

Tibor Szendrei

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🌐 <https://econometibi.github.io/>

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Employment History




- 2024 –  **Senior Economist**, National Institute of Economic and Social Research
- 2022 – 2024  **Research Assistant**, Heriot-Watt University
Projects: Statistical Review of World Energy (BP, Energy Institute), Negative Externalities on Green Economic and Financial Growth, Data-Driven Carbon and Energy Price Forecasting
- 2021 – 2024  **Teaching Assistant**, Edinburgh University (Scottish Graduate Programme in Economics)
Course: Econometrics 2: Time Series
- 2021 – 2021  **Intern**, National Institute of Economic and Social Research
- 2019 – 2024  **Teaching Assistant**, Heriot-Watt University
Courses: Statistical Techniques, Introductory Econometrics, Introductory Economics, Intermediate Economics 2, The Economy, Applied Financial Modelling in Python
- 2017 – 2018  **Economist**, Central Bank of Hungary
- 2016 – 2017  **Analyst**, Central Bank of Hungary
- 2015 – 2016  **Junior Analyst**, Central Bank of Hungary

Education

- 2019 – 2024  **Ph.D. Economics, Heriot-Watt University.**
Thesis title: *Essays in Quantile Regression with Growth-at-Risk and allied applications* (Passed with minor corrections)
- 2018 – 2019  **M.Sc. Economics (Econometrics), University of Edinburgh** in Scottish Graduate Programme in Economics.
Dissertation title: *Modelling house prices: QARDL vs. HaR.*
- 2013 – 2014  **M.Sc. Economic Studies (Social Economics), Maastricht University.**
Dissertation title: *Regulatory Forbearance: A Comprehensive Look at What It Is and What It Does.*
- 2010 – 2013  **B.Sc. International Economic Studies, Maastricht University.**
Dissertation title: *Does the Presence of Zombie Banks Disrupt the Schumpeterian Notion of Creative Destruction?*

Miscellaneous

Research community

- Reading Group  Helped organise the Economics Reading Group at Heriot-Watt University (2019-2023).
- Referee Activity  Spatial Economic Analysis, Journal of Statistical Software, International Review of Financial Analysis, Science Progress, Journal of Forecasting.
- Conference presentations  CESS (2016), ASMDA (2017), CEPR/ESRB/MNB (2017), ELTE Financial Statistics (2017), SGPE Crieff (2020, 2021, 2022, 2023); Panmure House (2020, 2021, 2022), CFE (2021, 2024), DAFM (2021), ISF (2021, 2024), IWAP (2023), RiskLab/BoF (2024), EEA (2024), MMF (2024)

Miscellaneous (continued)

Skills

Languages	■	Fluent in Hungarian and English. Beginner level in Japanese
Coding	■	MATLAB, R, Python, Julia, Stata, \LaTeX .

Awards and Achievements

2019-2023	■	Studentship , Economic and Social Research Council +3 Studentship for PhD and Covid-19 related extension.
2019	■	Graduated with distinction , University of Edinburgh.
2014	■	Graduated Cum Laude , Maastricht University.
	■	PREMIUM programme , Maastricht University.
2013	■	MaRBLLe programme , Maastricht University.

Research Publications

Journal Articles

- 1 Bhattacharjee, A., Pabst, A., **Szendrei, T.**, & Hewings, G. J. D. (2024). NiReMS: A regional model at household level combining spatial econometrics with dynamic microsimulation. *Spatial Economic Analysis*, 19(3), 436–461. <https://doi.org/10.1080/17421772.2024.2333978>
- 2 Varga, K., & **Szendrei, T.** (2024). Non-stationary financial risk factors and macroeconomic vulnerability for the uk. *International Review of Financial Analysis*, 103866. <https://doi.org/10.1016/j.irfa.2024.103866>
- 3 Kohns, D., & **Szendrei, T.** (2023). Horseshoe prior Bayesian quantile regression. *Journal of the Royal Statistical Society Series C: Applied Statistics*, 73(1), 193–220. <https://doi.org/10.1093/jrssc/qlad091>
- 4 **Szendrei, T.**, & Varga, K. (2023). Revisiting vulnerable growth in the Euro Area: Identifying the role of financial conditions in the distribution. *Economics Letters*, 223, 110990. <https://doi.org/10.1016/j.econlet.2023.110990>
- 5 **Szendrei, T.**, & Varga, K. (2020). FISS—A Factor-based Index of Systemic Stress in the Financial System. *Russian Journal of Money and Finance*, 79(1), 3–34. <https://doi.org/10.31477/rjmf.202001.03>
- 6 Lakos, G., & **Szendrei, T.** (2017). Explanations of Asset Price Bubbles. *Financial and Economic Review*, 16(4), 122–150. <https://ideas.repec.org/a/mbn/finrev/v16y2017i4p122-150.html>

