



A History of Dogecoin

12th February, 2021

Usman W. Chohan, MBA, PhD

Discussion Paper Series: *Notes on the 21st Century*¹


Abstract: The frenzied public interest in cryptocurrencies has meant that, as second-order capital rushes towards the Bitcoin trade, potential investors are also drawn toward alternative currencies that may serve specific purposes; but one such cryptoasset, Dogecoin, is not so much an alternative numismatic instrument as it is a leisured exploration of community-building around a cryptoasset. This discussion paper recounts the historical evolution of Dogecoin, while also highlighting the crossover of cryptocurrency principles with the leisures of the blockchain.

¹ Originally written in December 2017, update to reflect the changing social context of Dogecoin's spread

A History of Dogecoin


The frenzied public interest in cryptocurrencies has meant that, as second-order capital rushes towards the Bitcoin trade, potential investors are also drawn towards alternative currencies that may serve specific purposes; but one such cryptoasset, Dogecoin, is not so much an alternative deflationary numismatic instrument as it is an inflationary leisured exploration of community-building around a cryptoasset. This discussion paper recounts the historical evolution of Dogecoin, while also highlighting the crossover of cryptocurrency principles with the leisures of the blockchain.

Introduced as a “joke currency,” Dogecoin can be described as a member of the cryptocurrency asset class with a capitalization of \$10 *billion* USD near the time of this writing (mid-February, 2021), up from a capitalization of \$60 million in 2014, driven by an online community base which generates “brand” loyalty and demand inelasticity. In comparison to other cryptocurrencies, Dogecoin has had a fast initial coin production schedule: 100 billion coins by mid-2015, with a rate of additional production of 5.256 billion coins each year since. In line with Chohan’s discussion on the “leisured aspect of blockchains,” there are very few mainstream commercial or research applications. Yet the currency has found a quirky niche as an online system for tipping, whereby users on social media platforms grant Dogecoin tips to other




users for providing interesting or noteworthy content. Many members of the Dogecoin community, as well as members of other cryptocurrency communities, use the phrase "To the moon!" to describe the overall sentiment of the coin's rising value. With crowdfunding support, an actual gold coin with the imprimatur of Dogecoin is scheduled to reach the surface of Earth's lunar satellite in 2019. Dogecoin was created by programmer Billy Markus from Portland, Oregon, who saw Dogecoin through the leisured aspect, wanting to create a "fun cryptocurrency" that could reach a broader demographic than the erstwhile (although today widely touted and observed) rival bitcoin. Billy Markus also emphasized a detachment of Dogecoin from the controversy of origination of Bitcoin (see Cryptoanarchist discussion in Chohan 2017d) Jackson Palmer, a member of Adobe Systems' marketing department in Sydney, Australia was encouraged on Twitter by a student at Front Range Community College to make the idea a reality. Palmer purchased the domain dogecoin.com and added a splash screen, which featured the coin's logo and scattered Comic Sans text. Markus saw the site linked in an IRC chat room, and started efforts to create the currency after reaching out to Palmer.

The structure of Dogecoin was based on an existing cryptocurrency, Luckycoin, which featured a randomized reward received for mining a block of coin, which was later altered to a static block reward in March 2014. It should be noted that Luckycoin is itself based on Litecoin, which also deploys scrypt technology in its proof-of-work




algorithm. The use of script results in miners unable to use SHA-256 bitcoin mining equipment, and dedicated FPGA and ASIC devices are used for mining which are complicated to create. The official launch of Dogecoin was on December 6, 2013. While the original total supply was intended to be 100 billion Dogecoins, it was later announced that the Dogecoin network would produce infinite Dogecoins, thereby building-in inherent inflationary momentum. Dogecoin's implementation differs from rival Litecoin by several parameters. Dogecoin's block time is 1 minute as opposed to Litecoin's 2.5 minutes, the difficulty retarget time is once per block, while and the reward is fixed based on a block schedule. However, when Dogecoin was first introduced, the difficulty retargeting was once every four hours, and the reward was a randomized number in the range of value $\{0, \max B\}$ where $\max B$ was defined by the block schedule. Under the system in which a random number of coins were distributed, rewards were calculated using a Mersenne Twister pseudo-random number generator. While the original implementation of Dogecoin meant for there to be a fixed number of coins per block from block 600,001 onwards only (thereby providing 10,000 coins per block), the algorithms in Dogecoin were changed starting at value $n=145,000$ th block, such that a fixed reward was always given (providing 250,000 coins per block until block 200,001). On March 12, 2014, version 1.6 of the Dogecoin client was announced. Along with allowing for there to be a fixed reward per block, the new client update also introduced a new difficulty algorithm called DigiShield. The main goal of the new



difficulty algorithm, adopted from DigiByte, was to prevent multipools from being able to mine the coin (and thus extract extranormal profit), but this in turn reduced the coin drastically, and also forced single-coin miners to deal with the rise in difficulty the pools left as a result. Thanks to the algorithm's near-instant change in difficulty, any multipool entering the Dogecoin network would immediately leave, as the difficulty of mining would spike exponentially, thereby causing a drop in profitability drive out multipools.


