Valentina Ronchi

Mining cryptos: can it be more sustainable?

Introduction

This report presents the negative impacts of mining cryptos on the environment and why this makes mining cryptos not completely sustainable yet. It also talks about a few attempts by people to solve this problem and why this has not been addressed sooner.

Meynkhard (2019) in his paper refers to crypto as an encrypted digital money that exists only electronically, money which, unlike the normal ones, is anonymous and more secure. Some of these features have made cryptos' popularity increase exponentially in the last few years. As indicated by Popper's (2020) article, since November 2020, Bitcoin has achieved some important records. This has not been limited to Bitcoin only, but to other cryptos as well, such as Etherium, Litecoin, Stellar and many more. Part of the popularity of cryptos, it is given by the fact that many important companies, like Tesla as indicated by Kovach's (2021) article, have reported to buy cryptos in large quantities, especially in the last few months.

Why is mining cryptos non-sustainable

Mining cryptos is how cryptos are generated. To mine cryptos, a lot of computer power is needed, which will cause a high use of electricity. Even though investing and mining cryptos might be seen as a good investment and as an opportunity not to have money in a bank account lose value while inflation increases, the process through which cryptos are generated is considered not sustainable. Something is sustainable if it does not have negative impacts on society, the economy and the environment. As seen before, cryptos have a positive impact on the economy and they do not have any negative impact on social lives. However, even though often investors and miners do not think about it, mining cryptos has had and will keep having negative impacts on the environment because of the high quantity of electricity used to generate cryptos.

As stated in Greenberg's et al. (2020) paper, the quantity of electricity used to mine Bitcoin in 2018 was as much as Ireland. In June 2020, Bastian-Pinto et al. (2021) reported the electricity used was as much as the annual energy consumption of Chile. As said at the beginning, the popularity of Bitcoin and other cryptos have increased since November of 2020, having more people entering the world of cryptos. This has meant that a higher quantity of cryptos needed to be generated, therefore also the quantity of electricity used increased and it will keep increasing as more people enter the crypto world. Many, among which there is Truby (2018), admit that the increase in popularity of the cryptos is a threat to both the planet and to the global commitment to reduce the emission of gasses. Truby (2018) also agrees that immediate intervention is needed to make mining more sustainable for the environment.

The biggest problem is not that miners use electricity. But, how much carbon emission is created because of that electricity. As seen in Corbet's et al. (2021) paper, what worries scientists, is how much carbon emission is produced. Corbet et al. (2021) say that in late 2018, the quantity of carbon emission created by the mining of Bitcoin in a year was almost the same as the one produced by Jordan and Mongolia. If Ethereum, Monero and zCash (other popular cryptos) are also considered, the value is doubled and becomes almost as much as the one produced by Portugal in a year.

Few attempts to make mining more sustainable

By the popularity of cryptos, it can be easily deduced that cryptos and therefore mining, will not disappear anytime soon, which could have disastrous effects on the environment if nothing is done in time. But, unfortunately, up till now, all the discussion on cryptos have been on how to tax them, to regulate them and on how to avoid money laundering, not on what impact mining them could have on the environment. According to Truby (2018), this negative impact of mining has just become evident.

Since then, there have been very few attempts to address this problem. In a paper published by Truby (2018), he presents a few methods which could reduce the quantity of energy and, most importantly, carbon emission. One of these is based on using another method called “Proof of Stake” used to generate Bitcoin where less energy would be required. Another approach takes into consideration the source of the energy used. If most of the miners could use renewable resources, producing cryptos would be less harmful to the environment.

Conclusion

As seen in this report, even if cryptos have made a positive impact on the economy, in the long run, the impact it will have on the environment will be enormous if miners do not switch to a more sustainable way of mining cryptos. Miners, developers and investor should take actions, otherwise, they are subsidising high energy-consuming technology and sending the wrong message to a future society.

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