

## **ФІНАНСОВО-ЕКОНОМІЧНА ТА ІНФОРМАЦІЙНА БЕЗПЕКА В УМОВАХ ДІДЖИТАЛІЗАЦІЇ. ДЕРЖАВНЕ УПРАВЛІННЯ У ГАЛУЗІ НАЦІОНАЛЬНОЇ БЕЗПЕКИ**

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### **CRYPTOCURRENCY – A THREAT OR A CHANCE FOR LOCAL ECONOMIES?**

In the below article I discuss metrics of cryptocurrencies using XBT as an example and their relation to local economies with possible effects on them if a cryptocurrency is adopted as a global currency.

**Keywords:** *cryptocurrencies, local economies, BTC, XBT*

Cryptocurrencies are present for few decades already. However the current interest and the price jump is an unprecedented phenomenon. Price of a XBT has jumped over 50.000 USD and even with certain fluctuations it is still heading up. Other cryptocurrencies like EHT, XRP gained unbelievable amount of value over the last few months. Their value jumps and falls cause a lot of emotions since fortunes were lost or built. The interested investors look at tweets of financial world influencers, like Elon Musk, and groups of people, like those from Reddit – WallStreetBets. They can pump up the value of particular currencies, like DOGE coin to incredible values. Also the companies, like Tesla and Apple make XBT their official currency. Tesla did that spending 20% assets on XBT, making incredible profit on that but announced, that it is going to accept payments (in the closest future) for tesla products using XBT<sup>1</sup>. Apple in turn integrates XBT as a payment method to the Apple Pay<sup>2</sup>.

Following the Tesla and others example XBT is considered to be not only a speculation asset, but also a long term investment. And also an accepted currency in buying goods and services. It may become the new global currency.

But what does it mean for the FIAT currencies if another currency starts to exist together with the old one? Will the local governments be willing to give up power and control that a local currency is giving them? How local problems will affect the global ones? In order to answer those and other questions we need to look at the metrics of currency. All currencies has certain metrics that one can look at. One of the examples the distribution of the money, is it evenly distributed in the society or kept by a small group of people. But also how it is distributed geographically. For example most of the US dollars is in China<sup>3</sup>. Another metrics is supply and demand of the money,

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<sup>1</sup> <https://www.cnn.com/2021/02/08/tesla-buys-1point5-billion-in-bitcoin.html>.

<sup>2</sup> <https://www.cnet.com/news/apple-pay-can-now-be-used-to-spend-bitcoin/>.

<sup>3</sup> <https://www.reuters.com/article/us-china-economy-forex-reserves-idUSKBN25Y0U7>.

so how much money is in circulation. What is the demand for it. What is the exchange factor for that currency. What is the relationship to other currencies, so how closely particular currencies are connected in pairs, for example some currencies like US Dollar and Euro are connected while Peso and PLN not so much. Who has the influence or control over the currency. So for example in some cases a small group of people has significant influence on the money. In Poland that group would be associated in the National Bank of Poland, which can affect the supply of the money and also aim at certain price points, that can have dramatic impacts on the credibility, faith and supply of the PLN. So a small group of people can have a huge impact on the money in citizen's pocket. As an opposite side we can provide a currency with platinum backing where regardless of attempts there is a dictated by nature supply of platinum, so no entity is probably going to be able to significantly influence the supply of the money nor the demand of the money or it's of value in terms of other currencies.

