## prof. PhDr. Miloslav Lapka, CSc.

# Socio-economic context and ethical issues of the bioeconomy from the perspective of the concept of sustainability

A critical view at the bioeconomy as a scientific concept responding to global issues, such as those expressed in the 17 Sustainable Development Goals. A critical look at the socio-economic implications and ethical issues related to the actual functioning of the bioeconomy from the perspective of selected regional and national institutions.

This topic deliberately avoids developing the traditional economic discourse of sustainable development (SD) in its familiar three pillars of economic, social and environmental, and instead focuses on a critical evaluation of the discourse in terms of the bioeconomy as a universal tool for further economic and social development. The need for regulation of the bioeconomy.

In the analytical part, the student will focus on a region or a country close to him/her, depending on his/her focus. In the synthesis, he/she will try to critically evaluate the economic, social and ethical limits of the development of the bio-economy and to bring a scientifically based perspective to this problem in relation to energy, the Green Deal and many other current issues in Europe.

# European Green Deal - Ambitions and concessions from the perspective of selected companies and institutions

The European Green Deal - inspiration from economic history and ambitious targets Europe as the first CO2-neutral continent by 2050.

A critical perspective of selected companies and institutions on the EGD from an economic, social and environmental point of view. The research method will be mixed with mainly quantitative research. How is the EGD an innovation for customers, management and strategy setting?

Recommendations for a communication strategy on EGD.

## prof. Ing. Martin Macháček, Ph.D. et Ph.D.

#### The Cyclical Behaviour of Firms and Industries in Post-Transition Economies

The dissertation will be based on the current theory and empirics of the business cycle, and the research will be focused on the cyclical behaviour and sensitivity of heterogenous firms and industries in selected post-transition economies. Research methodology will include especially the methods of correlation and regression analysis.

#### prof. Ing. Pavol Kita, PhD.

## Assortment planning strategies in urban food retail stores

Retailers in the urban food market are increasingly inclined to use multiformat retail store strategy, respectively open super-modern fully automatic stores. This strategic approach aims to do better solve the challenges of competitors, adapt to the reality of the multi-channel market, and manage the economic difficulties affecting the food industry. However, this requires them to look at the relationship between different planning methods – such as fixed, dynamic and demand-based planning – and the size of the range of products offered in retail store. The aim of the thesis is to find if flexible, demand-driven scheduling strategies lead to more efficient assortment planning, resulting in optimal product availability and improved customer satisfaction in urban retailing.

# doc. Dr. Ing. Dagmar Škodová Parmová

## Management of services within the circular economy

The aim of the work is to design optimal models of service management within regional management with emphasis on the approaches of the circular economy. Most current material flows are linear in their nature - the primary raw materials for production are extracted, transformed into production in production and end up in a landfill, incinerator or consumed at the end of the life cycle. Circular economics is inspired by natural ecosystems that are based on perfect and functional cycles of organic nutrients. Circular economics transfers this to use in economic production processes.

The basic principles that define the circular economy include: closing material flows in functional and endless cycles where they do not lose value, drawing energy from renewable and sustainable sources, and designing products and services that do not have a negative impact on natural ecosystems and human resources. The research will include, based on the study of economic theories and practical examples of good practice in the application of circular economics approaches, the design of service management models in a specific area of public or market services.

#### doc. Ing. Ivana Faltová Leitmanová, CSc.

## Resource allocation and technology in the context of ESG principles

The sustainable functioning of economic organizations is becoming another aspect of fulfilling their goals. While the institutional conditions on the one hand and the sectoral or branch affiliation, on the other hand, create a framework for their activities, efficiency is explained more and more clearly in connection with the implementation of modern technologies together with respect for ESG principles. The aim of the thesis will be to assess the success of the current fulfillment of economic and environmental aspects of the activities of economic organizations.

## doc. Ing. Milan Jílek, Ph.D.

## Municipal capital expenditure

Municipal capital expenditure (CAPEX) is an essential factor of gross fixed capital formation. Therefore, obstacles in CAPEX realisation negatively impact economic growth. According to the fiscal federalism theory, decentralised municipal CAPEX brings a high degree of allocation efficiency. Therefore, it is essential to understand the factors influencing municipal CAPEX.

#### **Baumol cost disease**

The Baumol model of unbalanced growth and the Baumol cost disease might help to explain differences in the dynamics of some economic sectors. The dissertation empirically verifies the validity of the assumption for selected national economic sectors and industries (i.e. culture, healthcare, social services, education).

## **Causes and Effects of Public Capital Expenditure**

The dissertation focuses on factors of public capital expenditure development and the effect this development has on economic growth. The study will analyze the causes and consequences of public investments. The aim of the work is to identify the key factors that influence the development of public capital expenditure and to analyze how this development affects economic growth. The research will utilize data from various countries and time periods to conduct a quantitative analysis. The results of the study should provide a better understanding of the role of public investments in supporting long-term economic growth and offer recommendations for budgetary policy-making.

#### prof. Ing. Luboš Smutka, Ph.D.

## Regional Integration and Its Impact on the Development and Structure of Agrarian Trade

Regional integration groupings, such as the EU, NAFTA, or ASEAN, significantly influence agrarian trade both within and outside their member states. This research focuses on analyzing the impact of these integrations on the trade of agricultural commodities. It examines the advantages and disadvantages of integration for domestic producers and consumers. A key part of the study is evaluating trade barriers, tariffs, and quotas, which are reduced or completely eliminated within integration blocs. The research also analyzes changes in production chains and the relocation of production within regions. A significant issue is the impact of integration on food prices, availability, and quality. The research also includes an analysis of trade disputes between members of integration groupings and third countries. The work may include case studies of specific regions or commodities. The outcome will be a proposal for policies supporting sustainable agrarian trade within integration groupings. The research also examines how the position of farmers and agrarian businesses changes as a result of integration processes.

## Liberalization of Agrarian Trade vs. Food Security

This topic examines the relationship between the liberalization of agrarian trade and ensuring food security at both national and global levels. Liberalization often leads to a decrease in prices and an increase in food availability, which has a positive impact on consumers. On the other hand, it can harm domestic farmers who are unable to compete with cheaper foreign products. The study focuses on analyzing the effects of the removal of trade barriers on the production capabilities of individual countries. It examines the impacts of liberalization on small and medium-sized farmers and their ability to survive in a competitive environment. A key part of the work is assessing the risks associated with dependence on imports of essential foodstuffs. The research also addresses policies that can ensure a balance between market opening and protecting domestic production. Special attention is given to developing countries, where food security remains a key issue. The outcome of the work will be recommendations for optimizing liberalization processes with regard to protecting vulnerable groups. Emphasis is placed on long-term sustainability and self-sufficiency in food production.

## doc. RNDr. Renata Klufová, Ph.D.

#### **Business demography**

The term business demography is used to cover a set of variables which explain the characteristics and demography of the business population. The creation of new enterprises and the closure of unproductive ones are considered important indicators of business dynamics. There is a large demand for information on business demography both at the national and international levels. At the European level, demands are for coherent and comparable data across the members of the European Statistical System (ESS). The support of entrepreneurship and entrepreneurial dynamics can be revealed by the analysis of business demography statistics over time. The first task is to describe the methodology and indicators for business demography statistics such as Enterprise Births, Enterprise Deaths and Surviving Enterprises; High-Growth Enterprises etc. The analytical part of the work will consist of a comparison of the main business demography indicators in the EU regions, including their spatial analysis. This will serve as the explanation of business dynamics and their differences across the EU.

# Rural gentrification - impacts on businesses and institutions

The political and economic transformation after 1989 significantly affected all social realities in rural areas. The changes of the last decades (reduction in the intensity of agricultural activity and light industry) have resulted in population decline and economic stagnation, associated with serious social problems. Large-scale changes in the socio-economic environment have led to increasing rural

differentiation. These changes have had the greatest impact on small rural communities, which have replaced the decline in traditional forms of livelihood with the service sector in an attempt to halt the overall decline. The gradual transition from agriculture to service development is referred to as the so-called post-productivist transition. This gave rise to modern post-industrial rurality.

This thesis aims to map the changes in the use of a chosen rural space by tourism in the context of the above-mentioned transformation. The development in the area over the last 15 years shows significant changes indicating possible manifestations of rural gentrification, the most intensive of which appears to be the development of services associated with the tourist use of the area. However, this must be examined in a broader economic and social context, which influences and intertwines with each other (the development of the destination by the destination life cycle theory, issues of the carrying capacity of the area and the authenticity of individual tourist activities, demographic changes associated with the emergence of new uses of the area, population stratification and different ideas of individual groups of inhabitants about the appropriate development of the area, migration, changes in land use, etc.), and is collectively referred to as rural gentrification. The processes of rural gentrification as a complex phenomenon have not received similarly significant attention so far. The chosen region (intensively used by tourism) will thus serve as a model area for identifying and describing its manifestations. A combination of geographic, demographic, statistical and sociological methods will be used to investigate this phenomenon.

# Changes in administrative boundaries and their impact on the economic development potential of municipalities

The aim of the thesis is to evaluate the impact of administrative borders and their historical changes in the selected peripheral and/or border area. One of the sub-objectives is to assess the socio-economic differences and differences in economic potential between the districts in the model area and at the municipal level, to identify peripheral and problem municipalities using statistical and spatial data analysis methods, and to demonstrate the impact of borders on their economic development. The aim is therefore to assess the impact of administrative boundaries at different hierarchical levels, especially in terms of barriers in relations between businesses and institutions on the basis of commuting and cooperation between municipalities in the form of associations, but also the potential for business development, etc. An integral part of the work will be to find a suitable methodology for defining the administrative boundaries of the selected municipality/group of municipalities in GIS in several chronological horizons, and to interpret the cause of changes in these boundaries in the selected period.

## doc. Ing. Kamil Pícha, Ph.D.

#### **Content marketing**

Content marketing is topical in companies' current marketing communication (promotion). Customer in the consumer markets faces an information explosion, he is inattentive and exigent. Therefore, it is more and more difficult to attract his attention and communicate important information through particular offline or online communication channels. The creation of the content has to respect the requirements of the legislation in force. The aim of the thesis is to identify particular formats of communications and assess their pertinence and performance with regard to the specific communication channel and character of the customer and a potential use of advanced technologies and technological progress.

#### Consumer research in retail

The evolution of consumer behaviour together with structural changes in retail and the development of particular forms of retail selling represent a challenge in the field of market research continually. The aim of the thesis is to assess the applicability of methods and techniques of consumer research in the context of new and emerging technologic tools and to assess the potential of new approaches.

### doc. Ing. Eva Cudlínová, CSc.

# Biogas stations and bio methan production role within the energy mix

To avoid financial penalties, EU countries have to end landfilling of recyclables and biodegradable waste by 2030 at the latest. Sorted kitchen and catering waste should be used to produce biogas and especially bio methane, which is one of the solutions to replace natural gas. The new type of biogas plants can also process food waste or sewage sludge. The way to improve the economic function of biogas plants is, instead of biogas, which has limited use, to evaluate the function of biogas plants by converting them to bio methane production. The work will focus on mapping the potential of biogas plants in the Czech Republic in terms of bio-methane production and its possible inclusion in the energy mix of the energy sector. In addition to the potential, the thesis will also assess the barriers and possible ways to improve the use of bio methane in the Czech Republic in a broader European context.

#### Plastics recycling - economic and legislative opportunities and obstacles

Plastic packaging accounts for up to 40% of all plastics ending up in landfills and its recycling rate is still very low. However, the situation is changing with technological innovation and legislative change. The so-called EU waste reform obliges Member States to recycle 55% of municipal waste by 2025. The work should concern new recycling technologies and the conditions of their use in the Czech Republic and selected EU countries. It is mainly about comparing the legislative, economic and social conditions of new recyclate production and proposing improvements to the situation in the Czech Republic based on the experience of selected EU countries.

#### doc. RNDr. Zuzana Dvořáková Líšková, Ph.D.

# Transformation of the Energy Sector: Economic, Socioeconomic, and Institutional Impacts of the Transition to Sustainable Energy

This dissertation thesis focuses on the transformation of the energy sector in the context of the transition to sustainable energy sources. The thesis examines the economic aspects of this transformation, including investment costs, changes in economic models, and the impact on the competitiveness of businesses. It also addresses socioeconomic factors such as job creation, changes in employment structure, and the impacts on households. The evaluation of the impact on institutions, regulation, and political strategies are also an important part of the thesis.

The objective of the dissertation thesis is to identify the challenges and opportunities related to the transformation of the energy sector and propose effective approaches to mitigate negative impacts on businesses and society.