

The review of dissertation

written by Victoria Wolf entitled „*The Measurement of the Impact of a Startup oriented cooperative innovation Strategy on the Innovation Potential of Companies in the German and Polish Industry*”,

Poznań 2022.

The formal basis of the preparation of the review is a letter from prof. Barbara Jankowska, Chairwoman of Scientific Advancement Council, Poznań University of Economics and Business (16.09.2022), dissertation written by Victoria Wolf under supervision of hab. Renata Dobrucka, prof UEP, dr hab. Jacek Przekop, prof. UAM, prof. dr Stephan Haubold ((Fresenius University of applied Science).

Doctoral dissertation is in the discipline of Management and Quality Sciences.

The requirement set for doctoral dissertation are indicated in legal regulations - Law on Higher Education and Science 2018 (Journal of Law of 2020, item 85, as amended).

General information

The dissertation deals with the important and current issues of an innovation strategy oriented towards cooperation with startups. It should be emphasized that currently many enterprises are moving away from the closed innovation model, creating or acquiring innovations in cooperation with other entities, including enterprises, research and development entities or startups. Both entities should benefit from such cooperation. In order to assess these benefits, it is necessary to evaluate the startup orientated strategy and its impact on the innovation potential of established companies. It should be emphasized that the literature in the field of management and quality sciences lacks works that address this important and current issues , both from the methodological and practical point of view. Therefore ,

all works dealing with this issue should be considered particularly valuable and substantively justified.

The author correctly identified the research gaps, develop the methodological assumption of the research, conduct her own research and formulate important conclusions and recommendation.

The dissertation is a wide work of 252 pages and consists of two parts. The dissertation consists of two parts. The first part contains a brief introduction, six chapter and conclusion, bibliography and the list articles and studies.

The second part if the work contains copies of 11 publications composing the dissertation.

Evaluation of the content of the work

In accordance with statutory requirements of the Law on Higher Education and Science (Act of 20 July 2018, in Part V (degrees and Tittles in the system of higher education and science, art 187), a PhD dissertation should demonstrates the candidate's general theoretical knowledge in a discipline and the ability to conducted research independently. The subject matter of the doctoral dissertation shall be an original solution to the scientific problem in the economic and social sphere. Taking these recommendation into consideration, below is an evaluation of Victoria Wolfs doctoral thesis.

1/Evaluation of the dissertation subject and the original solution to the academic problem

The issues raised in the dissertation is important and fill the gap of innovation strategy measurement. At the same time , it should be emphasized that this issues is original, due to the study, the main problems as well research hypothesis and methods of their verification. In the introduction , the author defined subject of the

research as well the main hypothesis, which he verified in the adopted research procedure.

In the dissertation the author presented the PANDA approach , which enables companies with an established position to develop a general idea to innovation with any company – based limitation. The evaluation of the contribution of PANDA as a SOCI (startup oriented cooperative innovation) strategy on the innovation potential of the company is the research subject of research activities and there the core focus of doctoral thesis and appended research articles (4 page of dissertation). The research subject of the dissertation was supported by research questions. The author identified t the following main problems :

1. Has a startup oriented cooperative innovation strategy an impact on established companies?
2. How can innovative activities and therefore innovation strategy be measured ?

Taking into account the issues raised , as well identified research problem, I am convinced that the research field are not only important, but also scientific and utilitarian. The innovation strategy of PANDA and its implementation in chemical and pharmaceutical industries can be analyzed through multiple and comparable case.

2/ Evaluation of the research goals

The author adopted the following research goals:

1. Analysis and synthesis of the term of innovation and innovation strategy in several dimension with the focus on cooperative innovation approaches and innovative behavior of startups.
2. Development of a framework which classifies a cooperation between an established organization with stakeholders of the entrepreneurial world
3. Description and classification of the PANDA approach in the context of the in 2 mentioned framework.

4. Development of a methodology to evaluation an innovation strategy in every dimension of the applied Oslo Manual 2018 concept of innovation
5. Based on 2. And 3 empirical evaluation with the approach of 4 implemented PANDA projects as an innovations strategy.
6. Based on 5 analysis of the impact of the PANDA approach on the innovation potential of established companies in multiple dimension.

Taking into account the presented goals , the following goals can be classified as :

- Cognitive , i.e. goal 1, 2, 3;
- Methodological – goal 4;
- Empirical – goal 5 and 6.

