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 **Edinburgh University (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), ASMDA (2017), 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)

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