Sustainable Service Innovation in Technology-Driven Business Models

Summary

In the context of accelerating digital transformation and growing sustainability imperatives, technology-driven business models are undergoing profound innovation. The project aims to explore how digital services can drive sustainability while scaling globally and how sustainable innovation in technology-driven models in general interacts with international business expansion. The applications for this study can be mobile banking, decentralized finance, blockchain, decentralized autonomous organization, AI, technology ventures and others. Examining the interplay between sustainability-oriented service innovation and institutional, regulatory, and cultural dynamics across borders, with a particular focus on risk management strategies and addressing uncertainties in international markets will be conducted by comprehesive qualitative and/or quantitative methodology and international comparative analysis. The project outcomes will contribute to business models studies, innovation capabilities, risk mitigation approaches and ecosystem partnerships that facilitate sustainable international growth in fintech and other technology driven businesses. Research will contribute to theory at the intersection of international business, service innovation, risk management, and sustainability transitions.

Research field:	Business
Supervisors:	Marina Järvis Daria Podmetina
Availability:	This position is available.
Offered by:	School of Business and Governance Department of Business Administration
Application deadline:	Applications are accepted between June 01, 2025 00:00 and June 30, 2025 23:59 (Europe/Zurich)

Description

Main Supervisor: Senior Researcher Daria Podmetina (PhD)

Co-Supervisor: Assistant Professor Marina Järvis (PhD)

The research will address the opportunities and challenges of sustainable innovation in fintech and other technology driven businesses, with a special emphasis on risk management. The project will analyze how companies identify, assess, and manage risks related to regulatory changes, cybersecurity, market volatility, and cross-border operations. By integrating risk management frameworks into the analysis of sustainable business models, the research will provide actionable insights for practitioners and policymakers aiming to foster robust and responsible international expansion.

We foresee a planned cooperation with relevant fintech and technology professional in academia, including Taltech and in industry and also integration into relevant projects in the field.

Responsibilities and (foreseen) tasks

- Conduct independent and collaborative research on sustainable innovation in technology-driven business models with international business implications, including the identification and management of key risks (regulatory, technological, operational, and reputational).
- Perform literature reviews, develop conceptual frameworks, and formulate relevant research questions and hypotheses.
- Collect and analyze qualitative and/or quantitative data from companies, regulators, and other stakeholders across multiple countries, including Estonia.
- Write academic publications for international peer-reviewed journals and conferences.
- Actively participate in the department's research group(s) on sustainable innovation, international business, or digital transformation and risk management.
- Support teaching activities (e.g., seminars, supervision) related to innovation, entrepreneurship, or international business and risk management.

- Engage in research communication, stakeholder engagement, and knowledge transfer activities with industry and policy partners.
- Contribute to internal funding applications and national/international grant proposals.
- Contribute to small-scale teaching and/or supervising activities of the department.

The candidate is expected to have

- A Master's degree (or equivalent) in business, innovation management, economics, international business, entrepreneurship, or a related field
- Demonstrated interest in at least one of the following areas: fintech, sustainability, service innovation, or international business
- Good analytical and writing skills, with the motivation to produce high-quality academic publications
- Strong communication and collaboration skills
- Very good command of English (both spoken and written)

The following experience is beneficial

- Prior experience in applied research or industry projects related to digital business models, innovation, or financial services
- Relevant academic publication experience and participation in national and international conferences
- Familiarity with qualitative and/or quantitative research methods
- Familiarity with data collection/analysis software like NVivo, MaxQDA, SPSS, Stata, Qualtrix etc.
- Experience in stakeholder engagement or policy-relevant research
- Previous participation in international academic networks, research conferences, or student exchange programs
- Background in working with or researching digital platforms, startups, or innovation ecosystems and risk management in business contexts.

This project aligns with TalTech's strategic focus on digital transformation, green economy, and innovation for sustainable development. By investigating how fintech-enabled service innovation can foster sustainable international business models, especially in small open economies like Estonia, the project will generate valuable insights for policymakers, entrepreneurs, and investors. The integration of risk management into the research will help Estonian companies anticipate and mitigate challenges in international markets, supporting Estonia's ambitions in digital finance and green innovation. The project will strengthen research capacity within the Department of Business Administration in sustainable and international innovation, risk management, and support talent development in Estonia's innovation ecosystem.