Let us take a closer look how does it work with cryptocurrencies on the example of XBT. First the distribution of money. We need to ask certain questions talking about the distribution of money. First where is the money geographically based. In most of the cases it is in the respective countries. But in some other cases – like Euro and US dollars, there are large deposits of currencies outside the country and in case of those currencies in some counters with different monetary system USD or EUR are accepted in transactions as a second currency. In case of USD it stems from its strong economy but also the fact, that USD is the base for international trade and money transfer system. The more currency is geographically distributed, the stronger it is. The second question is about social distribution of the money. For example “with the wealthiest 1 percent of families in the United States holding about 40 percent of all wealth and the bottom 90 percent of families holding less than one-quarter of all wealth”<sup>1</sup> and the top 20% of population holds more than 80% of wealth. So if the top 20 % would decide to withdraw their money out of the economy it would collapse the entire USA's economy. But this top 20 percent can take their wealth and re-invest it for a return to the bottom 80 percent to keep the economy going. This is strongly related with the efficiency and quality and regulation of the financial markets that allow the distribution of the money. The third question about distribution is related to the one how new money is added to the system. It is usually done through complex series of transactions involving the treasuries and central banks. It is important because adding new money to system incorrectly may end up in giving them to the small group of people who already have the most of it. In case of XBT it's geographically decentralized by design and it belongs to no country. It's a decentralized peer to peer currency. However it is worth to mention, that it is not evenly distributed but a huge portion still belongs to the initial creators and early miners<sup>2</sup>. However with the recent value spike of the XBC those biggest wallets from the link report being emptied, so the distribution start to grow (unless this is just a wallet to smaller wallets of the owner transfer). Also the geographical distribution and the mining process has certain concentration<sup>3</sup> with China as the mining leader. But with the current application in payment it shall be more distributed, especially when the mining process ends.

Its geographical and social decentralization which constitutes a chance for small economies with unstable currencies under influence of small group of people. They have experienced huge devaluation of the currency like in case of Venezuelan bolivar (VES) in 2018 or Zimbabwean dollar (ZWD): 2008-2009<sup>4</sup>. A cryptocurrency with no government issuing body or being regulated by any particular state with its backing in the global market constitutes a stable currency also in the unstable times and places. CBT provides an transparent indicator of how economy is doing. XBT ledger allows us to measure Bitcoin movement with a metric called Bitcoin days destroyed. So the more of the money spent on the marked, the more vivid economy is. Unlike in case of local currencies when it is very hard to track how long particular bills stay unused.

Supply and demand of a currency are usually measured by a really complex series of signals designed from international trade monetary exchanges. There's a complex system of interconnected banks regulatory agencies and treaties built around easy conversion of one money to another. And those services bring a lot of money to those dealing with the exchanges. And contribute to USA wealth and US dollar importance as for now it is the base currency for international trade

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<sup>1</sup> <https://equitablegrowth.org/the-distribution-of-wealth-in-the-united-states-and-implications-for-a-net-worth-tax/#footnote-2>.

<sup>2</sup> <https://99bitcoins.com/bitcoin-rich-list/>.

<sup>3</sup> [https://cbeci.org/mining\\_map](https://cbeci.org/mining_map).

<sup>4</sup> <https://blog.oanda.com/foreign-exchange-data-services/blog/worst-currency-devaluations-in-history>.

(Bretton Woods Agreement<sup>1</sup>). Moreover in terms of supply there is also a central authority that will decide how much money to put into circulation. They base it upon certain determinants like the interest rates in society or the employment levels. And they're either going to increase the money supply or contract it to achieve these political factors. The currency can be manipulated for the purpose of trade, if one wants to export it is crucial to keep the local currency cheap. In case of XBT supply new bitcoins appear roughly around 10 minutes. The initial amount created during this period was 50 XBT, now it is down 6.25. So the supply is gradually going down to fixed 21mln XBT. New XBTs are added to the Bitcoin economy by a process called bitcoin mining. This process is regulated by the algorithms, not by the governmental institutions, but the algorithms built into the very core of existence of BTC. So in principle, with the supply diminishing, XBT is a deflationary currency. Therefore the situation like in case of Venezuelan bolivar is not possible. Moreover since over a time less and less XBT will enter the market we will know how much money is in the circulation, how much is created and we can predict when, but also how much in total there will be of that. And it protects local economies from manipulation by printing new bills and abnormal inflation. Not that inflation in itself is necessary bad. It is considered an economy propeller, so it would be interesting whether economies cannot long time operate in the deflation regime and confirm or deny the current economic theories on the matter.

Looking at currency exchange, in case of global adoption of a cryptocurrency, the whole FIAT conversion system is not necessary anymore, so those who earn significant amount of money on those conversions rather will not be happy (this cost elimination seems to be one of the reason why Tesla has decided to incorporate XBT into their payment system). But what does it mean for local governments regulating supply, demand and the value of local currencies on the basis of, for example, a political agenda? How is it going to affect US dollar since it would no longer be necessary for international transactions? It all depends on the governments and regulations and approach of the government. But we can expect rather a battle than a warm welcome especially from the governments with large economies and strong currencies or the corrupted ones, where the currency manipulation is a mean to control economy and its citizens. Moreover the sophisticated system for the export support by keeping the value of the local currency low, like in case of China with the value of renminbi kept low, will not work anymore.

