

New Technology Experience in Turkey: The Case of Bitcoin

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Abstract: A Cryptocurrency is an important alternative for money transactions. It is also a digital currency based on mathematics and cryptography. There exist more than a hundred of cryptocurrencies such as Ripple, Litecoin, Namecoin, Dogecoin, Mastercoin, Zerocoin, etc. But the most arguable and dominant cryptocurrency is Bitcoin. Although it provides money exchange and payment process, based on peer-to-peer network, without any central authority, there are one million estimated users globally. In this paper, the familiarity of Bitcoin (btc) in Turkey was researched. A questionnaire was designed, which contains totally 29 multiple and 5-point Likert-scale questions about general concept of btc. It was answered by 250 participants, who have at least undergraduate degree and know btc as a currency unit. Collected data were analyzed by using descriptive analysis. The results show that btc was accepted as a trustable e-cash flow system by well-educated individuals.

Keywords: Cryptocurrency, Digital Currency, Bitcoin (btc), Money Transactions

Introduction

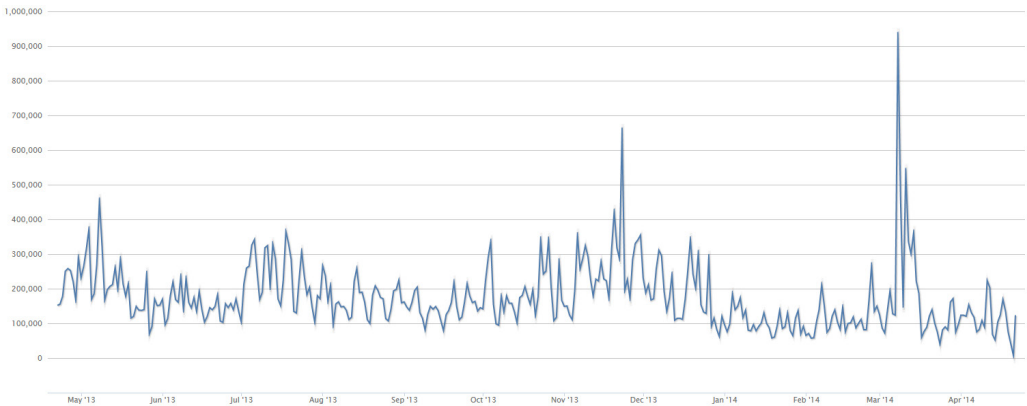
E-commerce sites provide merchandising in any time and at any place. They also use several payment systems such as Google Wallet, Paypal, or online banking systems (Bamert, Decker, Elsen, Wattenhofer, & Welten, 2013). Emerging as an alternative to these payment infrastructures, phenomenon of cryptocurrency is a pioneer of change in terms of trade and economy. There exist more than a hundred of cryptocurrencies such as Ripple, Litecoin, Namecoin, Dogecoin, Mastercoin, Zerocoin, and etc. But Bitcoin is the most popular example of cryptocurrency technology (Taylor, 2013) that supplies both currency and payment system (Bamert, Decker, Elsen, Wattenhofer, & Welten, 2013).

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Bitcoin was defined as a chain of digital signatures (Nakamoto, 2008). It compromises money transfer and payment process, based on peer-to-peer network, without any central authority (Bamert, Decker, Eلسen, Wattenhofer, & Welten, 2013; Reid & Harrigan, 2011). Confirmation process in these types of transactions depends on the acceptance of majority of participating nodes (Bamert, Decker, Eلسen, Wattenhofer, & Welten, 2013). Users have installed a Bitcoin wallet to their computers or mobile phones, thus it generates unique Bitcoin address. These addresses can be disclosed for payment or vice versa (The Bitcoin Foundation, 2014).

The first Bitcoins were transacted in January 2009 and by June 2011 there were 6.5 million Bitcoins in circulation among an estimated 10 thousand users (The Economist, 2011). Figure 2 illustrates estimated transaction volume of bitcoin between May 2013 and April 2014.

Figure 1: Estimated transaction volume of bitcoin (Blockchain, 2014)



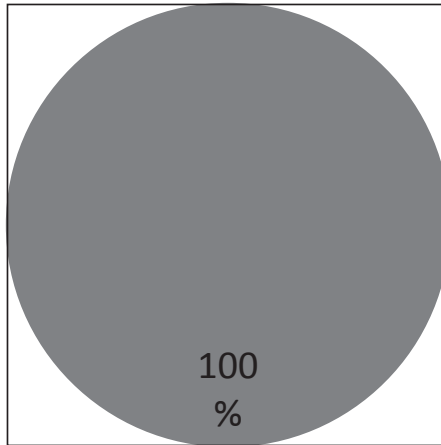
The goal of this study is to indicate familiarity of the bitcoin concept in Turkey. Therefore “the Bitcoin Usage Questionnaire” was designed, which contains multiple choices and 5-point Likert-scale questions for about the general concept of bitcoin. This questionnaire was applied throughout Turkey. Sample group was specified by having at least bachelor’s degree and defining bitcoin concept as “a currency unit”. The number of participants that matches with this profile is two hundred and fifty. 46%

of the participants have bachelor's degree and 54% of them have master's degree.

Findings

Firstly, participants were asked: "How did you hear bitcoin for the first time?". Figure 2 illustrates the acquaintance of the participants with bitcoin.

