

SCIENTIFIC ADVISOR'S REFERENCE

Program:	Master in Management (MIM)
Student:	Sebastian Grossalber
Title of thesis:	Innovation triggered by big data analysis of manufacturing machine data

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.

The selected topic is extremely relevant since companies around the world are concerned with innovations and technologies for big data analysis provide new opportunities for innovation. More rigorous definition of the main concepts could improve the accuracy in defining the aim and objectives of the thesis: the title and aim include the term "big data analysis", while research question is more broad about "usage of machine data to perform innovation".

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.

The work consists of seven chapters, which cover theoretical overview, research methodology, empirical study (survey results and case study analysis), conclusions, limitations and managerial implications. They are logically connected and well-structured.

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.

Research problem and research questions are formulated properly. The author investigates two main research questions: 1: To what extent are manufacturing companies are using machine data to perform innovation? and 2: How can innovation be triggered by Big Data analysis of manufacturing machine data? According to the research strategy survey is mostly used to answer the first question, while case studies – second one. This strategy looks reasonable. But analysis of results and conclusion mix these research questions and methods. So, in spite of good analysis of results, some conclusions raise questions.

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.

Data gathering process is clearly described. The student demonstrated good proactivity in gathering data and finding respondents.

Although Sebastian did a good job collecting data, size of the sample limits the possibilities to generalize the results of this work to the whole population manufacturing companies (in Austria, Germany, and Russia). It is rather typical problem for student's research, where access to respondents is limited. So additional research with a bigger sample is necessary in order to make results more representative.

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.

Sebastian demonstrated independent scientific thinking in solving the set problem and designing research. The author analyzed both academic and practical works in the field of study, but theoretical part could be extended in order to make research design more solid.

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.

The thesis provides detailed insights into existing practices of using machine data in business both for innovation and optimization purposes, mentions problems and possible solutions. This information may help practitioners.

Quality of thesis layout. Layout fulfils the requirements of the Regulations for master thesis preparation and defence, correct layout of tables, figures, references.

In general, layout fulfils the requirements of the regulations for master thesis preparation and defence. Only numeration of sections and English proof-reading could be done.

Originality of the text. All sources of match identified by the Safe Assign system follow the allowed cases, the paper does not contain any elements of plagiarism.

The thesis text is original and does not contain elements of plagiarism

In general, Sebastian demonstrated good self-organization and independence during all the steps of master thesis writing.

The Master thesis of Sebastian Grossalber meets the requirements for master thesis of Master in Management (MIM) program thus the author of the thesis can be awarded the required degree.

Date 03.06.2018

Scientific Advisor:
Dmitry Kudryavtsev, Associate Professor

