

# Senior and junior supervisor research topic application for the IPhD Programme in Regional Development, 2023-24year

Name/position of the senior supervisor: Prof. Dr. László Szerb, full professor  
Highest academic degree: DSc.



Name/position of the junior supervisor: Balázs Kovács  
Highest academic degree: PhD

**Title of the suggested research topic:** Examining entrepreneurial and digital ecosystems

## **The international relevance, importance, and timely of the research topic:**

Over the past decade, the study of entrepreneurial ecosystems has been one of the most dynamic areas of economic research. Research on digital entrepreneurship - analyzing the relationship between entrepreneurship and digitalization - has an even shorter history. Digitalization, the emergence of the internet, platforms and cyberspace have fundamentally transformed the entrepreneurial environment, what we call the digital entrepreneurial ecosystem. A good ecosystem effectively contributes to the emergence of new firms with high growth potential in the area, which are the main vehicles for technological innovation, as opposed to established firms.

## **Which UP-FBE research could the PhD candidate join?**

The University of Pécs, faculty of Business and economics (UP-FBE) is one of the world leaders on researching entrepreneurial ecosystems, as several highly cited publications in top journals show. The entrepreneurship research group is part of the RIERC research directions. The Global Entrepreneurship Index (GEI) measured the effectiveness and configuration of entrepreneurial ecosystems in countries around the world from 2009 to 2019, and the REDI, developed for 125 regions of the European Union, did the same at regional level. Our latest product is the Digital Platform Economy Index (DPE), a new composite indicator developed to measure digital entrepreneurial ecosystems. Our website [www.thegedi.org](http://www.thegedi.org) provides a wealth of information on it.

## **Possible research directions:**

In collaboration with other world-class researchers - Zoltán Ács, Erkkó Autio, Esteban Lafuente, Marcus Dejardin, Maxim Belitski - we are constantly running projects that students can join. We are currently researching entrepreneurial ecosystems in Hungarian city regions and digital entrepreneurship at national level. The conceptual model we have developed provides a good basis for researching emerging tech/digital entrepreneurship and new technologies. In particular, studies exploring the diffusion and diffusion of digital technologies, their spatial effects and mechanisms, or smart specialization could prove fruitful. The governance of ecosystems and the identification of their different types is also an interesting area, but the spread of artificial intelligence, which is currently on the rise, could

also be an excellent research direction. Developing and lower developed country characteristics can also be examined through the lens of ecosystems.

### **The supervisor's expertise and experience in the research field**

Researchers at the PTE are at the forefront of international research on this topic. Together with Zoltán Ács and myself, we have developed the world's first index measuring the entrepreneurial system, the GEI. This indicator contained a number of methodological innovations that will allow the development of economic policy recommendations to improve the entrepreneurial ecosystem. Since then, I have been involved in the development of several other indices, mostly as a leader, including REDI measuring regional entrepreneurial ecosystems and DEI and EIDES measuring digital ecosystems at national level. Our paper in *Research Policy* in 2014 won the journal's Citation of Excellence award. The regional version of the GEI, REDI, measures the level of entrepreneurial ecosystems in 125 regions of the European Union. Both the GEI and REDI have proven to be suitable for analyzing the relationship between economic growth and entrepreneurship. And for its analysis of smart specialization and the entrepreneurial ecosystem, it won the Martin Beckmann Prize for the best publication of 2020 in the journal *Papers in Regional Science*. According to a summary article in 2020, Szerb is among the world's top 10 authors in the field of entrepreneurial ecosystems (<https://www.igi-global.com/article/entrepreneurial-ecosystem-research/259927> ).

### **The most important publications in the research field over the last five years**

**2022:** Ács, Z. J., Lafuente, E., & Szerb, L. (2021). The digital ecosystem around the world: A composite indicator analysis. *Journal of Platform Economics*, Vol. 1, No. 1 (2022) 2150001 (26 pages) <https://doi.org/10.1142/S2810903121500011>

**2022:** Lafuente, E., Ács, Z. J., & Szerb, L. (2022). A composite indicator analysis for optimizing entrepreneurial ecosystems. *Research Policy*, 51(9), 104379. <https://doi.org/10.1016/j.respol.2021.104379>

**2021:** Ács, Z. J., Lafuente, E., & Szerb, L. (2021). A note on the configuration of the digital ecosystem in Latin America. *Tec Empresarial*, 16(1), 1–19. <https://doi.org/10.18845/te.v16i1.5926>

**2021:** Acs, Z.J., Song, A.K., Szerb, L., Audretsch, D.B, Komlósi, É. (2021) The evolution of the global digital platform economy: 1971–2021. *Small Business Economics* 57, 1629–1659 (2021). <https://doi.org/10.1007/s11187-021-00561-x>

**2021:** Szerb, L. ; E. Lafuente ; Rappai, G.; Kehl, D. (2021): Összetett indexek gazdaságpolitikai alkalmazása: a Globális Vállalkozói Index; SZIGMA 52 : 3 pp. 213-229., 17 p. (2021)

**2020:** Lafuente, E., Acs, Z., Sanders, M., & Szerb, L. (2020) The global technology frontier: productivity growth and the relevance of Kirznerian and Schumpeterian entrepreneurship, *Small Business Economics* 55: 153-178; <https://doi.org/10.1007/s11187-019-00140-1>

**2020:** Szerb, L., Komlósi, É., & Páger, B. (2020). Új technológiai cégek az Ipar 4.0 küszöbén. *Vezetéstudomány/Budapest Management Review*, 51(6), 81-96.

ISSN 0133-0179 DOI: 10.14267/VEZTUD.2020.06.08, <http://unipub.lib.uni-corvinus.hu/5712/1/396-Article.pdf>

**2020:** Szerb, L.; R. Ortega-Argilés; Acs, J. Z.; and É. Komlósi (2020) Optimizing Entrepreneurial Development Processes for Smart Specialization in the European Union, *Papers in Regional Science* 99(5), pp. 1413-1457, <https://doi.org/10.1111/pirs.12536>

**2020** Lafuente, E.; Szerb L.; Rideg A. (2020) A system dynamics approach for assessing SME competitiveness, *Journal of Small Business and Enterprise Development* 27(4); pp. 555-578. <https://doi.org/10.1108/JSBED-06-2019-0204>

**2020:** Varga A., Sebestyén T., Szerb L. Szabó, N. (2020) Estimating the economic impacts of knowledge network and entrepreneurship development in smart specialisation policy; *Regional Studies*, 54(1) pp. 48-59 available online DOI: <https://doi.org/10.1080/00343404.2018.1527026>