Tibor Szendrei

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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?*

Research Publications

Journal Articles

1. **Szendrei, T.**, Eross, A., Wasseja, M., & Ersoy, E. (2025). FiT for Purpose? Investigating the Effects of Feed-in-Tariffs on Renewable Energy Penetration in Europe [Forthcoming]. *"Applied Energy"*.
2. Varga, K., & **Szendrei, T.** (2025). Non-stationary financial risk factors and macroeconomic vulnerability for the uk. *International Review of Financial Analysis*, *97*, 103866.
   https://doi.org/https://doi.org/10.1016/j.irfa.2024.103866
3. Kohns, D., & **Szendrei, T.** (2024). Horseshoe prior Bayesian quantile regression. *Journal of the Royal Statistical Society Series C: Applied Statistics*, *73*(1), 193–220.
   https://doi.org/10.1093/jrsssc/qlad091
4. 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
5. **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

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.** (2025). *Crossing penalised CAViaR* [arXiv preprint arXiv:2501.10564]. https://arxiv.org/abs/2501.10564
2. **Szendrei, T.**, & Bhattacharjee, A. (2024). *Momentum Informed Inflation-at-Risk* [arXiv preprint arXiv:2408.12286]. https://arxiv.org/abs/2408.12286
3. **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
4. **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
5. Kohns, D., & **Szendrei, T.** (2021). *Shrink then Sparsify: Identifying Drivers of Tail Risk* [arXiv preprint arXiv:2107.08498]. https://doi.org/10.48550/arXiv.2107.08498

Work in Progress

1. Bhattacharjee, A., Pabst, A., da Silva Gomes, E., Smith, R., & **Szendrei, T.** (n.d.). Factor model based regional indices [WIP].
2. Christev, A., Holly, S., & **Szendrei, T.** (n.d.). Aggregate uncertainty and firm-size growth asymmetry along the business cycle [WIP].
3. Kohns, D., & **Szendrei, T.** (n.d.). Joint Quantile Shrinkage: Toward Non-Crossing Bayesian Quantile Models [WIP].
4. **Szendrei, T.**, Vago, N., & Varga, K. (n.d.). A Roof Over Risk: House Price-at-Risk for Hungary [WIP].
5. **Szendrei, T.**, Varga, K., & Palicz, A. (n.d.). Interconnected Risks: Growth-at-Risk with Spatial Spillovers [WIP].
6. Wasseja, M., Eross, A., Ersoy, E., & **Szendrei, T.** (n.d.). Unravelling the Spatial Risk factors of Green Growth in EU [WIP].

Teaching

2021 – 2024 **University of Edinburgh (Scottish Graduate Programme in Economics)**
Econometrics 2: Time Series (PG)

2019 – 2024 **Heriot-Watt University**
Statistical Techniques (UG)
Introductory Econometrics (UG)
Introductory Economics (UG, PG)
Intermediate Economics 2 (UG)
The Economy (UG)
Applied Financial Modelling in Python (UG)

Employment History

2024 – · · · · **Senior Economist,** National Institute of Economic and Social Research
2022 – 2024 **Research Assistant,** Heriot-Watt University
2021 – 2021 **Intern,** National Institute of Economic and Social Research
2017 – 2018 **Economist,** Central Bank of Hungary
2016 – 2017 **Analyst,** Central Bank of Hungary
2015 – 2016 **Junior Analyst,** Central Bank of Hungary

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, Mathematics.
Conference presentations	CESS (2016), CEPR/ESRB/MNB (2017), ELTE Financial Statistics (2017), SGPE Crieff (2020, 2021, 2022, 2023); Panmure House (2020, 2021, 2022, 2024), CFE (2021, 2024), DAFM/BoE (2021), ISF (2021, 2024), IWAP (2023), RiskLab/BoF (2024), EEA (2024), MMF (2024), RSA (2025), IAAE (2025), RSS (2025)

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	**MaRBLe programme**, Maastricht University.

Other Publications

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.

Pre-Doctoral works

1. **Szendrei, T.**, & Varga, K. (2020). FISS–A Factor-based Index of Systemic Stress in the Financial System [PrePhD]. `https://doi.org/10.31477/rjmf.202001.03`
2. Berki, T., & **Szendrei, T.** (2017). The cyclical position of housing prices: A VECM approach for Hungary [PrePhD]. `https://hdl.handle.net/10419/173448`
3. Lakos, G., & **Szendrei, T.** (2017). Explanations of Asset Price Bubbles [PrePhD]. `https://ideas.repec.org/a/mnb/finrev/v16y2017i4p122-150.html`