

Elena Catharina Lutz

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EDUCATION

ETH Zurich

Ph.D. Urban Economics and Urban Planning Nov 2019 - July 2025 (expected)
Thesis Title: “Building socially and environmentally sustainable cities: The impacts of densification and transit-oriented development”
Advisors: David Kaufmann (main advisor), Maximilian von Ehrlich

Massachusetts Institute of Technology

Visiting Fellow at MIT Center for Real Estate 2022 - 2023
Research Associate at MIT Urban Economics Lab 2023 - 2025

London School of Economics and Political Science

MSc Political Economy of Europe 2018 - 2019
Distinction (Best student), Regional Science Association Thesis Award

Eberhard Karls University Tübingen, Germany

BSc International Economics 2014 - 2018
GPA: 1.1 (Best student)

RESEARCH

Peer-reviewed Publications

Buechler, S. & Lutz E. (2024). Making Housing Affordable? The Local Effects of Relaxing Land-use Regulations on Housing Affordability. *Journal of Urban Economics*. [Media coverage: Business Insider, UCLA Housing Voice Podcast. Winner of ARES 2022 best manuscript award, category housing]

This paper examines the effects of relaxing land-use regulations on housing supply and rents at the local intra-city level. We apply a staggered difference-in-difference model, exploiting exogenous differences in the treatment timing of zoning plan reforms as identifying variation. Increasing the allowable floor-to-area ratio (FAR), i.e., upzoning, significantly increases the living space and housing units by approximately 9% in the subsequent five to ten years. This effect is stronger for larger upzonings, for rasters where zoning is binding, and where rents are high. Furthermore, upzoning leads to no difference in hedonic rents between upzoned and later-upzoned rasters. These results show that upzoning is a viable policy for increasing housing affordability. However, the effects depend on the upzoning policy design and take several years to materialize.

Lutz, E., Wicki, M., & Kaufmann D. (2024). Creating Inequality in Access to Public Transit? Densification, Gentrification, and Displacement. *Environment and Planning B: Urban Analytics and City Science*.

Densification is a key concept in contemporary urban planning. Yet, there are widespread concerns about densification causing displacement and gentrification. This paper examines densification around train stations—a prevalent form of transit-oriented development (TOD) in cities with established public transit systems—in the Canton of Zurich, Switzerland. We assess the effects of densification around train stations on the socioeconomic population composition in these areas and investigate three different potential displacement effects. Leveraging 1.8 million linked person-housing unit observations for all individuals within our study perimeter, we provide a more nuanced understanding of densification’s

effects on the population composition and displacement than prior research. Our findings reveal that even though densification increases the absolute number of low-income residents, it primarily benefits middle- and high-income households. Specifically, there is a decline in the share of low-income residents, attributed to the influx of younger high-income individuals. Moreover, incumbent low-income residents experience an increased risk of direct displacement due to housing demolitions. These outcomes highlight the limitations of TOD strategies in mitigating persistent socioeconomic disparities in public transit access, emphasizing the need for more comprehensive measures to address the challenges of equitable housing and public transit accessibility.

Working Papers

Lutz E., Kaufmann, D. & O'Clery N. (2024). Riding to Opportunity? The effects of Bogotá's cable car on experienced segregation.

How does access to public transit affect low-income individuals' mobility behavior and propensity to meet individuals from different economic backgrounds as they move throughout the city? We analyze the introduction of the TransMiCable, a cable car system in Bogotá, which connected a low-income neighborhood to the city center and opened in late 2018. Using an event study design, we compare areas near the new cable car line to those near planned stations of a future line. Our analysis employs one year of granular GPS data from cell phones, over 80,000 points of interest from Google Maps, and block-level income information. Our findings indicate that the cable car's opening significantly increased visits to commercially active lower-middle-class areas in Bogotá's center by approximately three visits per person per month. Better public transit also significantly increases visits to public and semi-public places within individuals' own neighborhoods, potentially fostering local social connections. However, there was no significant increase in visits to high-income areas. The results suggest that improved transit access enhances mobility and strengthens social networks among low-income and lower-middle-class individuals. However, it does not increase meetings between low-income and high-income individuals in public places in cities.

