

# Cäcilia Lipowski, Researcher & PhD Candidate

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## Current Position

09/2019 – present *Doctoral Researcher, ZEW Mannheim*, Research Unit “Labour Markets and Social Insurance”

04/2020 – present *PhD Candidate, Utrecht University School of Economics (completion expected mid 2024)*

Supervisors: Prof. Dr. Anna Salomons and Ass. Prof. Dr. Ulrich Zierahn-Weilage

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Research Interests: Labor Economics - Technological Change – Worker Tasks and Skills – Intergenerational Mobility

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## Education

04-05/2023 *Research Visit at Boston University* and Technology and Policy Research Initiative (TPRI), Boston, U.S.; Host: James Bessen

10-11/2022 + 10/2021 *Research Visit Utrecht University School of Economics*, Utrecht, Netherlands

09/2017 – 06/2019 *M.Sc. Statistics and Econometrics, University of Strasbourg*, with highest honors

09/2014 – 07/2017 *B.Sc. Economics, University of Mannheim*, final grade 1.5

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## “No Kids, No Tech: How Shortages of Young Workers Hinder Firm Technology Adoption” *Job Market Paper*.

*Abstract.* Firms in developed countries increasingly report skill shortages. This paper studies how shortages of young labor market entrants, particularly trainees, affect firm technology adoption. I exploit exogenous variation in trainee supply induced by an education reform in Germany in 2001. Based on a large firm panel survey and social security records, I show that trainee supply shortages decrease firm technology investments. The complementarity between trainees and technology adoption is explained by firms' low opportunity costs and high productivity gains of training young labor market entrants in skills required for technology adoption. These findings dampen hopes of counteracting labor shortages by substituting labor with capital.

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## Publications in Refereed Journals

“Computers as Stepping Stones? Technological Change and Equality of Labor Market Opportunities” (with Melanie Arntz, Guido Neidhöfer and Ulrich Zierahn-Weilage). Forthcoming in *Journal of Labor Economics* (2025).

*Abstract.* This paper analyzes whether technological change improves equality of labor market opportunities by increasing the returns to skills relative to the returns to parental background. We find that in Germany during the 1990s, the introduction of computer technologies improved the access to technology-adopting occupations for workers with low-educated parents, and reduced their wage penalty within these occupations. We also show that this significantly contributed to a decline in the overall wage penalty experienced by workers from disadvantaged parental back-grounds over this time period. Competing mechanisms, such as skill-specific labor supply shocks and skill-upgrading, do not explain these findings.

“Do preferences for urban amenities differ by skill?” (with Melanie Arntz and Eduard Brüll), 2023, *Journal of Economic Geography*.

*Abstract.* By investing in urban amenities, city-level policies often aim to attract highly skilled workers. However, studies relying on revealed preferences struggle to provide causal evidence that skilled workers value urban amenities more than less skilled workers. Therefore, we use a stated-preference experiment with hypothetical job choices between two cities that differ in wages, urban amenities and economic dynamism. We find that respondents are willing to forgo a significant fraction of their wages for better urban amenities. Most strikingly, preferences do not differ systematically by skill level. Hence, the higher fraction of highly skilled workers in amenity-rich places stems from the inability of low-skilled workers to move to and afford living in their preferred locations.

“Fertility, Economic Incentives and Individual Heterogeneity: Register Data based Evidence from France and Germany” (with Ralf Wilke and Bertrand Koebel), 2022, *Journal of the Royal Statistical Society – Series A*.

*Abstract.* This study demonstrates the importance of accounting for correlated unobserved heterogeneity to correctly identify the relevance of career and education for fertility decisions. By exploiting individual-level life-cycle information on fertility, career and education from large administrative longitudinal datasets, this paper shows that non-linear panel models produce substantially different results than the cross-sectional approaches widely used in previous studies. Higher opportunity costs of having children are found to be associated with lower fertility within a country, while the magnitude of the adjustment differs strongly across countries. In Germany, fertility decisions are found to depend more on individual circumstances than in France, where better public childcare support enhances the compatibility between family and professional life.