In main opinion, all this goals has been achieved. This is evidenced by the consideration both the first and second part of the dissertation. The first part contains a synthetic approach to the analyzed goals. In the second part , however, the are developed in individual scientific articles. Taking into account the adopted hypothesis of the dissertation , the description and classification on the PANDA approach and conceptualization and measurement of innovation strategy presented by the authors is particularly important. Also important and significant is the analysis of the impact of the approach on the innovative potential of established company.

3/ The evaluation of the research methodology

The considerations undertaken in the dissertation are based on both literature studies and empirical research conducted by the author. The case study method was used in the empirical research. However , in order to verify the adapted hypothesis the methodology of a questionnaire - basis business survey was used. The conducted survey was constructed on the current standard work for the measuring of innovation. , the OSLO Manual 2018, established by the organization for Economic Co-operation and Development (OECD). The chosen business survey approach was ten used between November 2020 and May 2021 to analyze 10

different PANDA projects of companies located in the chemical and pharmaceutical industry in Poland and Germany. Through the applied methodology the Panda approach and its impact on innovation potential of participating companies was qualitative analyzed with the main results that Panda can applied to generate innovative value in specific areas of influence and for several attributes of innovations.

The methods used are correct. They allowed the author to achieve the research goals and verify the research hypothesis.

4/ The structure of the dissertation

The dissertation consists of two parts. The first part contains a brief introduction, in which the authors discuss the subject and construction of doctoral dissertation. In the first part of the dissertation, it was characterized the subject of research, defines the research problem and goals. Then the research methodology, data sources and results of the conducted research were presented. This part of the dissertation also includes a conclusion and bibliography, as well a list of articles and studies.

The second part of the work contains copies of 11 articles and studies. The topics of the publications are logically related to the considerations undertaken in the first part of dissertation. Taking into account the topics covered in the articles, it can be seen that both the theoretical aspect of the innovation strategy, its assessment, as well as considerations related of the PANDA approach as startup – oriented strategy have been taken into account. The author has also includes articles on the use the PANDA approach in selected companies in the pharmaceutical and chemical industries. She also made an attempt to assess the impact of the PANDA approach on innovative potential of analyzed enterprises. It should be emphasized that the articles have very well prepared in terms of methodology, are based on a review of current literature, and have been published in journals of high scientific rank.

Taking into account the layout of the dissertation , it should be emphasized that it is logical and substantively justified. The dissertation present both theoretical concepts discussing the approach to the innovation, open innovation innovation strategy, as well the methodological aspect related to measurement of innovation strategy. They are of great added value in this dissertation results of empirical results conducted by the authors. Their analysis allowed the author to assess the impact of PANDA approach on the innovation potential of established companies in multiple dimension. . As the author states in the conclusion , *the impact of the PANDA approach can be seen for the area of influence of innovation Markets for the firm's and there especially for the attributes Upgrade goods or services and Comply with market regulation* (39 page of dissertation). The justification for this statement is convincing, and the analysis of the results of empirical research have been very well presented in this dissertation.

The formal side of the dissertation is correct, the language is accessible. Descriptions of tables and figures are correct. Therefore, reading it with such complexity of the issues raised is simple and interesting.

Summing up, I can say that the reviewed dissertation has many advantages. The most important of them include :

- Taking up original and important research topics,
- Correctly identifying the research gaps,
- A carefully designed research process leading to the achievement of goals and verification of hypothesis,
- Description of the PANDA approach as a SOCI (startup oriented cooperative innovation) strategy,
- Conceptualization and the measurement of innovation strategies,
- Assessment of the impact of the PANDA approach on the innovation potential of established companies,
- Presentation of many recommendations for business practice and directions for further research.

Final Conclusion

The final evaluation of the dissertation is positive. In my opinion dissertation entitled "*The Measurement of the Impact of a Startup oriented cooperative innovation Strategy on the Innovation Potential of Companies in the German and Polish Industry*", written by Victoria Wolf under the scientific supervision, fulfils the requirements for doctoral dissertation. The dissertation meets the requirements of the Law on Higher Education and Science of July 2018 (Journal of the Law of 2020 , item 85, as amended).

I move that the dissertation of Victoria Wolf be accepted and admitted to public defense.



Krystyna Poznańska

Warszawa, 4.01. 2023