

Assessment of Master Thesis – Opponent



Study programme: **Applied Informatics**

Field of study: **Information Systems Management**

Academic year: **2018/2019**

Master Thesis Topic: **Analyze and Design New Concept of Supply Chain Management in Pharmaceutical Industry by Blockchain.**

Author's name: **Osman Efe Adalier**

Ac. Consultant's Name: **Ing. PhDr. Antonín Pavlíček, Ph.D.**

Opponent: **Ing. Jan Kučera, Ph.D.**

	Criterion	Mark (1–4)
1.	Comprehensibility of the Master's Thesis topic and objectives	3
2.	Fulfilment of defined objectives	3
3.	Logical structure and cohesion of each parts	2
4.	Extent and relevance of description of the current level of knowledge	1
5.	Adequacy of methods in respect of the topic (selections of the methods and their application)	3
6.	Extent, quality and precism of description of the thesis's results	2
7.	Relevance and correctness of discussion of the thesis's results	3
8.	Correctness and relevance of information sources	1
9.	Grammar, stylistic style, terminology and overall formal and grahic level of the Master's thesis	1

Comments and Questions:

The master thesis discusses use of the blockchain technology for the pharmaceutical industry supply chains. The main outcome of the thesis is a design of a blockchain-based supply chain framework. Even though the master thesis provides good overview of the blockchain technology and of its potential applications for the supply chains, the objective of the thesis is only loosely defined. Design of the blockchain-based supply chain framework for the pharmaceutical industry is presented in chapter 4. However, there are three main drawbacks of the presented design:

1. Purpose and requirements for such a framework have not been specified.
2. The text of the thesis provides no evidence if the designed framework had been validated.
3. There is no discussion of the novelty of the presented design. Three case studies representing competing solutions are briefly described in chapter 3. At least, the designed framework should have been compared to the three existing solutions in order to show the student's contribution. It would have been also worth comparing the designed framework to some alternative non-blockchain-based solutions in order to show the comparative advantage of the blockchain technology, or summarizing the notes about the as-is state mentioned in the text and discussing the change that blockchain could bring.

Originality of the work

Originality of the master thesis has been automatically checked. The overall similarity score is below 1% which indicates that most of the text could be considered original. Exact match of a very small portion of the text has been identified which describes a purpose of the Drug Supply Chain Security Act. Even though this particular section is not marked as a direct quote of the act, the act itself is clearly referenced. Given the limited scope of the affected text this does not constitute a major issue.

Questions to be discussed at the defence:

1. What advantages does the designed framework bring compared to the solutions discussed in chapter 3 of the thesis?
2. Use of cryptocurrencies is proposed to settle payments in the supply chain. More specifically, cryptocurrencies with public ledgers such as Bitcoin or Ethereum are discussed. In general, the

framework seems to be designed with confidentiality of business information in mind. I.e. use of private blockchains is proposed for exchange of business confidential information, whereas use of public blockchain is proposed for exchange of information accessible to the general public. Please explain, how can organizations involved in a supply chain ensure confidentiality of the payment information while using cryptocurrencies such as Bitcoin or Ethereum?

Conclusion: The Master Thesis is recommended for the defence.

Suggested Grade: **3**

Date: 14/05/2019

Ing. Jan Kučera, Ph.D.
Opponent