

1
2
3
4

5 Appendices

6 **The Impacts of Remote Work on Residential Space: A Review on Relocation, Multilocality,** 7 **and Spatial Inequality**

8

9 **Appendix 1. The Scopus search queries**

10 *1.1. The search query for residential relocation articles*

11 ("co-working space" OR "coworking space" OR "digital nomad*" OR "digital workplace" OR "distance work*" OR "distributed work*" OR {e-work} OR {e-
12 working} OR "flexible work*" OR "home-based work*" OR "home office" OR "hybrid work*" OR "location-independent work*" OR "mobile office" OR "mobile
13 work*" OR "multi-locat* work*" OR "remote job" OR "remote work*" OR "satellite office" OR telecommut* OR telework* OR "virtual work*" OR "work* from
14 anywhere" OR "work* from home" OR workation OR workcation) AND (relocate* OR relocation OR downsize* OR "residential preference*")

15 *1.2. The search query for multilocal living articles*

16 ("co-working space" OR "coworking space" OR "digital nomad*" OR "digital workplace" OR "distance work*" OR "distributed work*" OR {e-work} OR {e-
17 working} OR "flexible work*" OR "home-based work*" OR "home office" OR "hybrid work*" OR "location-independent work*" OR "mobile office" OR "mobile
18 work*" OR "multi-locat* work*" OR "remote job" OR "remote work*" OR "satellite office" OR telecommut* OR telework* OR "virtual work*" OR "work* from
19 anywhere" OR "work* from home" OR workation OR workcation) AND ("second home" OR "multi-loc*" OR multiloca*)

20 *1.3. The search query for spatial inequality articles*

21 ("co-working space" OR "coworking space" OR "digital nomad*" OR "digital workplace" OR "distance work*" OR "distributed work*" OR {e-work} OR {e-
22 working} OR "flexible work*" OR "home-based work*" OR "home office" OR "hybrid work*" OR "location-independent work*" OR "mobile office" OR "mobile
23 work*" OR "multi-locat* work*" OR "remote job" OR "remote work*" OR "satellite office" OR telecommut* OR telework* OR "virtual work*" OR "work* from

24 anywhere" OR "work* from home" OR workation OR workcation) AND (segregat* OR "spatial inequality" OR "social inequality" OR "socio-spatial inequality"
25 OR "socio-spatial inequality" OR "spatial isolation" OR "socio-economic inequality" OR "socioeconomic inequality" OR "urban inequality" OR "regional
26 inequality" OR "spatial polarization" OR "socio-spatial polarization" OR "socio-spatial polarization" OR "social polarization")

27

28 **Appendix 2. The full list of reviewed articles**

29 *2.1 Table, part A*

Type of impact	Authors	Year	Journal, field	study continent	Study country	study period: 1=precovid; 2= covid crisis 2020-2021; 3=post covid (2022-	study year	study area scale 1=metropolitan/capital region; 2=country-wide; 3=rural regions; 4=Europe-wide; 5=global	study subject 1=employees, subgroup; 2=employees, all; 3=general population; 4=other
inequality	Braesemann et al.	2022	other	Global	Global	12	2013-2020	5	1
inequality	Burchell et al.	2021	urban studies/planning	Europe	EU28	1	2015	4	1
inequality	Howard et al.	2023	economics	N.America	USA	23	2020-2022	2	3
inequality	Irlacher & Koch	2021	economics	Europe	Germany	1	2017-2018	2	1
inequality	Owen et al.	2023	sustainability studies	N.America	USA	2	2021	1	4
inequality	Åberg & Tondelli	2021	sustainability studies	Europe	Sweden	2	2021	3	1
multilocality	Bürgin et al.	2021	other	Europe	Switzerland	1	2019	3	1
multilocality	Ciccarelli et al.	2025	geography/spatial research	Europe	Italy	3	2022-2023	2	1
multilocality	Di Marino et al.	2023	geography/spatial research	Europe	Norway	23	2021-2022	3	4
multilocality	Flipo et al.	2022	regional studies/planning	Europe	France	1	2017-2019	3	1
multilocality	Garde	2021	regional studies/planning	Europe	Germany; Italy	1	2018-2019	1	1
multilocality	Kiviaho & Toivonen	2023	regional studies/planning	Europe	Finland	2	2020	3	4
multilocality	Li & Xu	2023	regional studies/planning	Asia	China	2	2020-2021	1	1
multilocality	Schmidt-Thomé & Lilius	2023	transport & travel behavior	Europe	Finland	23	2021-2022	3	4
relocation	Al-Akioui & Monzon	2023	sustainability studies	Europe	Spain	3	2022	1	3
relocation	Brueckner et al.	2023	Economics	N.America	USA	12	2018-2020	2	2
relocation	Brueckner & Sayantani	2023	Economics	N.America	USA	12	2018-2020	2	2
relocation	Bönnen & Kuhnimhof	2024	transport & travel behavior	Europe	Germany	1	2011;2013	2	1
relocation	Choi	2022	sustainability studies	Asia	South Korea	2	2021	1	4
relocation	de Abreu e Silva	2022	regional studies/planning	Europe	Portugal	2	2021	1	2
relocation	de Vos et al.	2018	regional studies/planning	Europe	the Netherlands	1	2002-2014	2	2