"Competing Risks Regression with Dependent Multiple Spells: Monte Carlo Evidence and an Application to Maternity Leave" (with Simon Lo, Shuolin Shi and Ralf Wilke), 2021, *Japanese Journal of Statistics and Data Science*.

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## Work in Progress

"Keeping Up with the Computers: How Vocational Training Responds to New Technology" (with Anna Salomons and Ulrich Zierahn-Weilage).

*Abstract.* We examine how advancing technology has influenced the occupational training and skill acquisition of vocationally trained workers in Germany. Such changes in skill supply may allow workers to work with new technologies relevant for their job, acquire relevant complementary skills, and/or remove training for tasks that are being automated, highlighting a potentially important channel through which the labor market adjusts to changing skill demands. We construct a novel database of detailed and legally binding training curricula descriptions and changes therein, spanning the near universe of vocational training in Germany over five decades. We characterize changes in specific skill content over time, and identify the causal effect of technological change on educational content by linking vocational curricula to patents with Natural Language Processing techniques. Lastly, we use administrative employer-employee data to study whether educational updating helps workers adjust to changing skill demands, leading to improved wage and employment outcomes.

"Has Covid-19 Accelerated the Digital Transformation of the Labor Market?" (with Melanie Arntz, Michael Böhm, Georg Graetz, Terry Gregory and Florian Lehmer).

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## Policy Reports & Consulting

Federal Ministry of Labour and Social Affairs (online): Input talk at Workshop on "Die Erwerbsbeteiligung von Frauen: Hürden und Gelingensbedingungen", May 2023.

„Digitalisierung in der Covid-19-Pandemie. Corona hat den digitalen Graben zwischen den Betrieben vertieft“ (with Melanie Arntz, Michael Böhm, Georg Graetz, Terry Gregory, Jan Moritz Johanning, Florian Lehmer, Britta Matthes und Nick Niers). IAB-Kurzbericht 4, 2023.

"Mannheim im Wettbewerb um Talente" (with Melanie Arntz and Eduard Brüll). Policy Report to the City of Mannheim, July 2020.

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## Work experience

02/2019 – 06/2019	Research Assistant, ZEW Mannheim
10/2017 – 01/2019	Research Assistant, BETA Strasbourg
07/2017 – 08/2017	Research Intern, Macro Center for Political Economics Tel Aviv
03/2017 – 06/2017	Research Assistant, University of Mannheim

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## Teaching Experience

08/2015	Mathematics - Teaching Assistant (Undergraduate, English), University of Mannheim
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## Media Coverage (selected)

„Wir Deutschen“, by Andreas Frey. *FAZ*. April 16, 2023.

„Technologiewandel hilft Arbeiterkindern“, by Walter Serif. *Mannheimer Morgen*. July 16, 2022.

„Deutsche Frauen verzichten nach Gehaltserhöhung häufig auf Nachwuchs“, by Dorothea Siems. *Welt*. May 31, 2020.

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## Conference Presentations and External Seminar Talks (selected)

**2023 (including scheduled):** TPRI (Boston University), EEA, EALE, Interdisciplinary Text-as-Data Workshop (RWI Essen), LISER Workshop "Skills for the future", BIBB Kolloquium (Bonn, *invited*), Economics Department Seminar Mannheim, Internal Seminar IZA

**2022:** EALE (Padua), TASKS VI Conference (Nuremberg), Cournot Doctoral Days (Strasbourg)

**2021:** TPRI (Boston University), ECINEQ, LISER-IAB Conference on Digital Transformation and the Future of Work, Verein für Sozialpolitik, ICT Conference (ZEW Mannheim), Workshop on Social Mobility and Economic Performance (ZEW Mannheim)

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## Computer Skills and Languages

STATA, R, Python (including web scraping and NLP)

German native; English fluent; French fluent; Spanish good

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## Refereeing for International Journals

Industrial Relations, Economics of Education Review, International Labour Review, Socio-Economic Review, Journal of Labor Research, Research in Labor Economics

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## Scholarships

01/2018 – 06/2019 Scholarship Friedrich-Ebert-Stiftung