Curriculum Vitae

Personal Information

Name:	**Michael Kuhn**
Current affiliation:	Vienna Institute of Demography (VID) International Institute for Applied Systems Analysis (IIASA)
URL:	VID: https://www.oeaw.ac.at/vid/institute/vid-team/michael-kuhn IIASA: https://iiasa.ac.at/staff/michael-kuhn

Higher Education

1995 – 2001	PhD in Economics, Faculty of Economics and Social Sciences, University of Rostock, Germany, Prof Thusnelda Tivig (supervisor) and Prof Michael Rauscher (co-supervisor)
1989 – 1994	Diplom in Economics, Faculty of Economics and Social Sciences, University of Erlangen-Nürnberg, Germany

Appointments & Positions

2026 – present	Research Group Leader Economic Demography, Vienna Institute of Demography
2026 – present	Research Group Leader Economic Frontiers and Principal Research Scholar, International Institute for Applied Systems Analysis
2021 – 2025	Program Director Economic Frontiers and Principal Research Scholar, International Institute for Applied Systems Analysis
2014 – 2021	Research Group Leader Economic Demography, Vienna Institute of Demography
2008 – 2014	Senior Researcher, Population Economics, Vienna Institute of Demography
2005 – 2008	Junior Professor, Max-Planck-Institute of Demographic Research, Rostock, and University of Rostock, Germany
1999 – 2004	Lectureship, Centre for Health Economics and Department of Economics and Related Studies, University of York, UK

Awards and Fellowships

2026 – present	Population Europe Expert
2024 – present	Invited member of CEPR Research Policy Network “Ageing and Longevity”
2014 – present	Co-opted member of the Field Committee on Labour and Population Economics, German Economic Society
2008 – present	Co-opted member of the Field Committee on Health Economics, German Economic Society

Selected Memberships

2005 – present	German Economic Society (Verein für Socialpolitik)
2008 – present	Austrian Economic Society (Nationalökonomische Gesellschaft)

Selected Third Party Funding, Grants and Projects

2025 – 2027	Austrian Climate Research Program (ACRP), Adjusting policy measures to achieve a just transition preventing inequalities and fostering solidary participation (ADJUST) (Grant FO999913152), EUR 131,938, Partner, WP lead
2024 – 2027	Horizon Europe, Multidimensional Transition Pathway Analysis for Sustainable Futures (MultiFutures) (Grant 101137713), EUR 391,700, Partner, WP lead

2022 – 2026	Jubiläumsfonds—Österreichische Nationalbank, Long-term spillover impacts of financial markets on the environment (PVARGLOBIOM) (Projektnummer 18755), EUR 227,000, PI
2022 – 2024	Jubiläumsfonds—Österreichische Nationalbank (Projektnummer 18744), Reducing Inequality Within and Across Generations (RIWAG), 224,000, co-applicant
2020	City of Vienna, MA7 funding (Project: OLWI000340), Heart attacks and socio-economic environment in the City of Vienna (HeartAttacks), PI
2018 – 2021	Austrian Science Fund (FWF) stand-alone project (P30665-G27), Life-cycle behaviour in the face of large shocks to health (LifeShocks), EUR 397,434, Co-PI
2014 – 2017	Austrian Science Fund (FWF) Stand-Alone Project (Project Number P 26184-G11), Medical Progress, Health Expenditure and Population Ageing (MEDPRO), EUR 273,000, PI

Professional and Scholarly Activities

IIASA lead to the (Extended) OECD-IIASA Strategic Partnership on Systems Approaches, since 2021

Co-organiser of the 2020, 2021 and 2023 Wittgenstein Centre International Conferences

Co-Organiser: 2018 Annual Conference of the Austrian Economic Society (NOeG); conference theme "The Future of Health Care Systems"

Editorial Board, Covid Economics: Vetted and Real-time Papers, 2020-2021

Associate Editor, Journal of the Economics of Ageing, since 2015

Research Interests and Approach

My main research interests lie in the areas of population, health and environmental economics, including notably their interface. My approaches to studying them draw in equal measure on microeconomic and macroeconomic methods, including in particular

- life-cycle models with endogenous health and mortality processes
- overlapping generations modelling with realistic demography, integrated with multi-sector economic models
- economic epidemiology
- regional (econometric) methods.
- Advanced optimal control theory, including age-structured models and models with random regime shifts.

My work seeks to represent in particular realistic demographic processes and the complex systemic links between economic, population and environmental systems.