Type of impact	Authors	Year	Journal, field	study continent	Study country	study period: 1=precovid; 2= covid crisis 2020-2021; 3=post covid (2022-	study year	study area scale 1=metropolitan/capital region; 2=country-wide; 3=rural regions; 4=Europe-wide; 5=global	study subject 1=employees, subgroup; 2=employees, all; 3=general population; 4=other
relocation	Moser et al.	2022	urban studies/planning	Europe	Germany	12	2019;2022	1	4
relocation	Paköz & Kaya	2023	transport & travel behavior	Europe	Turkey	2	2020	1	2
relocation	Ravalet & Rérat	2019	geography/spatial research	Europe	Switzerland	1	2010;2015	2	3
relocation	Rohit Kavikondala et al.	2022	other	N.America	USA	12	2019-2020	1	3
relocation	Shakib et al.	2024	transport & travel behavior	N.America	Canada	2	2020	1	2
relocation	Sharifi & Lee	2024	sustainability studies	Asia	Japan	3	2022	1	2
relocation	Stachura & Jagiełło-Kowalczyk	2023	economics	Europe	Poland	2	2021	1	3
relocation	Stefaniec et al.	2022	transport & travel behavior	Europe	Ireland	2	2021	2	1
relocation	Tan et al.	2023	transport & travel behavior	N.America	USA	23	2021-2022	1	1
relocation	Thulin et al.	2023	transport & travel behavior	Europe	Sweden	23	2021-2022	2	1
relocation	Van Acker et al.	2024	transport & travel behavior	ustralia	Australia	2	2020	1	2
relocation	Wolday & Böcker	2023	urban studies/planning	Europe	Norway	2	2020-2021	1	1

Type of impact	Authors	Year	study subject criteria 0=none; 1=sectorial; 2=locational;3=employment type	sector criteria	locational criteria	employment type	study method 1=quantitative; 2=qualitative; 3=mixed	Data source 1=survey; 2=interviews; 3=transactional data; 4=databases; 5=register/census; 6=experiment; 7=other	sample size (for surveys, interviews)
inequality	Braesemann et al.	2022	1	ICT	none	none	1	345	N/A
inequality	Burchell et al.	2021	2	none	work in city	none	2	1	9007
inequality	Howard et al.	2023	0	none	none	none	2	35	N/A
inequality	Irlacher & Koch	2021	3	none	none	min 10h/w	2	1	20018
inequality	Owen et al.	2023	N/A	N/A	N/A	N/A	2	13	N/A
inequality	Åberg & Tondelli	2021	2	none	permanent & part-time residents	none	3	147	129
multilocality	Bürgin et al.	2021	12	knowledge workers	work in second home	none	3	27	6
multilocality	Ciccarelli et al.	2025	2	none	work in co-working space	none	1	1	188
multilocality	Di Marino et al.	2023	N/A	N/A	N/A	N/A	3	24	6
multilocality	Flipo et al.	2022	2	none	work in co-working space	none	3	127	377survey 52 interv.
multilocality	Garde	2021	1	knowledge workers	none	none	2	2	39
multilocality	Kiviaho & Toivonen	2023	N/A	N/A	N/A	N/A	2	27	45
multilocality	Li & Xu	2023	2	none	have second home	none	2	2	35
multilocality	Schmidt-Thomé & Lilius	2023	N/A	N/A	N/A	N/A	2	27	12
relocation	Al-Akioui & Monzon	2023	0	none	none	none	1	1	15666
relocation	Brueckner et al.	2023	0	none	none	none	1	345	N/A
relocation	Brueckner & Sayantani	2023	0	none	none	none	1	345	N/A
relocation	Böhnen & Kuhnimhof	2024	123	non-education	no long-distance commuters	no full RWA	1	1	4085
relocation	Choi	2022	N/A	N/A	N/A	N/A	1	16	95