Kauer, F., Lutz, E., & Kaufmann, D. (2024). Housing after redevelopment: Where and to what buildings do displaced residents move? (*R&R at Urban Studies*)

Densification is often implemented by demolishing older housing stock, leading to the direct displacement of incumbent inhabitants. This paper studies how this redevelopment-induced displacement affects residents' location and housing characteristics post-displacement. Using granular individual-level data of all residents from the Zurich region in Switzerland, we observe the redevelopment-induced displacement of 12,599 residents between 2016 and 2020. Our findings highlight the social stratification of redevelopment projects as they displace almost solely low-income residents. Displaced residents earned only 69.7% of the median income of all movers. Compared to all residents, those without Swiss citizenship have a substantially higher probability of displacement (9.6 percentage points). Regarding the location, displacement tends to occur between peripheral neighborhoods of the City of Zurich and its surrounding suburbs. We find that displaced residents from market-rate for-profit redevelopment projects move short distances but relocate to low-income areas. Additionally, they are more likely to move to old buildings (constructed 1945–1970), which are likely demolished soon, increasing the risk of repeated displacement. These findings highlight that redevelopment projects tend to increase spatial inequalities and predominantly affect low-income residents and those without national citizenship. Moreover, we show that housing assistance can mitigate some of the negative effects of displacement.

Work in Progress

Street vibrancy and commercial real estate prices

Environmental and social sustainability of vertical building extensions

Other Publications

Lutz, E., Kauer, F. & Kaufmann, D. (2023). Mehr Wohnraum für alle? Zonenplanänderungen,

Bauaktivität, und Mietpreise im Kanton Zürich von 1996-2020. *ETH Research Collection*. [Media coverage: Tagesanzeiger, SRF, Blick]

Büchler, S. & **Lutz, E.** (2021). The local effects of relaxing land use regulation on housing supply and rents. *MIT Center for Real Estate Research Paper No. 21/18*.

Lutz, E. (2020). The housing crisis as a problem of intergenerational justice: The case of Germany. *Intergenerational Justice Review*.

AWARDS AND SCHOLARSHIPS

Scholarships

- *SNSF Doc.Mobility Grant*, 16,316 CHF 2022
- *Konrad Adenauer Scholarship*, ca. 40,000 Euro 2015/19
- *Baden-Württemberg Scholarship*, 6,000 Euro 2016

Awards

- AREUEA Junior Scholars Program 2023
- ARES 2022 Best Manuscript Award in the Category of Housing (with Simon Büchler)
- Nathaniel Lichtfeld Award 2020 (Regional Studies Association Award for best master's thesis)
- Prize for the Best Overall Performance of the MSc Political Economy of Europe 2019
- Award for Best GPA 2018 of the Department of Economics and Business Administration, Eberhard Karls University Tuebingen

Research Grants

- *Methods for Housing and Poverty Mapping*, 115,000 2025
with David Kaufmann and Oliver Huembelin
- *Innosuisse SynEnergie - Verdichten im Bestand*, 350,000 CHF 2024
with David Kaufmann, Jacqueline Pauli and Arno Schlueter
- *Early Career Grant - Leading House for the Latin American Region*, 5,500 CHF 2023
Project using cellphone data to study urban mobility in Colombia
- *CIS Research Fund*, 10,000 CHF 2023
with Fiona Kauer, Thomas Kurer, and Tabea Palmtag
Project to map local intergenerational mobility in Switzerland Project evaluating differential environmental & social impact of replacement construction vs. building extensions
- *Research Grant Swiss Federal Housing Agency (BWO)*, 80,000 CHF 2023
with David Kaufmann and Fiona Kauer

TEACHING

Thesis Supervision

- Main supervisor of 11 master's theses (x2 ETH medal for best thesis) and 4 semester projects

ETH

- Fall 2024: Teaching Fellow "*Foundations of Spatial Planning*" (undergraduate)
- Fall 2024: Teaching Fellow "*Social Science Methods for Urban Planning and Urban Studies*" (master)

- Fall 2023: Teaching Fellow “*Basics of RE&IS*” (master)
No ETH teaching evaluation conducted.
- Fall 2021: Teaching Fellow “*Urban Planning and Urban Policy*” (master)
Teaching fellow in the first year of course, helped design outline, content, and Moodle page.
ETH teaching evaluation: 4.7/5 (excellent).

