

## **Abstract**

This thesis explores the price determinants of Bitcoin using a macroeconomic model based on the economic equation of exchange presented by Joseph Wang (2014). The thesis provides a concise and structured introduction to Bitcoin and a comprehensive literature review on Bitcoin. The analysis begins with the application of the functions of money to Bitcoin, arguing that while Bitcoin does fulfill the three classical functions of money to a certain extent, its use remains mainly as a speculative instrument. Wang's model is criticized and amended to reflect the realities of empirically analyzing the Bitcoin market. Using the daily number of transactions and Bitcoin days destroyed as proxies for economic activity and inactivity – to measure Bitcoin's velocity on the block chain – vector autoregression modelling is used to determine if there is Granger causality between the price of bitcoin and the two proxies. The results demonstrate that there is a bidirectional Granger-causal relationship between Bitcoin days destroyed and the price of bitcoin and that there is none between the daily number of transactions and the price of bitcoin; proving Wang's two main assumptions. Impulse-response functions are provided to illustrate and discuss this bidirectional relationship. The results are in line with the theoretical reasoning provided within the thesis. The main finding is that saving does have an impact on the price of bitcoin.