

Abstract

The aim of this thesis is to explore the price dynamics of Bitcoin and Ethereum with special emphasis on the role of transaction fees, which can provide insight into network congestion and user behaviour, and may also reflect the future economic viability of these networks. Previous research has shown intertwining relationships between variables and suggested possible endogeneity in a cryptoasset environment. For these purposes, a system of two simultaneous equations for transaction fees and price was developed and subsequently estimated using the 2SLS method. The analysis covers relationships from both long-term and short-term perspectives. It turns out that the price dynamics of both assets is determined by a diverse mix of fundamental, economic and speculative factors, despite the narrative that the price of cryptoassets is primarily driven by speculative factors. Furthermore, in the context of the fee-price relationship, it turned out that the relationship is a priori that the price impacts the fees, however, at some intervals, the opposite relationship is also shown, which is rather an exception. An important contribution could be the finding of a stable positive effect of the total number of active addresses in Bitcoin on transaction fees, which might bring new insights to the discussion on Bitcoin's sustainability.

Keywords Cryptoassets, Bitcoin, Ethereum, time series, transaction fees

Title Impact of total transaction fees on the price of Bitcoin and Ethereum