Opponent's review of the doctoral thesis

<u>Thesis:</u>

Assessing the factors impacting the shipping container dwell time: A multiport research study

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General assessment:

- The assessed doctoral thesis contains an analysis of several ports from the point of view of factors influencing the delay of shipping containers.
- The work has a total of 148 pages and is divided into 8 chapters.
- The content of the thesis is logically ordered from Introduction to Theoretical part, Research objectives, Methodology, Port data analysis and modeling, Contributions, Limitations and Conclusion.
- The thesis also includes references, appendices, publication summary of the author' professional CV.
- The individual chapters are unfortunately unbalanced. Chapter 6 and 8 are only one page long, which I find insufficient. Chapter 7 shouldn't be there at all because it's only three sentences long.
- These three final chapters 6, 7, 8 should summarize the achieved results and verify them in detail and show their use. Unfortunately, this is completely missing.
- The thesis has an average graphic style and the text is difficult to read. It contains a number of abbreviations, many of which are not explained in the text, e.g. SPSS.
- The letters in the programs' description given in the appendices are small and cannot be read well.
- In addition, the information given in the appendices is not commented on and therefore I see no reason why it is mentioned in the text of the doctoral thesis at all.
- The references used are appropriate and correctly cited in the text.

Detailed assessment:

- Some parts of the doctoral thesis are unnecessary. For example I don't know why Table 5 is part of the thesis? It lists the number of publications that the search engine gives when entering different keywords. It is mentioned as own research.
- The solution methodology is not well described. Table 8 is unclear. What do the labels of columns 1, 2 mean? What is the difference between a small and a large dot? What is the meaning of the numbers in the table?
- Figures 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80 are very confusing and unclear because x-axis is not marked. Why the functions are continuous?
- The description "Yes" and "No" does not correspond to required level of the mathematical presentation of results.
- Figures 13, 18, 23, 28, 33, 38, 43, 48, 53, 58, 63, 68, 73, 78 are confused. The left image has unreadable axes, the right one does not have the x-axis marked. It is not clear what the author wanted to say with these figures.
- In the text that describes Figure 9, it is said that it represents 6 variables, while there are 12?
- The conclusion of the thesis is very general and, unlike the previous chapters, very short (only one page).
- Table 26 is drawn up in a very literary style without a single number (e.g. significant positive/negative impact).
- All statements in conclusion can be derived without a deeper analysis: "Logistics Performance Index (LPI) has a significant positive impact on the economic development", or "Track and Trace have a significant positive impact on the economic development along with other parameters of LPI", etc.

Questions:

- I would appreciate during the defense, the methodology be presented in a more detailed and technical manner (clear definition of input data, algorithm description, achieved numerical results together with their interpretation and verification).
- I would like to hear a clear summary of achieved results, including description of their uniqueness and novelty.
- I would like to know how the achieved results will be applied in practice. How is the added-value of the results achieved?
- I would also like to ask how the work on this topic will continue and what the followup research will be in UTB.

Final assessment:

- The doctoral thesis deals with an interesting and up-to-date topic with an international impact.
- The problem of shipping container dwell time has a huge impact on manufacturing plants around the world.
- On the other hand, the text of the thesis has many formal and factual deficiencies mentioned above.

- Overall, the written thesis has a very average quality.
- On the other hand, the author's publications are at a satisfactory level.
- Four publications are listed in the Scopus database.
- Six citations are registered in the Scopus database.
- Author has h-index equal to 2.

In case my objections/queries are clarified at the defense, I may agree to be a

Ph.D. title awarded to the author of this thesis.

In Prague, October 31, 2023

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Miroslav Svítek