Books and Chapters

- 1 Ersoy, E., Li, H., Schaffer, M. E., & **Szendrei, T.** (2024). Stacking Regression for Time-Series, with an Application to Forecasting Quarterly US GDP Growth (N. Ngoc Thach, V. Kreinovich, D. T. Ha, & N. D. Trung, Eds.). In N. Ngoc Thach, V. Kreinovich, D. T. Ha, & N. D. Trung (Eds.), *Optimal Transport Statistics for Economics and Related Topics*. Cham, Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-35763-3_7

Working Papers

- 1 **Szendrei, T.**, & Bhattacharjee, A. (2024). *Momentum Informed Inflation-at-Risk* [arXiv preprint arXiv:2408.12286]. <https://arxiv.org/abs/2408.12286>

- 2 **Szendrei, T.**, Bhattacharjee, A., & Schaffer, M. E. (2024a). *Fused LASSO as Non-Crossing Quantile Regression* [arXiv preprint arXiv:2403.14036]. <https://doi.org/10.48550/arXiv.2403.14036>
- 3 **Szendrei, T.**, Bhattacharjee, A., & Schaffer, M. E. (2024b). *MIDAS-QR with 2-Dimensional Structure* [arXiv preprint arXiv:2406.15157]. <https://doi.org/10.48550/arXiv.2406.15157>
- 4 **Szendrei, T.**, Eross, A., Wasseja, M., & Ersoy, E. (2024). *Investigating the Effect of Green Finance Initiatives on Renewable Energy Penetration in Europe* [Available at SSRN 4751835. Submitted to Applied Energy]. <https://dx.doi.org/10.2139/ssrn.4751835>
- 5 Kohns, D., & **Szendrei, T.** (2021). *Shrink then Sparsify: Identifying Drivers of Tail Risk* [arXiv preprint arXiv:2107.08498. Submitted to Journal of the Royal Statistical Society Series C: Applied Statistics]. <https://doi.org/10.48550/arXiv.2107.08498>
- 6 Berki, T., & **Szendrei, T.** (2017). *The cyclical position of housing prices: A VECM approach for Hungary*. <https://hdl.handle.net/10419/173448>

Work in Progress

- 1 Bhattacharjee, A., Pabst, A., da Silva Gomes, E., Smith, R., & **Szendrei, T.** (2024). Factor model based regional indices [WIP].
- 2 Christev, A., Holly, S., & **Szendrei, T.** (2024). Aggregate uncertainty and firm-size growth asymmetry along the business cycle [WIP].
- 3 Kohns, D., & **Szendrei, T.** (2024). Joint Quantile Shrinkage: Toward Non-Crossing Bayesian Quantile Models [WIP].
- 4 **Szendrei, T.**, & Schaffer, M. E. (2024). Crossing penalised CAViaR [WIP].
- 5 Wasseja, M., Eross, A., Ersoy, E., & **Szendrei, T.** (2024). Unravelling the Spatial Risk factors of Green Growth in EU [WIP].

Policy Reports

- 1 Bhattacharjee, A., Pabst, A., & **Szendrei, T.** (2022). Box F: The Northern Ireland Protocol-Lost Opportunities for Northern Ireland? [Box]. National Institute of Economic & Social Research.
- 2 Bhattacharjee, A., & **Szendrei, T.** (2022). Box D: National Institute Regional Modelling System (NiReMS): Methodology and Updates [Box]. National Institute of Economic & Social Research.
- 3 Mosley, M., & **Szendrei, T.** (2022). Box D: Measuring the effect of the cost-of-living crisis on low-income households [Box]. National Institute of Economic & Social Research.
- 4 Bhattacharjee, A., & **Szendrei, T.** (2021). Box E: Distributional impacts of Covid-19 and potential for policy intervention [Box]. National Institute of Economic & Social Research.