometrics course using Stata.*

Scholarships

04/2022 - 07/2022: **Interdisciplinary Public Policy** *2000 Euro.*
10/2019 - 09/2020: **Deutschlandstipendium** *300 Euro per month.*
10/2018 - 09/2019: **Deutschlandstipendium** *300 Euro per month.*
09/2014 - 08/2015: **Erasmus +** *270 Euro per month.*
09/2014 - 08/2015: **Deutsch Französische Hochschule** *250 Euro per month.*

Conferences and Workshops

09/2021: EuHEA PhD Conference (presenting), *Rotterdam, online.*
03/2021: DGGÖ Conference on Health Economics (presenting), *Nuremberg, online*
09/2019: International Health Economics Workshop (visiting), *Mainz.*
04/2019: Summer School on Advanced Econometrics by Prof. J. Wooldridge, *Mainz.*
09/2018: Annual Conference Verein für Socialpolitik (visiting), *Freiburg.*
06/2018: Mini-course on Econometric Analysis of Experimental Data with Prof. C. Bellemare, *Mainz.*

Skills

Languages: German (native), English (fluent), French (advanced)
Software: Stata (advanced), Microsoft Office (advanced), LaTeX (advanced)