Type of impact	Authors	Year	study subject criteria 0=none; 1=sectorial; 2=locational;3=employment type	sector criteria	locational criteria	employment type	study method 1=quantitative; 2=qualitative; 3=mixed	Data source 1=survey; 2=interviews; 3=transactional data; 4=databases; 5=register/census; 6=experiment; 7=other	sample size (for surveys, interviews)
relocation	de Abreu e Silva	2022	2	none	work in study area	none	1	1	532
relocation	de Vos et al.	2018	3	none	none	no self-employed	1	1	7497
relocation	Moser et al.	2022	N/A	N/A	N/A	N/A	1	3	N/A
relocation	Paköz & Kaya	2023	2	none	work in study area	none	1	1	186
relocation	Ravalet & Rérat	2019	0	none	none	none	1	1	62868; 57090
relocation	Rohit Kavikondala et al.	2022	1	none	people who moved	none	1	13	2884
relocation	Shakib et al.	2024	0	none	none	none	1	16	913
relocation	Sharifi & Lee	2024	0	none	none	none	1	16	1333
relocation	Stachura & Jagiełło-Kowalczyk	2023	0	none	none	none	1	1	393
relocation	Stefaniec et al.	2022	1	white-collar workers	none	none	1	1	896
relocation	Tan et al.	2023	123	ICT	work in study area	fulltime	1	1	661
relocation	Thulin et al.	2023	13	office workers	none	with RWA	2	2	28
relocation	Van Acker et al.	2024	0	none	none	none	1	1	748
relocation	Wolday & Böcker	2023	2	none	geography & mobility	none	1	1	858

33 **References**

- 34 Al-Akioui, A., & Monzon, A. (2023). Spatial analysis of COVID-19 pandemic impacts on mobility in Madrid region. *Sustainability*, *15*(19), 14259.
- 35 Braesemann, F., Stephany, F., Teutloff, O., Kässi, O., Graham, M., & Lehdonvirta, V. (2022). The global polarisation of remote work. *PLoS ONE*, *17*(10),
36 e0274630.
- 37 Brueckner, J.K., Kahn, M.E., & Lin, G.C. (2023). A new spatial hedonic equilibrium in the emerging work-from-home economy? *American Economic Journal: Applied Economics*, *15*(2), 285-319.
38
- 39 Brueckner, J.K., & Sayantani, S. (2023). Intercity impacts of work-from-home with both remote and non-remote workers. *Journal of Housing Economics*, *59*,
40 101910.
- 41 Burchell, B., Reuschke, D., & Zhang, M. (2021). Spatial and temporal segmenting of urban workplaces: The gendering of multi-locational working. *Urban Studies*, *58*(11), 2207-2232.
42
- 43 Bürgin, R., Mayer, H., Kashev, A., & Haug, S. (2021). Digital multilocality: New modes of working between center and periphery in Switzerland. *Journal of Rural Studies*, *88*, 83-96.
44
- 45 Böhnen, C., & Kuhnimhof, T. (2024). Working from home and commuter travel in Germany – Panel data analysis of long-term effects. *Transportation Research Part A: Policy and Practice*, *190*, 104257.
46
- 47 Choi, H.-Y. (2022). Working in the metaverse: Does telework in a metaverse office have the potential to reduce population pressure in megacities? Evidence
48 from young adults in Seoul, South Korea. *Sustainability*, *14*(6), 3629.
- 49 Ciccarelli, F. C., Mariotti, I., & Rossi, F. (2025). The role of geographical location for work-life balance satisfaction: Insights from Italian coworking spaces.
50 *Applied Geography*, *174*, 103485.
- 51 de Abreu e Silva, J. (2022). Residential preferences, telework perceptions, and the intention to telework: Insights from the Lisbon Metropolitan Area during
52 the COVID-19 pandemic. *Regional Science Policy & Practice*, *14*, 142-162.
- 53 de Vos, D., Meijers, E., & Van Ham, M. (2018). Working from home and the willingness to accept a longer commute. *The Annals of Regional Science*, *61*(2),
54 375-398.
- 55 Di Marino, M., Chavoshi, S.H., Andersen, T., & Nenonen, S. (2023). The future of multilocal work and New Working Spaces in small and medium-sized
56 urban municipalities and in rural municipalities: A Norwegian perspective. *Norwegian Journal of Geography*, *77*(4), 207-223.

