

PhD thesis evaluation

Title of the thesis: Community-led Renewable Energy Business Models for the Czech Energy Sector Transition

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Reviewer: Prof. Boris Popesko, Ph.D.

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Evaluated PhD thesis represents the comprehensive research study which focuses on the multidisciplinary research in community-led renewable energy business models. Author accesses the research problem with great professional interest and brought innovative approach to the view on contemporary renewable energy projects in Czech Republic. On the other hand, the multidisciplinary and wide focus of the research brought several obstacles which author wasn't able to fully eliminate. In some extent, study remains predominantly descriptive and contribution to the current state of the knowledge, especially in the field of business models, remains limited. On the other hand, study opens a very interesting and promising research field, which could bring significant contribution to the knowledge in the future. In following parts of my evaluation I address the specific issues of the thesis.

Topicality of the scope and theme of the thesis

As mentioned in the previous part of the evaluation, study aims on very up-to-date research problem, which is currently the core element of the political discussion in the EU countries. Study itself, is multidisciplinary, which brings the very promising starting point to the research. Study itself aims to connect the highly important topic of renewable energy, with the problem of stakeholder and agency models and business model theory. All these topics are connected in the context of community-led renewable energy projects. Despite the fact, that topic's interconnections are highly perspective and interesting, the provided literature review is not comprehensive and seems to be relatively shallow. For instance, very important theory of business models is presented only on three pages. On the other hand, we can say that literature analysis addresses the adequate issues of the researched topics, and provides the necessary opinions. On the other hand, the analysis of literature, doesn't provides the sufficient image of the current state of the art, which is essential for accurate definition of the research gap, as explained later.

Fulfilling the research objectives

Thesis includes the appropriate identification of the research gap. Author dedicated whole chapter 6 to specifying the areas, where she intent to contribute with her research. Identification of the research gap is methodically correct, but relatively shallow to some extent. Due to the relatively general and brief literature review, author haven't addressed the concrete research problems, but focused on the wide and general perspectives such as understanding the role of community energy actors, analysis of interconnections to of business models theory and community energy project, or just classifying the CRE projects. It is not fully clear, which knowledge is missing and how this study intends to fill this gap.

Main aim and individual research questions are developed in chapter 7. Main aim is relatively suitably set as “*Identification of both community-led renewable energy business models and value propositions with related helix-based energy policy implications for the Czech energy sector transition*”. It is not fully clear how the individual RQs supports this main aim of the research. RQ1 i.e. aims to analyze the current state of renewable energy sources in Czech Republic, which is relatively descriptive analysis of statistical data. RQ2 aims to find suitable stakeholder model for community-led energy sector transition. And RQ3 aims to verification how could be business model canvas utilized for the CRE projects. Development of the research questions is however acceptable. Author uses the logical argumentation, while explaining the necessity of fulfilling the project aims. On the other hand, RQs are often relatively vague and doesn't addresses the specific research gaps.

Thesis includes the appropriate explanation of used research methods. Used research methods are defined for each subsequent RQ and are adequate for fulfilling the research objectives. Author used mixed-method approach which is suitable for such kind of research.

Generally, I can state that despite some limitations in research objectives definition and relatively vague definition of the RQs, author fulfill all research objectives. Firstly, Research objective 1 was fulfilled by detailed statistical and spatial analysis of Czech energy sector. RO2 is fulfilled by the narrative description of the multiple stakeholders structure and RQ3 is fulfilled by the performed case-studies.

Procedure of the problem solution and Dissertation outputs

Dissertation is elaborated on high quality and has very good logical structure. Author used the appropriate methodology of the research and evaluated work includes all essential components of the research work, i.e. adequate analysis of the current state of the art, definition of the research objectives, defined research methodology, data collection presentation of the results and conclusion with definition of the relevance of the work to development of the knowledge in the field.

On the other hand, work includes several shortcomings. One of the most important limitation of the study is its depth. Individual research results are not fully developed. For instance, RO1 is very descriptive, its includes high amount of data, but author doesn't came to specific conclusions. For instance, I miss the information how legislation impacts the Czech energy sector. Presented case studies are appropriate and interesting, but are not concluded by concrete findings. How they impact the use of individual business models? Such shortcomings negatively affect the quality of the research work. Study in some content looks like unfinished.

Formal features of the work

Evaluated PhD thesis and its presentation meet all necessary requirements for research work in the area of its formal structure and content. Thesis is very clearly structured, all chapters have got appropriate title and the sequence of chapters is corresponding with the aim of the thesis. Nevertheless some parts of the text could be more structured, because the quantity of the text in some chapters sometimes embrangles the text intelligibility.

Thesis are written in correct and appropriate language with use of suitable English terms and words. References and information sources discussed by the author are sufficient and form the excellent theoretical background for authors' research outputs.

General evaluation:

Evaluated PhD thesis presents the original research work including all essential components and meeting all its general requirements. Author defined the obviously delimited objectives of his research, have used the appropriate methodology procedures and adequate research techniques. Author also performed the adequate literature review and detailed analysis of present situation of researched problem. Author also presented, despite the above mentioned limitations, the rich results outputs and significant conclusions.

According to above mentioned facts I consider the presented thesis as the corresponding to the demands on the PhD thesis and in case of fulfilling all other necessary requirements I recommend the award of the PhD title to the Ing Viera Pechancová.

Question

1. What is the legislative framework of the renewable energy projects in Czech Republic and Europe and how it affects the future business models?



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