The project team will actively apply for national and international research funding to support the Early-Stage Researcher's salary and research activities. Key funding sources include:

- Estonian Research Council grants
- Erasmus, Horizon Europe and Digital Europe Programme calls relevant to fintech, sustainability, and service innovation
- Collaboration with Estonian and European industry partners for co-funded or contract research
- Targeted applications to foundations and bilateral cooperation funds supporting digital and sustainable transformation (e.g., Nordic-Baltic cooperation, EIT Digital/Climate)

The PhD student will be involved in grant writing and project development to build long-term research and career sustainability.

The initial research plan

The candidate should submit an initial research plan for the topic, including the overall research and data collection strategy. The candidate can expand on the listed research questions and tasks and propose theoretical lenses to be used. The research plan will be developed further considering project aim and research questions as well as ongoing project activities once the candidate is admitted.

We offer

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- 4-year PhD position (employed as an Early-Stage Researcher at the Department of Business Administration) in a strong team of researchers.

- The chance to do high-level research in one of the most dynamic sustainability contexts globally.
- Opportunities for conference visits, research stays and networking with leading universities and research centres in the fields of energy, environmental and innovation studies
- All PhD positions are guaranteed a gross income of at least 2300 EUR and Estonian national health insurance.

About the department

TalTech is an international community with 9,000 students and 1,800 employees, making it one of Estonia's largest universities and a leader in EU digitalisation. The university boasts multidisciplinary research, a modern environment, and strong international collaboration. Its green, compact campus includes the Tehnopol Science Park and the Mektory Innovation Center, which supports research funding and business expertise. TalTech values low hierarchy, academic freedom, and work-life balance, offering development opportunities, recognitions, and recreational activities, including a sports club and all-staff events. 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 characterise TalTech today are rapid development, interdisciplinarity, and internationalisation. The university has an international working environment, and the working languages are English and Estonian.

TalTech School of Business and Governance (SBG) offers interdisciplinary education in economics, international business management, and law, fostering innovation in a diverse community with 18% international students from 60 countries. Influential alumni in Estonian politics and business reflect our commitment to quality education. The faculty includes globally recognized researchers and practitioners, with nearly 30% having an international background. SBG, with over 200 employees, conducts research on modern business aspects—entrepreneurship, technology transfer, strategic management, marketing, supply chain, accounting, digitalisation, sustainability, and more—focusing on individual and organizational performance. Our department is known for its strong team spirit and engaging events, large scale teaching in all levels and growing research activities. In the international ranking of Times Higher Education, TalTech's School of Business and Governance has climbed a hundred places in the last year and is now ranked 301-400 among the world's best in business and economics.

TalTech has a green and one of Europe's most compact university campuses, including 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 shared mission to develop Estonian higher education and research. Keywords that characterise TalTech today are rapid development, interdisciplinarity, and internationalisation. The university has an international working environment; the functional languages are English and Estonian.

Additional information

For further information, please contact Daria.Podmetina@taltech.ee and Marina.Jarvis@taltech.ee and visit https://taltech.ee/en/department-business-administration and https://taltech.ee/en/phd-admission

List of crucial references

A list of potentially relevant authors and theoretical approaches to be considered for the specified PhD research plan:

- Geels, F.W., 2002. Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. Research policy, 31(8-9), pp.1257-1274.
- Chesbrough, H., 2011. Open services innovation: Rethinking your business to grow and compete in a new era. John Wiley & Sons.
- Boons, F. and Lüdeke-Freund, F., 2013. Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. Journal of Cleaner production, 45, pp.9-19.
- Offiong, U.P., Szopik-Depczyńska, K., Cheba, K. and Ioppolo, G., 2024. FinTech as a digital innovation in microfinance companies–systematic literature review. European Journal of Innovation Management, 27(9), pp.562- 581.
- Moro-Visconti, R., Cruz Rambaud, S. and López Pascual, J., 2020. Sustainability in FinTechs: An explanation through business model scalability and market valuation. Sustainability, 12(24), p.10316.
- Zournatzidou, G., 2025. Green Finance and Sustainable Development: Investigating the Role of Greentech Business Ecosystem Through PRISMA-Driven Bibliometric Analysis. Administrative Sciences, 15(4), p.150.
- Oh, S., Chung, G. and Cho, K., 2024. New sustainable fintech business models created by open application programming interface technology: A case study of Korea's open banking application programming interface platform. Sustainability, 16(16), p.7187.

- Al-Okaily, M., Al Natour, A.R., Shishan, F., Al-Dmour, A., Alghazzawi, R. and Alsharairi, M., 2021. Sustainable FinTech innovation orientation: a moderated model. Sustainability, 13(24), p.13591.
- Davidson, S., 2025. The nature of the decentralised autonomous organisation. Journal of Institutional Economics, 21, p.e5.