Selected Publications

Population Economics

- Bloom, D. E., Kuhn, M., & Prettner, K. (2024). Fertility in high-income countries: Trends, patterns, determinants, and consequences. *Annual Review of Economics*, *16*(1), 159-184. https://doi.org/10.1146/annurev-economics-081523-013750.
- Siskova, M., Kuhn, M., Prettner, K., & Prskawetz, A. (2023). Does human capital compensate for population decline?. The Journal of the Economics of Ageing, 26, 100469. https://doi.org/10.1016/j.jeoa.2023.100469.
- Kuhn, M. (2023). Medical progress, aging, and sustainability of health care finance. In: The Routledge Handbook of the Economics of Ageing. Eds. Bloom, D.E., Souza-Posa, A., & Sunde, U., 61-83, London, UK: Routledge. https://doi.org/10.4324/9781003150398-5.
- Kuhn, M., & Prettner, K. (2023). Rising longevity, increasing the retirement age, and the consequences for knowledge-based long-run growth. Economica, 90(357), 39-64. https://doi.org/10.1111/ecca.12445.

- Bloom, D. E., Kuhn, M., & Prettner, K. (2020). The contribution of female health to economic development. The Economic Journal, 130(630), 1650-1677. https://doi.org/10.1093/ej/ueaa061.
- Kuhn, M., & Ochsen, C. (2019). Population change and the regional distribution of physicians. The Journal of the Economics of Ageing, 14, 100197. https://doi.org/10.1016/j.jeoa.2019.100197.
- Bloom, D. E., Kuhn, M., & Prettner, K. (2019). Health and economic growth. In: Oxford Research Encyclopedia of Economics and Finance. https://doi.org/10.1093/acrefore/9780190625979.013.36.
- Kuhn, M., & Prettner, K. (2018). Population age structure and consumption growth: evidence from national transfer accounts. Journal of Population Economics, 31(1), 135-153. https://doi.org/10.1007/s00148-017-0654-z.
- Bloom, D. E., Kuhn, M., & Prettner, K. (2017). Africa's prospects for enjoying a demographic dividend. Journal of Demographic Economics, 83(1), 63-76. https://doi.org/10.1017/dem.2016.19.
- Wrzaczek, S., Kuhn, M., Prskawetz, A., & Feichtinger, G. (2010). The reproductive value in distributed optimal control models. Theoretical Population Biology, 77(3), 164-170. https://doi.org/10.1016/j.tpb.2010.01.003.

Health Economics

- Freiberger, M., Kuhn, M., & Wrzaczek, S. (2026). Integrating large health shocks into life-cycle models-Modelling impacts of a cancer diagnosis. *Journal of Economic Dynamics and Control*, 105367. https://doi.org/10.1016/j.jedc.2026.105367.
- Frankovic, I., & Kuhn, M. (2023). Health insurance, endogenous medical progress, health expenditure growth, and welfare. Journal of Health Economics, 87, 102717. https://doi.org/10.1016/j.jhealeco.2022.102717.
- Kelly, M., & Kuhn, M. (2022). Congestion in a public health service: A macro approach. Journal of Macroeconomics, 74, 103451. https://doi.org/10.1016/j.jmacro.2022.103451.
- Chen, S., Kuhn, M., Prettner, K., Bloom, D. E., & Wang, C. (2021). Macro-level efficiency of health expenditure: Estimates for 15 major economies. Social Science & Medicine, 287, 114270. https://doi.org/10.1016/j.socscimed.2021.114270.
- Frankovic, I., Kuhn, M., & Wrzaczek, S. (2020). Medical innovation and its diffusion: Implications for economic performance and welfare. Journal of macroeconomics, 66, 103262. https://doi.org/10.1016/j.jmacro.2020.103262.
- Frankovic, I., & Kuhn, M. (2019). Access to health care, medical progress and the emergence of the longevity gap: A general equilibrium analysis. The Journal of the Economics of Ageing, 14, 100188. https://doi.org/10.1016/j.jeoa.2019.01.002.
- Kuhn, M., & Prettner, K. (2016). Growth and welfare effects of health care in knowledge-based economies. Journal of Health Economics, 46, 100-119. https://doi.org/10.1016/j.jhealeco.2016.01.009.
- Kuhn, M., Wrzaczek, S., Prskawetz, A., & Feichtinger, G. (2015). Optimal choice of health and retirement in a life-cycle model. Journal of Economic Theory, 158, 186-212. https://doi.org/10.1016/j.jet.2015.04.006.
- Kuhn, M., & Nuscheler, R. (2011). Optimal public provision of nursing homes and the role of information. Journal of health economics, 30(4), 795-810. https://doi.org/10.1016/j.jhealeco.2011.04.006.
- Brekke, K. R., & Kuhn, M. (2006). Direct to consumer advertising in pharmaceutical markets. Journal of health Economics, 25(1), 102-130. https://doi.org/10.1016/j.jhealeco.2005.06.003.