In December 19, 2013, Dogecoin saw a 300%+ rise in value in 72 hours, US\$0.00026 to \$0.00095, with an underlying volume of billions of Dogecoins per day. This was concomitant with the damage to price levels in bitcoin and many other cryptocurrencies when the relevant Chinese agencies forbade Chinese banks from investing Chinese Yuan into the bitcoin economy. The volatility was double-edged, for three days later, Dogecoin experienced its first major crash with an -80% loss due to large mining pools seizing opportunity in exploiting the very little computing power required at the time to mine the coin, which is to say a “big fish in small pond” problem arose as mining pools diverted towards Dogecoin and seized on the simplicity of mining this coin instead.

Several adverse events thereafter followed the growth of the coin. In December 24, 2013, The Reserve Bank of India cautioned users of Dogecoin and other cryptocurrencies on the heavy risks associated with



these coins. At the same time, the first major theft attempt of Dogecoin occurred when millions of coins were stolen during a hacking attempt on the online cryptocurrency wallet platform Dogewallet. The purported hacker gained access to the platform's filesystem and modified its send/receive page to send any and all coins to a static address. An ensuing online panic spiked tweets about Dogecoin, making it the most mentioned alternative coin ("altcoin") on Twitter at the time. As a counter-strategy to reimburse the sinistered users who had lost funds on Dogewallet after its hacking breach, the Dogecoin community started an initiative titled "SaveDogemas" to help donate coins to those who lost them. This initiative helped damaged wallet users to recoup their losses within a month. By January 2014, the trading volume of Dogecoin briefly surpassed that of bitcoin and all other crypto-currencies combined. As of 25 January 2015, Dogecoin has a market capitalization of USD 13.5 million. In April, 2015, founder Jackson Palmer announced he is taking an "extended leave of absence" from the cryptocurrency community.

One important aspect of Dogecoin is the emphasis of its community on fundraising initiatives, such disadvantaged Olympians attempting to attend the Sochi Winter Olympics (2014) or raising money to build wells in developing countries on World Water Day. Today, several online exchanges offer inter cryptocurrency trading such as the DOGE/BTC (-Bitcoin) and DOGE/LTC (-Litecoin) trades. The first DOGE/USD exchange was established by AltQuick.co in January 2014. Soon



after, Canada-based exchange Vault of Satoshi also announced DOGE/USD and DOGE/CAD trading. DOGE can now be traded in exchanges around the world including Hong Kong, the UK, Indonesia, South Korea, and so forth. The first ATM for DOGE was presented in Vancouver in February, 2014. Two bitcoin ATMs supporting Dogecoins and other altcoins opened in Tijuana, Mexico on March 17, 2014. Since then, DOGE has been used in the exchange of real estate, pornography, and online gambling as well. Subsequently, during 2017 to early 2018 Cryptocurrency “bubble”, Dogecoin briefly reached a peak of \$0.017/coin on January 7, 2018, putting its total market capitalization near USD 2 billion.

Thereafter, in July 2020, the price of Dogecoin spiked following a TikTok trend aiming to get the coin's price to \$1. This incident in particular spoke to the aforementioned leisurely exploration of the value of cryptocurrencies, as the viral nature of promoting a trend on Tiktok, a platform largely dedicated to early Gen Z participants, popularized the token and pushed for its rise.

Unlike deflationary cryptocurrencies such as Bitcoin, there is no upward limit to the Dogecoins supply, and according to the current production schedule, the inflation rate is approximately 5%, to drop to 3.4% by 2025 and 2.5% by 2035. Public forums have discussed whether the inflation rate should be changed, but the verdict has thus far been that the rate will slow but remain inflationary.


Figure 1: Dogecoin's Price Chart

Denominated in \$USD, range from Dec 15, 2013 to Feb 11, 2021



[Source: CoinGecko](#)

Since it was introduced on December 6, 2013, it has quickly developed its own online community reaching a market capitalization of US \$5,3 billion on January 28, 2021, then shooting up to \$10.2 billion on February 8, 2021.