- 57 Flipo, A., Lejoux, P., & Ovtracht, N. (2022). Remote and connected: Negotiating marginality in rural coworking spaces and “tiers-lieux” in France. *Region*, 9(2),
58 87-107.
- 59 Garde, L. (2021). Multi-local living employees in Stuttgart and Milan: An analysis of their employer support for the spatial-temporal organisation of their living
60 arrangements. *Spatial Research and Planning*, 79(5), 470-483.
- 61 Howard, G., Liebersohn, J., & Ozimek, A. (2023). The short- and long-run effects of remote work on U.S. housing markets. *Journal of Financial Economics*,
62 150(1), 166-184.
- 63 Irlacher, M., & Koch, M. (2021). Working from home, wages, and regional inequality in the light of COVID-19. *Jahrbücher Für Nationalökonomie Und Statistik*,
64 241(3), 373-404.
- 65 Kiviahho, A., & Toivonen, S. (2023). Forces impacting the real estate market environment in shrinking cities: Possible drivers of future development. *European*
66 *Planning Studies*, 31(1), 189-211.
- 67 Li, J., & Xu, H. (2023). Megaregion development, multilocal dwelling and well-being in China. *Regional Studies*, 57(4), 739-748.
- 68 Moser, J., Wenner, F., & Thierstein, A. (2022). Working from home and COVID-19: Where could residents move to? *Urban Planning*, 7(3), 15-34.
- 69 Owen, D., Arribas-Bel, D., & Rowe, F. (2023). Tracking the transit divide: A multilevel modelling approach of urban inequalities and train ridership disparities
70 in Chicago. *Sustainability*, 15(11), 8821.
- 71 Paköz, M.Z., & Kaya, N. (2024). Personal adaptations to remote working in the post-pandemic city and its potential impact on residential relocations: The case
72 of Istanbul. *Transportation Research Record: Journal of the Transportation Research Board*, 2678(12), 2198-2213.
- 73 Ravalet, E., & Rérat, P. (2019). Teleworking: Decreasing mobility or increasing tolerance of commuting distances? *Built Environment*, 45(4), 582-602.
- 74 Rohit Kavikondala, S.M.K., Sperling, J., Hou, Y., Holden, J., Young, S., Duvall, A., & Yang, A. (2022). Quantifying movement motivations, demand, and inflow-
75 outflow dynamics in four cities (New York, Chicago, Austin, and San Diego) during COVID-19. *International Conference on Transportation and Development*
76 2022, 133-141.
- 77 Schmidt-Thomé, K., & Lilius, J. (2023). Smart shrinkage and multi-locality – The appeal of hope, illustrated through Puolanka, a rural municipality in Finland.
78 *Urban, Planning and Transport Research*, 11(1), 2165140.
- 79 Shakib, S., Hawkins, J., & Habib, K.N. (2024). Perturbation of residential preferences by COVID-19 shocks in the Greater Toronto Area. *Transportation Research*
80 *Record: Journal of the Transportation Research Board*, 2678(12), 702-719.

- 81 Sharifi, A., & Lee, C.Y. (2024). The appeal of cities may not wane due to the COVID-19 pandemic and remote working. *Npj Urban Sustainability*, 4(1), 11.
- 82 Stachura, E.J., & Jagiełło-Kowalczyk, M. (2023). Housing and the pandemic: How has COVID-19 influenced residents' needs and aspirations? *Real Estate Management and Valuation*, 31(2), 18-28.
- 83
- 84 Stefaniec, A., Brazil, W., Whitney, W., & Caulfield, B. (2022). Desire to work from home: Results of an Irish study. *Journal of Transport Geography*, 104, 103416.
- 85 Tan, S., Fang, K., & Lester, T.W. (2023). Post-pandemic travel patterns of remote tech workers. *Transportation Research Interdisciplinary Perspectives*, 19,
- 86 100804.
- 87 Thulin, E., Vilhelmson, B., & Brundin, L. (2023). Telework after confinement: Interrogating the spatiotemporalities of home-based work life. *Journal of Transport Geography*, 113, 103740.
- 88
- 89 Van Acker, V., Ho, L., & Mulley, C. (2024). "Home sweet home". How staying more at home impacted residential satisfaction and residential attachment during the COVID-19 pandemic in Sydney, Australia. *Travel Behaviour and Society*, 34, 100671.
- 90
- 91 Wolday, F., & Böcker, L. (2023). Exploring changes in residential preference during COVID-19: Implications to contemporary urban planning. *Environment and Planning B: Urban Analytics and City Science*, 50(5), 1280-1297.
- 92
- 93 Åberg, H.E., & Tondelli, S. (2021). Escape to the country: A reaction-driven rural renaissance on a Swedish island post COVID-19. *Sustainability*, 13(22), 12895.