Industrial Strategy and Competitiveness Research Using Innovative Data Analytics

Summary

A research team working on industrial strategy and competitiveness using innovative data analytical methods and tools is looking for a PhD candidate interested in economic complexity and global value chains. The PhD candidate would join the two on-going international projects, carried out in co-operation with outstanding research partners.

Research field:	Business
Supervisors:	Prof. Dr. Tarmo Kalvet
	Dr. Marek Tiits
Availability:	This position is available.
Offered by:	School of Business and Governance
	Department of Business Administration
Application deadline:	Applications are accepted between January 01, 2024 00:00 and January 22, 2024 23:59 (Europe/Zurich)

Description

The research group is driven by the understanding that the living standard of nations depends fundamentally on their ability to earn export revenues. The dependence on foreign trade is especially obvious for small(er) economies. However, not all products are the same in terms of their potential to contribute to the increase in living standards. Evolutionary economics maintains that in order to increase living standards, nations should increase the knowledge intensity of products. Research on economic complexity operationalises this by focusing on the ubiquity and related-ness of products, and the analysis of potential pathways for entering more complex product groups. Open-data, big-data, and other novel data science approaches are currently seen as transforming the landscape for socio-economic policy and research, as well as for business management and decision-making.

The objective of the research project is to develop research methods, with a particular focus on advanced data analytics skills to be exploited to conduct improved analysis of global value chains (GVCs) and clusters, and to identify and analyse the impact of relevant public policies.

Responsibilities and (foreseen) tasks

The researcher is expected to contribute to the research project "Economic Complexity, Machine Learning and Economic Policy" (2022-2025). This project advances the state-of-the art by integrating the market demand side of the international trade and considering risks involved in a country's participation in global value chains. Another major novelty is the inclusion of data not generally utilised for such research and the use of explainable machine learning, acknowledged as a crucial feature for the practical deployment of AI models. On the basis of the research, a framework is built on business intelligence and public services, and on policy support. The above leads to actionable research results on upgrading the competitive advantages and securing the strategic autonomy of the European economies.

The researcher will be also part of the H2020 project "Industrial Strategy and Competitiveness Studies at Tal-Tech" (2020-2024). This project develops strategic partnership between TalTech as the beneficiary, and Bocconi University (Italy), Aalto University (Finland) and NESTA (United Kingdom).

The candidate is also expected to engage in small-scale teaching and supervision as well as active participation in the department's activities.

The candidate is expected to have master's degree in economics or policy/governance studies or ICT, have very good command of English and have very good qualitative and quantitative (such as R) research skills.

The candidate should submit **a research plan for the topic**, including the general research and data collection approach. The candidate can expand on the listed research questions and tasks, and propose theoretical lenses to be used.

We offer

- 4-year PhD position (employed as an Early-Stage Researcher at the Department of Business Administration) in a strong team of researchers with international publication records and experience in leading and participating in pan-European research consortia.
- The chance to do high-level research in a dynamic academic environment.
- Opportunities to be involved in ongoing research projects and in new initiatives and to be part of an evolving collaborative research network.
- Fully funded based on the employment contract, including a guaranteed gross income of at least 1828 EUR per month and social and health benefits for a nominal study period of up to 4 years. Optional remunerated larger scale teaching activities or high-level publications are possible.

About the department

Tallinn University of Technology (TalTech) is an international scientific community with approximately 9,000 students and 2,000 employees, one of the largest universities in Estonia that is the leading EU country in digitalization. The strengths of the university are wide multidisciplinary study/research interests, modern research and study environment as well as strong collaboration with international educational and research institutions. TalTech is aiming to be an organization leading the way to a sustainable digital future.

TalTech has a green and one of the most compact university campuses in Europe that includes the Tehnopol Tallinn Science Park. Low hierarchy, academic freedom and a balanced work and family life are valued at TalTech. The university provides individual development and training opportunities, material and non-material tokens of acknowledgement, sporting opportunities at TalTech Sports Club and all-staff activities.

TalTech as an employer brings together representatives from a wide range of disciplines - engineers and economists, business and biotechnology, and data scientists - with a common mission to develop Estonian higher education and research. Keywords that characterize TalTech today are rapid development, interdisciplinarity, and internationalization. The university has an international working environment and the working languages are English and Estonian.

The research carried out at the Department of Business Administration in the School of Business and Governance in TalTech deals with various aspects of business – entrepreneurship, sustainability, knowledge and technology transfer, operations and strategic management, digitalization, marketing, supply chain management, accounting and performance management. The School has over 200 employees.

The department is highly internationalised. Its staff have been involved in a multitude of international research projects with the EU (INTERREG, COST, Horizon Europe etc).

For further information, please contact Prof Tarmo Kalvet Tarmo.Kalvet@taltech.ee and visit https://taltech.ee/en/department-business-administration and https://taltech.ee/en/phd-admission

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