Christian Diem

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Google Scholar: https://scholar.google.com/citations?user=xj0TYJsAAAAJ

Professional experience

Oct. 2024 –	*Marie Skłodowska-Curie Postdoctoral Research Fellow*, Smith School of Enterprise and the Environment, University of Oxford.
2023 – 2024	*Senior Scientist – PostDoc*, Economics and Finance Group, Complexity Science Hub, Vienna.
2019 – 2023	*PraeDoc Researcher*, Complexity Science Hub, Vienna.
2019 – 2020	*Research Scholar*, International Institute for Applied Systems Analysis (IIASA), Laxenburg.
2017 – 2019	*PraeDoc Researcher*, Institute for Statistics and Mathematics, Vienna University of Economics and Business.
08.-09.2016	*Research Assistant*, Economic Analysis Division, Central Bank of Austria.

Education

2017 – 2023	*PhD in Economics and Social Sciences*, Vienna University of Economics and Business. passed with honors. Title: “Shock propagation and systemic risk in production- and financial exposure networks”, won the Stephan Koren Prize
2015 – 2017	*MSc in Quantitative Finance*, Vienna University of Economics and Business. passed with honors.
2011 – 2014	*BSc in International Financial Services*, University of Liechtenstein. passed with honors.

Publications

1. Diem, C., Borsos, A., Reisch, T., Kertész, J., & Thurner, S. (2024). Estimating the loss of economic predictability from aggregating firm-level production networks. *PNAS Nexus*, 3(1), pgae064
2. Diem, C., Schueller, W., Gerschberger, M., Stangl, J., Conrady, B., Gerschberger, M., & Thurner, S. (2024). Supply network stress-testing of food security on the establishment-level. *International Journal of Production Research (in press)*
3. Tabachová, Z., Diem, C., Borsos, A., Burger, C., & Thurner, S. (2024). Estimating the impact of supply chain network contagion on financial stability. *Journal of Financial Stability (in press)*.

4. Stangl, J., Borsos, A., Diem, C., Reisch, T., & Thurner, S. (2024). Using firm-level production networks to identify decarbonization strategies that minimize social stress. *Nature Sustainability*. *in press*.
5. Chakraborty, A., Reisch, T., Diem, C., & Thurner, S. (2024). Inequality in economic shock exposures across the global firm-level supply network. *Nature Communications.*
6. Pichler, A., Diem, C., Brintrup, A., Lafond, F., Magerman, G., Buiten, G., Choi, T., Carvalho, V., Farmer, J. D, & Thurner, S. (2023). Building an alliance to map supply networks. *Science*, 382(6668), 270-272.
7. Diem, C., Borsos, A., Reisch, T., Kertész, J., & Thurner, S. (2022). Quantifying firm-level economic systemic risk from nation-wide supply networks. *Scientific reports*, *12*(1), 7719.
8. Reisch, T., Heiler, G., Diem, C., Klimek, P., & Thurner, S. (2022). Monitoring supply networks from mobile phone data for estimating the systemic risk of an economy. *Scientific reports*, *12*(1), 13347.
9. Diem, C., Pichler, A., & Thurner, S. (2020). What is the minimal systemic risk in financial exposure networks?. *Journal of Economic Dynamics and Control*, *116*, 103900.

Policy Briefs

1. *A call for understanding supply chains' exposure in the light of climate change*, T20 Brasil: Policy Brief.
2. *The need for a better map of the global supply network*, SUERF Policy Brief, No 803, February 2024.
3. *Reconstructing Austrian supply chains with VAT data: Feasibility for Austria,* CSH Policy Brief, September 2022.
4. *How robust are the Austrian supply chains?,* CSH Policy Brief, June 2020.

Funding acquisition and project management

Total funding acquired as Principal Investigator: EUR 991.659,-

2024 "*IMPACTSIM – Simulating the economic impacts of crises using large-scale firm-level production network data*". Budget: EUR 220,908,-. MSCA Postdoctoral Fellowships - European Fellowships. PI Christian Diem.
Funder: UKRI Postdoctoral guarantee scheme.

2024 "*SYRI-Alert – Early warning system for supply chain disruptions to increase the resilience of the Austrian food supply*". Total Budget: EUR 1.016.646,- Funding: EUR 770,751,-. FFG KIRAS. PI Christian Diem.
Funder: Austrian Research Promotion Agency (FFG).

Organization of Workshops and Conferences (selected)

1. 4th Interdisciplinary Workshop on Firm-Level Supply Networks, Complexity Science Hub Vienna, June 2024. https://firmnets2024.csh.ac.at (approx.. 35 attendees)
2. International Policy Forum on Firm-level supply network data for policy making, Complexity Science Hub Vienna, June 2023. (approx.. 35 attendees)
3. Alan Turing Workshop on Firm-level Supply Network Reconstruction, University of Cambridge, July 2023. (approx.. 30 attendees)

4. Satellite on Firm-level supply chain networks at NetSci 2023, Vienna, July 2023. (approx.. 50 attendees)
5. 1st Interdisciplinary Workshop on Firm-Level Supply Networks, Complexity Science Hub Vienna, November 2022. https://firmnets2022.csh.ac.at (approx.. 35 attendees)

Reviewer

Journals: Journal of Economic Dynamics and Control, Journal of Economic Interaction and Coordination, International Review of Economics and Finance, National Bank of Belgium Working Paper Series, Chaos, Solitons and Fractals, Scientific Reports

Grant proposals: Hungarian National Research, Development and Innovation Office

Teaching experience

1. Guest Lecture on "Shock propagation and systemic risk in financial and economic networks", MSc Computational Finance, University College London, 2024
2. Teaching three days research workshop on "Modelling shock propagation and systemic risk in supply networks", University of Bamberg, Germany, 2024.
3. Teaching 50% of the Lecture in Supply Chain Analysis in the MSc Logistics and Supply Chain Management (full-time program), University of Applied Sciences Upper Austria, Steyr. (4 ECTS, 20 students), 2022.
4. Teaching 50% of the Lecture in Supply Chain Analysis in the MSc Logistics and Supply Chain Management (extra occupational program), University of Applied Sciences Upper Austria, Steyr. (4 ECTS, 15 students), 2022.
5. Teaching the Lecture on Introductory Mathematics in the BSc in Business and Economics, Vienna University of Economics and Business. (4 ECTS, 120 students), 2019.