

REPORT ON THE MASTER THESIS

IEPS – International Economic and Political Studies, Faculty of Social Sciences, Charles University

Title of the thesis:	Exploring the Price Determinants of Bitcoin with Vector Autoregression
Author of the thesis:	Bc. Hugo Vozak
Referee (incl. titles):	Petr Polák, MSc.

SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
<i>Theoretical background (max. 20)</i>	17
<i>Contribution (max. 20)</i>	16
<i>Methods (max. 20)</i>	9
<i>Literature (max. 20)</i>	17
<i>Manuscript form (max. 20)</i>	18
TOTAL POINTS (max. 100)	77
The proposed grade (1-2-3-4)	2

You can even use a decimal point (e.g. giving the grade of 2.5 for 60 points).

Comments of the referee on the thesis highlights and shortcomings (following the 5 numbered aspects of your assessment indicated below).

1) Theoretical background:

Bitcoin has captured academic interest in the last years. Digital currency has its own specific that are worth studying. Comparing virtual market to real ones brings better understanding of both sides. The thesis topic uses model of Wang (2014) and from that resulting hypotheses. Economic theory is used as background and topic is quantitatively analyses using suitable econometric methodology. It is a pity, that author did not use extensive literature to formulate more hypotheses. Then the research question would be exploiting current state of art of academia.

2) Contribution:

Author provides extensive literature summary but does not point out what part of research areas are still uninvestigated and where added value can be provided by proper research. Such analysis would bring not only new hypotheses, but also clearly connect to current research. Gathered data and methods used would definitely allow the author to explore more hypothesis and analyze them more thoroughly. Data used in the analysis were selected properly. Recommendations for future research would also increase the contribution, as author has definitely found interesting questions worth investigating and came across problems that could not be solved at the time, but can be overcome in the future.

3) Methods:

Thesis uses Wang Macroeconomic Model with some amendments. Firstly, data sets are presented, but I am missing quantitative and descriptive statistic of used variables. Models are mentioned as well some tests, but equations and relations are not formally stated. The key model is listed on page 42, was already introduced on page 28, I would expect the discussion to be at one place. VAR analysis is used, yet such model is not introduced formally at all. Stating researched model is essential part of the methodology. Formally the variables examined are changes in log values, interpretation of the results is similar, bit slightly different. It is a minor issue in the relevant context, but since author pays attention when describing IRF, I would also expect that in the description of other results as well.

4) Literature:

Introduction into Bitcoin itself is very descriptive in the area of terminology and bitcoin background. Author describes every aspect of the bitcoin usage, pricing, history etc. Author demonstrates that he is interested in Bitcoin itself and even a reader with no background gets properly introduced into the Bitcoin problematic. Literature review chapter that follows uses and summarizes academic literature studying Bitcoin. Author uses up-to-date and relevant sources, yet often are academic works listed with the idea they researched, but not what was found and how this is relevant. Closer connection to researched hypotheses is not obvious. Sources listed in Chapter 7 are lacking some formalities, mostly the reference is missing journal or edition, but sources can be clearly and unambiguously identified.

5) Manuscript form:

Thesis is very well written and it is easy to follow author's thoughts. Everything is described into detail. The only small drawback I would mention is the chapter labeling which is detailed and sections 2 and 3 have similar headers, which confuses the reader a bit. Better interconnection between chapter 2 and 3 would make the thesis less extensive in the length, but content would have the same value. Author would not have to repeat some parts. Conclusion is quite long and should contain clear results of the analysis. Such information is unfortunately hidden.

DATE OF EVALUATION: June 10, 2015

Petr Polák

Referee Signature

The referee should give comments to the following requirements:

1) THEORETICAL BACKGROUND: Can you recognize that the thesis was guided by some **theoretical fundamentals** relevant for this thesis topic? Were some important theoretical concepts omitted? Was the theory used in the thesis consistently incorporated with the topic and hypotheses tested?

Strong Average Weak
20 10 0 points

2) CONTRIBUTION: Evaluate if the author presents **original ideas** on the topic and aims at demonstrating **critical thinking** and ability to draw conclusions based on the knowledge of relevant theory and relevant empirical material. Is there a distinct **value added** of the thesis (relative to knowledge of a university-educated person interested in given topic)? Did the author explain **why** the observed phenomena occurred? Were the policy implications well founded?

Strong Average Weak
20 10 0 points

3) METHODS: Are the **hypotheses** for this study clearly stated, allowing their further verification and testing? Are the theoretical explanations, empirical material and **analytical tools** used in the thesis relevant to the research question being investigated, and adequate to the aspiration level of the study? Is the thesis **topic comprehensively analyzed** and does the thesis not make trivial or irrelevant detours off the main body stated in the thesis proposal? More than 10 points signal an exceptional work, **which requires your explanation "why" it is so**.

Strong Average Weak
20 10 0 points

4) LITERATURE REVIEW: The thesis demonstrates author's full understanding and **command of recent literature**. The author quotes relevant literature in a proper way and disposes with a representative bibliography. (Remark: references to Wikipedia, websites and newspaper articles are a sign of **poor research**). If they dominate you cannot give more than 8 points. References to books published by prestigious publishers and articles in renowned journals give much better impression.

Strong Average Weak
20 10 0 points

5) MANUSCRIPT FORM: The thesis is **clear and well structured**. The author uses appropriate language and style, including academic **format** for quotations, graphs and tables. The text effectively refers to graphs and tables, is easily readable and **stimulates thinking**.

Strong Average Weak
20 10 0 points

Overall grading scheme at FSV UK:

TOTAL POINTS	GRADE	Czech grading	US grading
81 – 100	1	= excellent	= A
61 – 80	2	= good	= B
51 – 60	3	= satisfactory	= C
41 – 50	3	= satisfactory	= D
0 – 40	4	= fail	= not recommended for defence