

REFEREE'S REVIEW

Program:	MIB
Student:	Polina Zinchenko
Title of thesis:	DEVELOPING METRICS FOR "INTERNET OF THINGS" IMPLEMENTATION ASSESSMENT BY ENTERPRISES

Justification of the topic choice. Accuracy in defining the aim and objectives of the thesis. Justification of the topic choice; accuracy in defining the aim and tasks of the thesis; originality of the topic and the extent to which it was covered; alignment of the thesis' topic, aim and objectives.	5	4	3	2
Structure and logic of the text flow. Logic of research; full scope of the thesis; alignment of thesis' structural parts, i.e. theoretical and empirical parts.	5	4	3	2
Quality of analytical approach and quality of offered solution to the research objectives. Adequacy of objectives coverage; ability to formulate and convey the research problem; ability to offer options for its solution; application of the latest trends in relevant research are for the set objectives.	5	4	3	2
Quality of data gathering and description. Quality of selecting research tools and methods; data validity adequacy; adequacy of used data for chosen research tools and methods; completeness and relevance of the list of references.	5	4	3	2
Scientific aspect of the thesis. Independent scientific thinking in solving the set problem/objectives; the extent to which the student contributed to selecting and justifying the research model (conceptual and/or quantitative), developing methodology/approach to set objectives.	5	4	3	2
Practical/applied nature of research. Extent to which the theoretical background is related to the international or Russian managerial practice; development of applied recommendations; justification and interpretation of the empirical/applied results.	5	4	3	2
Quality of thesis layout. Layout fulfils the requirements of the Regulations for master thesis preparation and defense, correct layout of tables, figures, references.	5	4	3	2

Each item above is evaluated on the following scale, as applicable: 5 = the thesis meets all the requirements, 4 = the thesis meets almost all the requirements, 3 = a lot of the requirements are not met in the thesis, 2 = the thesis does not meet the requirements.

Additional comments:

This thesis is devoted to the development of the metrics for manufacturing company related to IoT use. Analysis of theoretical basic requirements of the study is made of a very high level, as well as literature review. The thesis has really strong features: interesting topic, practice-oriented approach to the analysis and new field of research. The author paid special attention to firms' satisfaction and economic gains by investing in Internet of Things. Polina Zinchenko's work is very well structured with clear set of the objectives she wants to elaborate. The work is divided into three parts: she starts with existing methods of analysis of IT innovations implementation, then goes to the overview of the existing approaches towards ROI as an instrument to assess IT performance; finally, she implements developed indicators using real case. The author shows the ability to conduct independent analysis and individual statements are based on solid data. Primary sources and secondary sources cited by Polina Zinchenko are relevant to the chosen topic. The conclusions offered are well supported and have creditable value. At the

same time, it is an interesting contribution to the debate about the possible future of Big Data Innovations implementation into managerial practice.

The limitations of the research were related with lack of publicly available data and research methodology based only on literature review. Summarizing the results of the paper presented, we note, that almost all objectives were realized and the main goal achieved.

Taking into account all written above, the thesis contains a number of weaknesses:

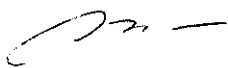
- not so deep theoretical study of financial (operational) risks, because external product use leads not only to cost reduction and economy, but also may have potential risks or cyber threats like improper use of data collected or mistakes due to the system options;
- alternative options (risk of substitutes) are not analyzed, but if IoT is based on RFID system, the company can easily use TQM tools such as control charts, fishbone diagrams etc. or LEAN management system. These systems will start the concept of continuous improvement of the process and will also lead to cost saving;
- from theory of IoT is known that the process of detection of problem zones there uses inferential method, not descriptive. That means it is based on probability approach and can check only probable anomalies, not actual, using given confidence level;
- IoT use may meet the problem of compatibility of devices used, but this problem also isn't mentioned there.

The master's thesis presented here is fully acceptable and I recommend it for defense. Question for defense: What are assumptions towards the role of IoT in the context of balance between profitability, operational stability and safety of production process data?

Master thesis of Polina Zinchenko meets the requirements of the MIB program, and according to the reviewer's opinion deserves a good (C) grade, thus the author can be given the desired degree.

Date 12th of June, 2015

Referee:



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c.d.e. Churakova Iya Yu.*