Available research topics of BME Doctoral School of Business and Management
Academic Year 2019/2020

Description of selection and entrance examination process

Applicants must prove their comprehensive professional knowledge, ideas regarding their doctoral work, previous professional activities and language proficiency personally or through an on-line interview. The Admission Committee evaluates the performance of the Applicants on a scale from 0 to 100, which score serves as a basis for ranking:

- qualification of degree certificate (0-25 points)
- language skills (0-15 points)
- professional skills (0-30 points)
- previous scientific activities (0-30 points).

Students have to reach a minimum of 60 points to be considered for admission, nonetheless passing the 60-point limit in itself guarantees neither admission nor eligibility for a scholarship (Stipendium Hungaricum).

Contact (regarding non scholarship holders’ administrative issues): Ms. Valéria BALOGH admission@mail.bme.hu

Stipendium Hungaricum applicants

After the application deadline, Tempus Public Foundation and the sending partners will make a pre-selection. Only applicants nominated by their sending partner will be assessed by the universities.

As a first step of this process, the uploaded materials will be checked by our faculty to see if they meet the requirements. The relevant supervisors will thoroughly evaluate the uploaded materials. After that the applicants have to take an on-line entrance examination, consisting of two parts. First, an entry assignment will have to be completed and submitted in writing electronically, which needs to be reviewed before the second part of the entrance exam. Second, an interview will be conducted online, in which students are expected to give an account of their research interests and trainings, but also, to express their motivation for joining the programme.

The decision on admission will be based on the overall assessment of the applicants, as well as on the number of vacancies in the research groups.

Following from the above procedure, it is not possible for our faculty to assign a supervisor to you before your application. Please note that for the Stipendium Hungaricum scholarship application, it is not a mandatory requirement to have your future supervisor’s recommendation. If you upload all the necessary documents, your application will be regarded as complete even without such a letter.
SOCIAL ASPECTS OF MANAGEMENT AND BUSINESS ECONOMICS

Social interactions, communication and culture in organizations
Human relations affect the efficiency of organizations and the well-being of employees. The aim of this research project is to analyze strategic "games", social networks and communication patterns in selected organizations.

The platformisation of cultural production
The aim of this research project is to analyze, through a selected case, the ways in which the logic of platformisation, during which major “tech” companies such as Google, Apple, Amazon or Facebook are reshaping cultural production, distribution, consumption and gatekeeping practices, has come to play a dominant role in the cultural industries, e.g. in the music, gaming or fashion industry.

The self-organizing collectivity as a model of post-bureaucratic organizations
The past decades can be described as a post-bureaucratic period in which a wide range of actors experiments with new forms of organization that surpass the limitations of former bureaucratic models like the welfare state, the regulated bank system, the mass party or the Fordist company. Many innovating actors stand on a common ground as they all rely on the mental model of a utopian self-organizing, self-governing collectivity. The research project analyzes the institutional and discursive strategies by which organizations try to constitute such self-governing entities like the „markets” in finance, the „people” in politics, the crowd of social media platforms, projects in production or multi-level "hybrid" governance networks.

Cartesian Dualism in Econometric Modelling
This project will investigate what constitutes one the most enduring residues of theological thinking in economics, namely, Cartesian dualism. The required approach is critical engagement with the related assumption informing various currents of economics that dissociate ‘thinking’ from ‘doing’, the ‘cultural’ from the ‘economic’, etc., and generally reify empirically inseparable aspects of agency. The candidate will work toward deconstructing the Cartesian dualist philosophy underpinning econometric modelling by focusing on a specific subfield or research tradition. In addition to a background in economics, familiarity with relevant fields in sociology and philosophy is a must, and the preferred method includes an empirical study (e.g., participant observation, questionnaire survey, focus groups).
QUANTITATIVE ANALYSIS IN MANAGEMENT AND BUSINESS ECONOMICS

Apportionment methods and practices.
In most democracies fair representation is ensured by a proportional allocation of representatives to the various administrative units. While the problem is largely similar, a wide range of apportionment methods are used for the allocation. Under this project properties of apportionment methods are studied, practices compared. The project may involve a combination of any of the following: theoretical modelling, data collection and analysis and simulations.

Dynamic stability in cooperative games.
Cooperative games are usually solved using the core - so what happens when the core is empty? Under this project different dynamic models, such as stochastic stability, the dynamic coalition formation, dominant sets, convergent transfer schemes, etc. are compared. The project is based on mathematical modelling complemented by simulations.

Quantitative methods for improving customer satisfaction
Using and developing quantitative models which can help improve customer satisfaction in service systems and support management decisions related to other operation process improvements.

Quantitative analysis of the efficiency of production and service operations
The increase of efficiency of production and service system is a continuing effort of management. Objective methods are required to explore the sources of inefficiencies, and to provide direction about improvement possibilities. Mathematical modelling of the operation may provide this information and may support the improvement of the management information system. The objective of the research is to develop models, which can take advantage of the new possibilities of advanced info-communication technologies and of big data methods.

Project Management Decisions with Quantitative Methods
Further development and new directions of operations management related project management techniques (e.g., deterministic and stochastic network analysis, project crashing, resource analysis and allocation, monitoring etc.).
STRATEGIC ISSUES AND BUSINESS MODELS IN MANAGEMENT AND BUSINESS ECONOMIC

Business model innovation as a result of digital transformation.
This stream of research explores how ICT driven innovation - especially the complex phenomenon which is called the fourth industrial revolution - impacts industries, business functions, managerial areas and value creation.

Marketing strategy and management tools for product policy decisions
Modeling the factors that are determined the industrial and/or the corporate strategy and analyzing its/their application possibilities in marketing decisions. Developing market analysis tools and methods. Supporting the product development with different marketing management tools.

B2B marketing: Analyzing business relationships from interactive, network approach

Business and sustainable development: the environmental and social aspects of business organisations
Businesses increasingly have to consider the environmental and social implications of their activities and adjust their strategies and business models to changing expectations. Research topics in business sustainability include the management aspects of internal operations, as well the whole supply chain; the CSR activities of companies; the strategies towards climate change and the business models of innovative businesses such as the sharing economy. The topic also includes the policy aspects of sustainability as well as issues relating to sustainable consumption.

Sustainability and adaptation in different sectors and regions
The expected impacts of climate change are difficult to forecast with total certainty, creating challenges for the analysis of the capacity and willingness to adapt in different social and economic systems. Adaptation and sustainability are closely interconnected and reinforce each other. Innovating for sustainability can play pivotal role on global and local level as well. Globalization, urbanization processes lead to the development of more frequent and intense bottom up approaches in several communities worldwide also related to climate issues especially focusing on smart urban, rural and sectoral solutions. The possible impacts of climate change make the transition towards sustainability more complicated especially in the preparation for expected impacts, prevention, management and recovery. Climate change related consequences can also have significant influence on different sectors in a given area for instance related to the quality of life, innovation potential, income, health etc., which can make up the basis for regional sustainability.