Report on **Bachelor Thesis**

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	**David Černý**
Advisor:	**Ladislav Kristoufek**
Title of the thesis:	**Impact of total transaction fees on the price of Bitcoin and Ethereum**

OVERALL ASSESSMENT *(provided in English, Czech, or Slovak):*

Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.

Short summary

The primary aim of this work is to investigate the price dynamics of Bitcoin and Ethereum with a special emphasis on the role of transaction fees. This angle provides insight into network congestion, user behavior, and potentially the future economic viability of these crypto networks. The study digs deep into the intertwined relationships between various factors and explores the potential endogeneity in a crypto asset environment. The research employs a system of two simultaneous equations for transaction fees and prices, estimated using the 2SLS method. The analysis covers relationships from both long-term and short-term perspectives. An essential observation is that the price dynamics of both Bitcoin and Ethereum are influenced by a mix of fundamental, economic, and speculative factors.

Contribution

The main contribution is the exploration of the complex interplay between transaction fees and cryptocurrency prices. The author challenges the prevailing notion that crypto asset prices are primarily driven by speculative factors alone. The research highlights that there's more to the price dynamics than speculation, with fundamental and economic factors also playing a significant role. The findings suggest that while price primarily impacts fees, there are intervals where the reverse relationship is observed.

Methods

The author adopts a two-stage least squares (2SLS) method, suggesting a rigorous econometric approach. This methodology allows the investigation of potential simultaneous relationships between variables, which is crucial given the suspected endogeneity in the crypto environment. The way the methodology is applied and its rigor go well beyond the standard bachelor level.

Literature

The topical literature in crypto often deals with pricing models in a separate manner – speculative and fundamental factors are often treated separately. Also, endogeneity is standardly disregarded as it complicates the approach (as is often the case in standard finance as well). This only highlights the contribution of the thesis as well as an advanced level of the provided analysis.

Manuscript form

The manuscript is well-structured and it reads well. The language is formal and appropriate for an academic thesis.

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Overall evaluation and suggested questions for the discussion during the defense

Turnitin uncovered no systematic issues.

This is a commendable piece of research that delves into a pertinent and timely topic in the field of cryptoassets. The rigorous methodology and the fresh perspective on the interplay between transaction fees and crypto prices make this thesis noteworthy.

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest grade A. As this goes well beyond the standard methodology of the bachelor level and it goes into a frontier topic, I would suggest the thesis for the commendation as well.

Possible questions for the defense:
* Were there any surprising findings or outcomes that challenged your initial hypotheses?
* How do you see the future of transaction fees impacting the broader crypto market, especially with the rise of alternative cryptocurrencies and layer-2 solutions?
* How do you think network congestion and scalability issues in crypto networks will evolve, and what could be their potential impact on transaction fees and prices?

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

CATEGORY		POINTS
Contribution	*(max. 30 points)*	30
Methods	*(max. 30 points)*	30
Literature	*(max. 20 points)*	20
Manuscript Form	*(max. 20 points)*	20
TOTAL POINTS	*(max. 100 points)*	**100**
GRADE	**(A – B – C – D – E – F)**	**A**

NAME OF THE REFEREE: Ladislav Kristoufek

DATE OF EVALUATION: 4 September 2023

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Referee Signature