Indeed, the true boost to Dogecoin, from the vantage point of this writing, has been in the frenzy of early 2021, including the Gamestop Short Squeeze and the post-pandemic cryptocurrency rush. In January 2021, Dogecoin went up over 800% in 24 hours as a result of attention from Reddit users, at least in part encouraged by tech baron Elon Musk and the GameStop short squeeze. In February 2021, Dogecoin hit its all-time high price following Twitter encouragement from tech baron Elon Musk, along with artist Snoop Dogg and Gene Simmons. For example, Musk tweeted “I just set up some little Doge mining rigs with my kids. It was *fun*” (emphasis added). This “fun” element emphasizes the thesis of Dogecoin as a leisurely cryptoasset. It also complements the populist ambience of Dogecoin, as promoted by Musk, who tweeted that “Dogecoin is the people’s crypto,” after he even shared an instructional video about Dogecoin. In addition, Musk posted a picture of himself holding a Shiba Inu dog (Dogecoin’s mascot).

In sum, Dogecoin represents a prime example of the “leisured aspect” of the blockchains, with a strong community-building function in line with anarchist thought, but which distances itself from the negativity that such thought espouses to resist, with a structure that encourages engagement by individuals, while refuting the numismatic valuation of a deflationary asset class. Given these elements, Dogecoin represents an altcoin worthy of further research by academics and practitioners in its own right.

References

- Akram, S. V., Malik, P. K., Singh, R., Anita, G., & Tanwar, S. (2020). Adoption of blockchain technology in various realms: Opportunities and challenges. *Security and Privacy*, 3(5), e109.
- Cai, X., Zhao, X., Zhang, B., & Feng, G. (2019). Identifying multiple peer influences on smart contract adoption in blockchain user network. Available at SSRN 3387794.
- Chohan, U. W. (2017a). The leisures of blockchains: Exploratory analysis. Available at SSRN 3084411.
- Chohan, U. W. (2017b). The Licentious Blockchains: Outlining an Altcoin Subgenre.
- Chohan, U. W. (2019). Are Cryptocurrencies Truly Trustless?. In *Cryptofinance and Mechanisms of Exchange* (pp. 77-89). Springer, Cham.
- Chohan, U. W. (2021). Counter-Hegemonic Finance: The Gamestop Short Squeeze. Available at SSRN.
- Coingecko: Dogecoin Price Chart: <https://www.coingecko.com/en/coins/dogecoin>
- Hofmann, A., Schatz, F. J., & Winkelmann, A. (2020). Uncovering the Mining Behaviour in Proof-of-Work Blockchains.
- Jurgelaitis, M., Butkienė, R., Vaičiukynas, E., Drungilas, V., & Čeponienė, L. (2019). Modelling principles for blockchain-based implementation of business or scientific processes. In *CEUR workshop proceedings: IVUS 2019 international conference on information technologies: proceedings of the international conference on information technologies, Kaunas, Lithuania, April 25, 2019* (Vol. 2470, pp. 43-47). CEUR-WS.
- Nadler, M., & Schär, F. (2020). Decentralized Finance, Centralized Ownership? An Iterative Mapping Process to Measure Protocol Token Distribution. *arXiv preprint arXiv:2012.09306*.
- Oseni, U. A., & Ali, S. N. (Eds.). (2019). *Fintech in Islamic finance: Theory and practice*. Routledge.

- Serada, A., Sihvonen, T., & Harviainen, J. T. (2020). CryptoKitties and the new ludic economy: how blockchain introduces value, ownership, and scarcity in digital gaming. *Games and Culture*, 1555412019898305.
- Teutsch, J., Straka, M., & Boneh, D. (2019). Retrofitting a two-way peg between blockchains. *arXiv preprint arXiv:1908.03999*.
- To, K. (2020). *Reimagining the Future of Aviation with Blockchain* (Doctoral dissertation, Ph. D. dissertation, Stern School of Business New York).
- Sai, A. R., Buckley, J., Fitzgerald, B., & Gear, A. L. (2020). Taxonomy of Centralization in Public Blockchain Systems: A Systematic Literature Review. *arXiv preprint arXiv:2009.12542*.
- Sookhak, M., Jabbarpour, M. R., Safa, N. S., & Yu, F. R. (2020). Blockchain and smart contract for access control in healthcare: A survey, issues and challenges, and open issues. *Journal of Network and Computer Applications*, 102950.
- Young, I. (2018). Dogecoin: A Brief Overview & Survey. Available at SSRN 3306060.

Also in this series available on SSRN:

