AN OVERVIEW ON THE ROLE OF CRYPTOCURRENCIES IN BUSINESS AND FINANCE

Abstract

In this paper, we analysis the data for age, country, gender profession in Cryptocurrencies at business and finance sector. Also we considered the IT, finance and Cryptocurrencies for the further investigation. Experts split into three groups of comparably equal sizes when considering the importance of bad reputation as a result of criminal activities (e.g., money laundering, silk road) (27.97%, 21.68% and 31.47%), which was found to be slightly, moderately or greatly important.

Keywords: Cryptocurrencies, business, finance

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I. INTRODUCTION

In this article, the results of a quantitative survey of experts at the end of the year 2022 are analyzed. Among those experts there are specialists from both IT and financial fields of various universities as well as several owners of Cryptocurrencies startups in Germany, USA, Austria, Switzerland, UK and Israel [1].

Due to the fact that all Cryptocurrencies transactions are pseudonymous, criminal activities can be supported [2]. For instance, in the healthcare area, these include trades of illegal and counterfeit drugs, pedo-pornographic material and stolen medical records sees these activities as an important source for the cryptocurrency growth [3]-[6].

We conducted an online survey in the web-based survey tool *Unipark*. An online survey is a considerably low-cost method of research in comparison to other approaches, which implies quick questionnaire distribution and short response collection time [7]. We collected the addresses from official websites, in particular of universities containing Computer Science or Finance departments in Germany, Austria, Switzerland, UK, USA and Israel, as well as IT developers and bloggers dealing with on a daily basis [8]-[10].

To motivate respondents and, hence, increase the response rate, the survey invitation offered a small lottery incentive in return to a fully answered questionnaire [11]. Considering that selected experts were residents of different regions and therefore dissimilar time zones, they were split in several groups and e-mailed in certain time, so the invitations would find the respondents in the beginning of a working day [12].

II. ANALYSIS OF BUSINESS FOR FINANCE

Preliminary statistics show two third of experts are male (65.03%) and hardly one third of them are female (30.77%) (see Table 1). Most of them are aged 30-39 (36.36%), with a relatively large proportion of people aged 40-49 (27.27%), 20-29 (20.98%) and over 50 (12.59%) [13]. The two top largest nationalities in our sample are US American (38.46%) and German (39.86%). In their majority, the experts are professors (68.53%) from various universities, specializing in Computer Science, Economics and Finance [14].

Table 1: Demographics

Description	Sub Categories	Number of respondents	%
Gender	Male	93	65.03%
	Female	44	30.77%
Age	< 20 years	1	0.7%
	20--29	30	20.98%
	30--39	52	36.36%

	40--49	39	27.27%
	Over 50	18	12.59%
Country	Germany	57	39.86%
	USA	55	38.46%
	Austria	9	6.29%
	Switzerland	2	1.4%
	Israel	3	2.1%
	Other	13	9.09%
	No answer	4	2.8%
Profession	Professor	98	68.53%
	Blogger	4	2.8%
	Journalist	3	2.1%
	Banker	2	1.4%
	Other	32	22.38%

Notably, our participants are potentially representative for the Cryptocurrencies user community [15]. Similarly, the registered 44% US Americans in their Cryptocurrencies user sample. In line, we argue that having a larger proportion of German- speaking countries is rather beneficial for Cryptocurrencies research, since they usually show a high level of privacy awareness and represent hotspot areas of Cryptocurrencies activity [16]-[20].

III. RESULTS

The analysis who uses Cryptocurrencies now and will be using it in up to November 2022 from now is depicted in Figure 1&2 and Table 2. Experts indicate that the current Cryptocurrencies community is formed from technology enthusiasts (52.45% of all experts) and visionaries (30.07%) [21]. According to Rogers' (1962) theory of innovation diffusion, technology enthusiasts are more eager for changes, new ideas and innovations adaptation. They represent the most risk tolerant group, being ready for innovation fail. Tech enthusiasts of the Cryptocurrencies system are represented by technology evangelists possessing complex technical skills, scientific connections and interests [22].

Almost every third expert argues that those who will be using Cryptocurrencies in technology enthusiasts (27.27%), visionaries (24.48%) or early majority (27.27%). Early majority can be characterized by low risk tolerance, high sociability and interest for innovation [23]. Even though their willingness for innovation adoption is incomparable with tech enthusiasts and visionaries, they still will be more likely to adopt Cryptocurrencies before the rest of the community [24].

Table 2: Respondents' knowledge self-assessment

	IT	**Finance**	**Cryptocurrencies**
No knowledge	1.4% 2	2.8% 4	4.9% 7
Novice	5.59% 8	6.29% 9	20.98% 30
Medium	20.98% 30	34.27% 49	26.57% 38
Advanced	27.97% 40	25.87% 37	27.97% 40
Expert	39.86% 57	23.78% 34	11.19% 16
No answer	4.2% 6	6.99% 10	8.39% 12

Experts split into three groups of comparably equal sizes when considering the importance of divisibility into tiny amounts / micropayments (30.07%, 27.97% and 23.08%) and transaction irreversibility for merchants (20.98%, 28.67% and 29.37%), which was found slightly, moderately or greatly important. The possibility of gaining Cryptocurrencies by mining attracted experts slightly (35.66%) and moderately (23.78%) [25].

The importance "to a great extent" or "moderately" were attached to the features hindering the widespread adoption of Cryptocurrencies such as vulnerability of a wallet (e.g., due to hacking) (23.08% and 65.73%), risk of deflation due to a fixed total number of coins (34.97% and 27.97%), inaccessible coins (e.g., due to lost keys / wallet file) (34.27% and 43.36%), volatility of exchange rates (28.67% and 50.35%), possibility of political regulations and restrictions (34.27% and 40.56%), lack of trust in the reliability of the Cryptocurrencies system (30.07% and 46.85%), unclear issues of taxation (36.36% and 37.76%), low adoption of Cryptocurrencies by merchants (e.g., shops) (32.17% and 55.24%), and transaction irreversibility for consumers (27.97% and 41.96%) [26].

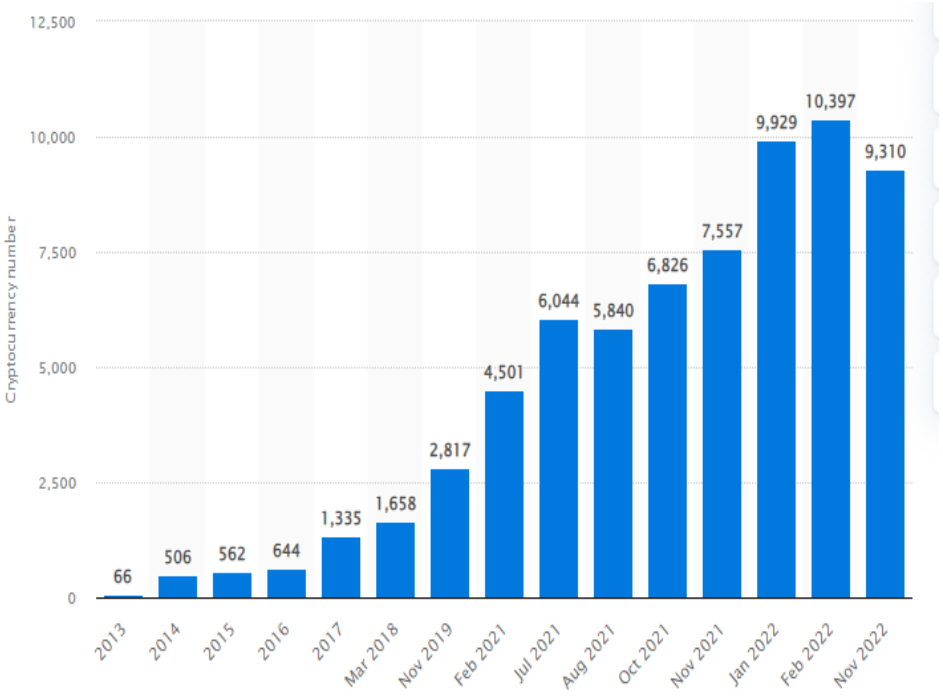

Figure 1: Number of cryptocurrencies from 2013 to 2022

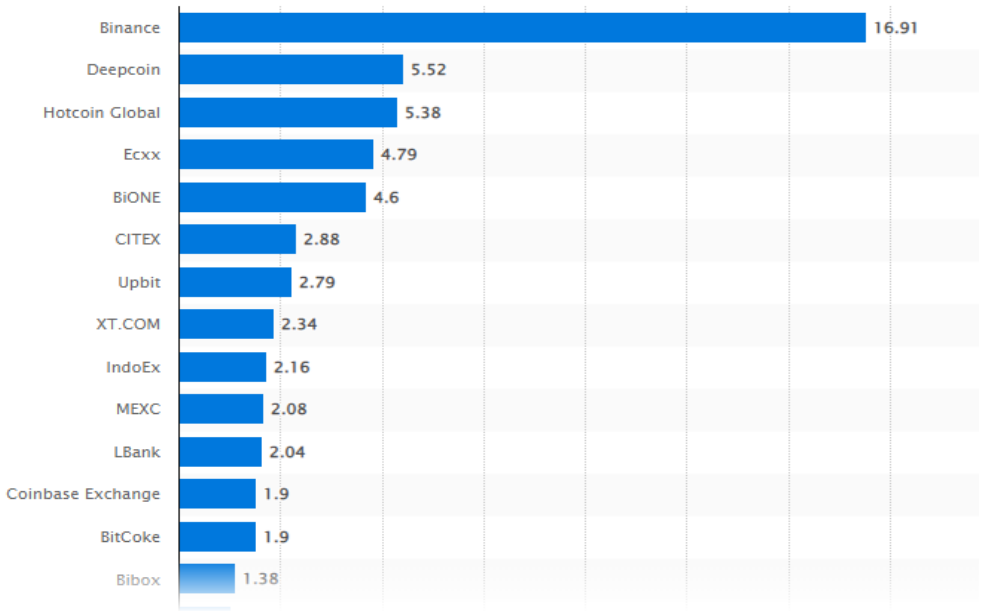

Figure 2: cryptocurrency exchanges

Almost every seventh expert appraises the absence of intermediaries and central control organs in a great or moderate manner. The same holds for minimized transaction fees, resulting from the Cryptocurrencies' decentralized structure. Considerably low transaction fees or in many cases total absence of them (e.g., when a user is able to choose whether to pay a fee in order to prioritize his transfer over other transactions waiting confirmation) should be attractive especially for merchants using frequent micropayments.

Cryptocurrencies is not limited to a particular geography, government or bank; hence there are no hurdles for international money transfers. Every 8 in 10 experts agreed that worldwide usage would be greatly or moderately favorable.

Around 80% of our experts attached a great or moderate value to enhanced anonymity of electronic payment. Notably, the famous belief about Cryptocurrencies' complete anonymity comes from having a wrong idea of the currency. Indeed, according, the Cryptocurrencies network could be regarded as anonymous, if and only if their individual users could not be sufficiently identified within the community. For this, the Cryptocurrencies developers did not follow anonymity as a primary goal, although we can speak about all pseudonymous transactions.

Slightly more 70% of our experts considered the missing conditions for becoming part of the Cryptocurrencies community as greatly or moderately important in light of Cryptocurrencies adoption. This view potentially stems from seeing criminals being supported through this feature is irreparable. Regardless of whether this was caused intentionally by means of cyber-attacks or unintentionally due to human mistake, all wallets and coins being lost are unrecoverable. This is an important risk users should bear in mind while using Cryptocurrencies system, and may be one of strongest hurdles negatively impacting the adoption of Cryptocurrencies.

IV. DISCUSSIONS

The persons of our primary interest within the present study were mainly professors in IT, Economics and Finance fields located in Germany and the United States of America. It can be assumed that this group of people is better informed on cryptocurrencies due to constantly conducting research and holding lectures. Moreover, university professors are easily identifiable and directly reachable with their e-mail addresses available on university websites, which made the research more efficient and rapid. Indeed, argue that pulling a representative random sample of Cryptocurrencies users is hardly possible.

To collect versatile viewpoints on the research question and to expand study applicability and generality, we involved experts from different geographic locations. Yet in order to assure firm response rate and answers quality, it was decided to contact professors from technologically and economically advanced countries with progressive political views on innovations and flexible taxation systems favoring Cryptocurrencies circulation. Thus, the research was limited to participants from universities of Germany, USA, Austria, Switzerland, UK and Israel. Obviously this move has resulted in considerably narrowed survey target group and therefore reduced the possible sample size. On the other hand, it allowed ensuring scientific strength of the research.

Not least, even expert opinions could be subject to change over time. Therefore, repeating the questionnaire and observing potential developments over time would constitute an interesting avenue for future work. For supporting this line of research, we will publish the full questionnaire together with this article.

Our research mainly focused on factors that may drive and hinder adoption of the Cryptocurrencies payment system. It can be followed by studies investigating to what extent each of these factors impacts the decision of individuals to adopt the system.

The research has de facto delivered mostly scientists' point of view, which may be different from perspective of merchants or those who utilize Cryptocurrencies on a daily basis. Next, it would be interesting to analyze what stimulates traders to accept Cryptocurrencies as payment method, and what are the main challenges they experience while using the currency.

The viewpoint of this study can be also broadened geographically. It would be especially interesting to obtain the input of Cryptocurrencies users in countries with unfavorable political regulations towards cryptocurrencies, and to observe how Cryptocurrencies acceptance tendency differs depending on users' geographic location and legislative system of different countries.

V. CONCLUSION

The insights gathered provide input on the discussion of future developments in the cryptocurrencies field and expands knowledge regarding the Cryptocurrencies system operation and adoption as well as suggest recommendations for further investigations in the field of finance.

Moreover, the study results may be practically useful for Cryptocurrencies users, traders and merchants considering implementation of the Cryptocurrencies as alternative payment method, since it identifies key drivers and hinderers of the system adoption and thus may be used to understand the current and predict the future outlook of the system. It might be also of interest to business analytics predicting the currency's future and its diffusion in certain demographic sectors.

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