Economic Epidemiology and Economic Burden of Disease

- Chen, S., Cao, Z., Chen, W., Zhao, J., Jiao, L., Prettner, K., Kuhn, M.,... & Bloom, D. E. (2026). The global macroeconomic burden of diabetes mellitus. Nature Medicine, 32(1), 126-138. https://doi.org/10.1038/s41591-025-04027-5.
- Chen, S., Cao, Z., Nandi, A., Counts, N., Jiao, L., Prettner, K., Kuhn, M.,... & Bloom, D. E. (2024). The global macroeconomic burden of Alzheimer's disease and other dementias: estimates and projections for 152 countries or territories. *The Lancet Global Health*, *12*(9), e1534-e1543. https://doi.org/https://doi.org/10.1016/S2214-109X(24)00264-X .

- Grass, D., Wrzaczek, S., Caulkins, J. P., Feichtinger, G., Hartl, R. F., Kort, P. M., Kuhn, M.,... & Seidl, A. (2024). Riding the waves from epidemic to endemic: Viral mutations, immunological change and policy responses. Theoretical Population Biology, 156, 46-65. https://doi.org/10.1016/j.tpb.2024.02.002.
- Caulkins, J. P., Grass, D., Feichtinger, G., Hartl, R. F., Kort, P. M., Kuhn, M., ... & Wrzaczek, S. (2023). The hammer and the jab: Are COVID-19 lockdowns and vaccinations complements or substitutes?. *European Journal of Operational Research*, *311*(1), 233-250. https://doi.org/10.1016/j.ejor.2023.04.033.
- Chen, S., Cao, Z., Prettner, K., Kuhn, M., Yang, J., Jiao, L., ... & Wang, C. (2023). Estimates and projections of the global economic cost of 29 cancers in 204 countries and territories from 2020 to 2050. JAMA oncology, 9(4), 465-472. https://doi.org/10.1001/jamaoncol.2022.7826.
- Freiberger, M., Grass, D., Kuhn, M., Seidl, A., & Wrzaczek, S. (2022). Chasing up and locking down the virus: Optimal pandemic interventions within a network. Journal of Public Economic Theory, 24(5), 1182-1217. https://doi.org/10.1111/jpet.12604.
- Bloom, D. E., Kuhn, M., & Prettner, K. (2022). Modern infectious diseases: macroeconomic impacts and policy responses. Journal of Economic Literature, 60(1), 85-131. https://doi.org/10.1257/jel.20201642.
- Bloom, D. E., Chen, S., Kuhn, M., McGovern, M. E., Oxley, L., & Prettner, K. (2020). The economic burden of chronic diseases: estimates and projections for China, Japan, and South Korea. The Journal of the Economics of Ageing, 17, 100163. https://doi.org/10.1016/j.jeoa.2018.09.002.
- Chen, S., Kuhn, M., Prettner, K., & Bloom, D. E. (2019). Noncommunicable diseases attributable to tobacco use in China: macroeconomic burden and tobacco control policies. Health Affairs, 38(11), 1832-1839. https://doi.org/10.1377/hlthaff.2019.00291.
- Chen, S., Kuhn, M., Prettner, K., & Bloom, D. E. (2018). The macroeconomic burden of noncommunicable diseases in the United States: Estimates and projections. PloS one, 13(11), e0206702. https://doi.org/10.1371/journal.pone.0206702.

Environmental and Resource Economics

- Grass, D., Kuhn, M., Patange, O., Prskawetz, A., & Wrzaczek, S. (2025). Out of the black into the green? Modeling the pathways for regional coal transitions. European Journal of Operational Research. https://doi.org/10.1016/j.ejor.2025.12.045.
- Luckeneder, S., Maus, V., Siqueira-Gay, J., Krisztin, T., & Kuhn, M. (2025). Forest loss and uncertain economic gains from industrial and garimpo mining in Brazilian municipalities. Nature Communications, 16(1), 6543. https://doi.org/10.1038/s41467-025-61930-8.
- Borghi, J., & Kuhn, M. (2024). A health economics perspective on behavioural responses to climate change across geographic, socio-economic and demographic strata. Environmental Research Letters, 19(8), 081001. https://doi.org/10.1088/1748-9326/ad5d0c.
- Wrzaczek, S., Kuhn, M., & Frankovic, I. (2020). Using age structure for a multi-stage optimal control model with random switching time. Journal of Optimization Theory and Applications, 184(3), 1065-1082. https://doi.org/10.1007/s10957-019-01598-5.

Complete Publication List

Link: https://orcid.org/0000-0003-0424-3221

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