Other universities

- Fall 2022: Guest Lecture ”*Real Estate Economics*” (master) at MIT DUSP for Professor Albert Saiz
- Fall 2022: Guest Lecture ”*Sustainable Urbanization Lab Seminar*” (master) at MIT DUSP for Professor Siqi Zheng
- 2016-2017: Teaching Assistant ”*Intermediate Macroeconomics*” (undergraduate) at Tübingen University
- 2015-2017: Teaching Assistant ”*Introduction to Economics*” (undergraduate) at Tübingen University

Other teaching experience

- 2013-2014: One-year full-time English High School Teacher in Colombia at Colegio INSEANDES, Sogamoso as part of Voluntary Social Service

CONFERENCE PRESENTATIONS

Conference & Workshop Presentations

2025:

UEA European Meeting (Berlin), CRED Seminar (Bern), AREUEA International Conference (Barcelona)

2024:

UCL CASA Workshop (online), Workshop: Research Agenda for Land Use Regulation and Segregation (Zurich), ETH Center for Law and Economics Seminar, Zurichberg Colloquium (Zurich), SPSA Annual Congress 2024, Politics in Proximity Workshop (Zurich), Applied Economics Seminar Universidad del Rosario (Bogotá)

2023:

2023 AREUEA National Conference (Washington DC), NYU Furman Center (NYC), MIT Sustainable Urbanization Research Seminar (Boston), Schweizer Wohntage (Biel), 10 Jahre RPG 1 (ETH Zürich), Royal Geographical Society Annual International Conference 2023 (London), Center for Regional Economic Development Seminar (University of Bern)

2022:

LSE Department of Geography and Environment (London), Swiss Young Economists Meeting (online), Swiss Network on Public Economics General Meeting (Zurich), European Meeting of the Urban Economics Association (London), Annual Congress of Swiss Society of Economics and Statistics (Fribourg), ETH Urban Research Seminar, Zurich Political Economy Seminar Series (online), Konstanz Politics of Place Workshop, North American Meeting of the Urban Economics Association (Washington), CURE (Philadelphia), ACSP Conference (Toronto), MIT SUL Research Seminar (Boston)

2021:

WSL Conference 2021, Ivory Innovations Hack-a-House 2021, LSE Department of Geography and Environment Applied Economics Work-in-Progress Seminar (London)

PROFESSIONAL EXPERIENCE

German Development Cooperation (GIZ) (Intern)	2018
Ernst & Young Global Ltd. (Part-time job during bachelor)	2017-2018
German Central Bank (Summer internship)	2017

SKILLS

Programming Languages: R, Stata, Python, LaTex, ArcGIS, QGIS, Leaflet

Languages: German (native), English (fluent), Spanish (advanced), French (B2)

REFEREEING

Journal of Regional Science (x3), Journal of Housing Economics, Journal of Environmental Planning and Management, Scientific Committee for the AREUEA International Conference 2023 Cambridge, Scientific Committee for Research Partnership Grant of Leading House for the Latin American Region

PUBLIC ENGAGEMENT

Work with Swiss Government Bodies on Sustainable Urban Planning

I meet with Swiss Government Bodies (e.g. Amt für Raumentwicklung Kanton Zürich) to communicate the insights of my research. I was invited to speak at events, such as the Schweizer Wohntage 2023, and my research has been covered in Swiss media.

Ambassador Foundation for the Rights of Future Generations, 2019-2021

Participation in COP26 Climate Negotiations as civil society representative for sustainable urban development, Research and advocacy for intergenerational justice (press interviews, panel speaker e.g. Demographie Tage Rheinland-Pfalz 2021), Judge on German Intergenerational Justice Prize 2020 (Topic: Housing Justice)

REFERENCES

Professor David Kaufmann, ETH Zürich (kadavid@ethz.ch)

Professor Neave O'Clery, University College London (n.oclery@ucl.ac.uk)

Professor Albert Saiz, Massachusetts Institute of Technology (saiz@mit.edu)

Professor Maximilian von Ehrlich, University of Bern (maximilian.vonehrlich@unibe.ch)

Citizenship: Swiss, German