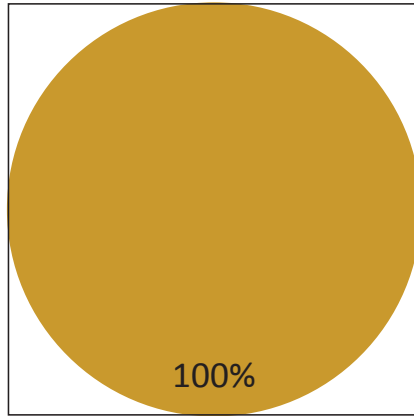
Figure 2: Acquaintance of the participants with bitcoin



Analyzing Figure 2; it can be seen that a large portion of respondents (53%) were faced with this concept while just searching on the internet without any referral. Searching on the internet is followed by the guidance of friends (16%) and social network shares (12%) respectively.

In order to understand familiarity of the participants to the concept of bitcoin, they were asked: "For how long have you known the bitcoin concept?". Figure 3 illustrates the familiarity of the bitcoin concept for participants.

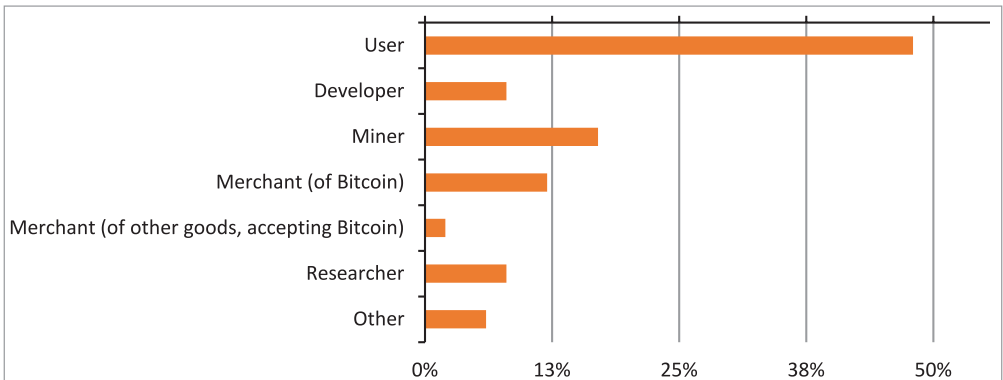
Figure 3: The familiarity of the bitcoin concept for participants



It can be seen from Figure 3 that the majority of participants (%55) know bitcoin less than one year.

To locate role-based relationship of participants with bitcoin concept, they were asked “Which role might describe you in relation to bitcoin?”. Figure 4 illustrates participants’ roles in the use of bitcoin.

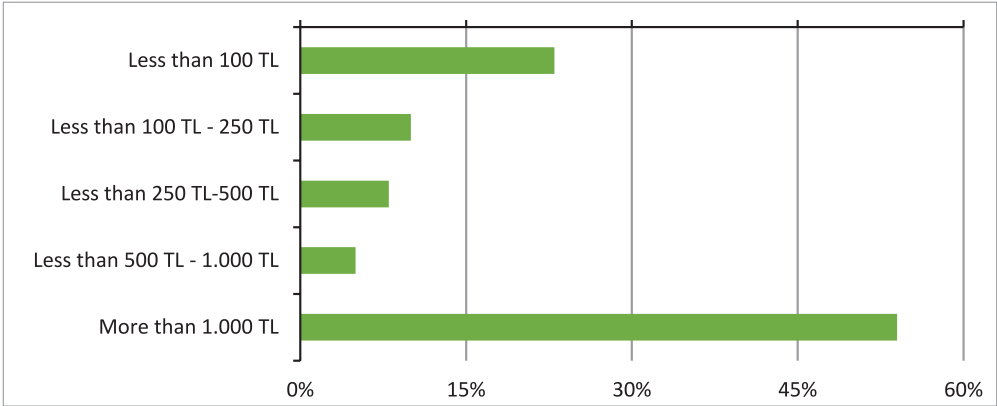
Figure 4: Roles in the use of bitcoin



Analyzing Figure 4, the majority of participants (48%) prefer to include in the role defined as user. Figure 4 also shows user role choice of participants followed by the miner (14%), merchant (14%) roles respectively.

Participants also were asked about the amount they can spend with bitcoin. Figure 5 illustrates information about bitcoin spending ranges:

Figure 5: Information about bitcoin spending ranges of participants



Analyzing Figure 5, it can be seen that the majority of the participants (54%) can spend an amount of 1000 TL and above. At this point, by asking participants the amounts of bitcoin they have, it is analysed that how much the answers reflect the reality. The participants have the lowest value of 0,04 btc and the highest value of 5814 btc.

Conclusion

Bitcoin has a certain fame in digital world not only for its cryptographic structure but also as an e-cash flow system. There are also many negative and positive approaches to usage of bitcoin in countries and some of the largest e-commerce sites, which directly or indirectly effect individuals' attitude. In this research, the individuals that have a certain level of education (at least Bachelor's degree) were evaluated in terms of familiarity on the concept of bitcoin. The results showed that participants have an increasing curiosity and the desire to use bitcoin technology and they have an increasing trust (73%) even if there is no any central authority.

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