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Summary of doctoral dissertation

Advancing a green urban economy - Implementation and challenges of sustainability governance in different cities

Climate change challenge people, companies, and governments, encouraging them to act for sustainability. Decentralisation trends and the variability of the climate impact moved the responsibility for the urban development to the local governments. Therefore, given the strong attention to enhancing the effective public policy, the question has been raised about how cities can respond to climate challenges and re-think how to operate more cost-effectively with less financial resources and at once achieve the competitive advantage of sustainable implementation. As the concept of sustainable urban development is very pervasive and can be considered in the international, national, regional or local context of governmental intervention, the dissertation will primarily focus on the local perspective of municipal governance.

The ultimate objective of this dissertation is to develop and verify a normative model for planning and implementation of the green urban economy to supplement the city governments in the methodologies required for practical application of sustainable development. Additionally, the model will reflect the concept of the "sustainable city" as a comprehensive system with the complexity of its infrastructural elements. The secondary objective of this research is to study the local government's rational behaviour related to the decision-making process with the particular focus on making balanced decisions for achieving the sustainable development in the city.

While the green urban economy approach obligates the local governments to take responsibility for climate change adaptation in cities, the qualitative research question will answer to what kind of elements does the layout model include that will advance the implementation of the green urban economy. That leads to addressing the following main scientific hypothesis: Advancing the green urban economy requires using the comprehensive layout model that include city's infrastructural condition and social and economic relations.

The sustainable development approach as well the concept of the green economy is introduced in the chapter 1. Subsequently, chapter 2 provides the answer to the question

on what is the sustainable city as well defines the concept of the green urban economy. The next part of the chapter examines the business development opportunities in seeking for a competitive advantage associated with the sustainable performance, leading through the concept of green marketing, eco-design and the meaning of greening the supply chain. The most important part of the chapter 2 explores the core principles of the urban governance by highlighting the role of national, regional and local governments in addressing sustainability. Chapter 3 provides the perspective of the opportunities contained in the greening of the infrastructure components, leading through technological aspects, barriers and benefits and various financing incentives supporting the sustainable transformation. Chapter 4 focuses initially on the design of the preliminary conceptual model, then by analysing the results of the empirical research, constitutes the basis for the ultimate objective of this dissertation that is the construction of the normative model for planning and implementation of the green urban economy and it further testbed verification in chapter 5. As a result of the theoretical and empirical research in order to answer the primary research question, the theoretical model for the planning and implementation of the green urban economy was designed. The model reflects the comprehensive and dynamic nature of the implementation of the green urban economy presented by the use of sequential decision-making planning process for the urban governance. It indicates the city's infrastructural condition by integrations of all components, such as buildings, urban mobility, water, waste and energy management.

Summarising the overall research, it can be stated that the use of the comprehensive model approach for implementation of the green urban economy is beneficial for a city because of it allows responding to climate change challenges, satisfies the expectations of the various groups of stakeholders, and at the same time by the establishment of transparent priorities and partnerships, strengthens the integration and increase the long-term advantages.