There is another issue worth mentioning. Having the same currency makes all economies bind together. So if one country suffers a crisis, all are affected. That was the case of Euro and economic crisis in Greece, where all the Euro zone was affected and other members of the zone had to support Greece, so the whole system wouldn't collapse. This was not the case for Poland, which despite of being a EU member did not adopt Euro, and at the time of the crisis reported not a collapse, but an economic growth.

The matter of control of the currency by a small, large group of people or the lack of controlled at all is also crucial. Since cryptocurrencies have transparency built in their core (the amounts in the wallets and transactions are visible) on one hand it is resistant, at least partially to the authorities manipulation, on the other hand those manipulations are used to keep economy going, to prevent unemployment and so on. So certain replacing mechanism for social or economic crash prevention must be developed. However despite all the good, that a crypto-conversion could bring, it is hard to foresee the situation, where the governments will freely abandon their tools of control. Also because of the transparency. All transactions in the ledger are visible and stay there forever. So it will be really easy to trace who has sponsored whose campaign. Or how public money was spent and where did they go. Never mind secret funds for secret operations. So it is another issue, that may actually be problematic for those, who run countries either being in officially in power, or influencing those who are. Money is power, and power results in addiction very difficult to overcome, especially that there is no standard treatment for that. Therefore a long, and main battle is still ahead of those who want to replace the Fiat currencies with the crypto one.

#### Summary

There is a great potential for local economies if a cryptocurrency, or closely cooperating set of specialized cryptocurrencies, is adopted as a global mean for covering goods and services exchange. Since they are transparent, keep the record of transactions, offer free or low transaction fee, are deflationary (in some cases) in nature, international, immutable in terms of creation, they seem like realization of the initial purpose of monetary system – to replace inconvenient barter and serve people in exchanging goods and services, rather than being a tool of power and control.

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<sup>1</sup> <https://www.federalreservehistory.org/essays/bretton-woods-created>.

There are however certain disadvantages, since certain social phenomena like unemployment, export and import rate etc. were controlled by Fiat currencies allowing to address the most unguent issues by monetary manipulation. Also USA could lose some of its economic importance if USD is no longer the international transfer default currency, so for USA it is not an attractive perspective. Moreover an economic crisis in one place affects all the globe. Also certain technological limitations must be address, like the XBT 3 operations per second only. However if a good cryptocurrency(s) and its implementers overcome its disadvantages it may have a stabilizing, transparent, anticorruption, common people friendly potential and that would be very interested to see not only in its financial perspective, but also in the way it affects the global distribution of wealth and power.

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### **ЕТИКО-ПРАВОВІ ЗАСАДИ ВИКОРИСТАННЯ СОЦІАЛЬНИХ МЕРЕЖ ПРАЦІВНИКАМИ ПІДРОЗДІЛІВ ПОЛІЦІЇ ПРЕВЕНТИВНОЇ ДІЯЛЬНОСТІ**

Сучасний час – це період технологій, які трансформували спілкування людей за допомогою соціальних мереж. Зараз Інтернет використовують понад 4,5 мільярда людей, тоді як кількість користувачів соціальних мереж перетнула позначку в 3,8 мільярда. Майже 60% населення світу вже користується Інтернетом і більше 50% використовує соціальні мережі [1]. В середньому людина витрачає майже дві години (приблизно 116 хвилин) на соціальні мережі щодня, це 5 років життя [5].

Представники поліції вивчають використання соціальних мереж для отримання інформації, особливо для тактичних цілей, наприклад, для збору інформації про загрози масового насильства, заворушень або злочинної діяльності під час інших незаконних масових демонстрацій [6]. Особливо актуальною ця проблема стала в процесі формування позитивного іміджу поліції після її реформування. Сьогодні усі публічні дії поліцейських можуть бути записані на мобільний пристрій та завантажені на YouTube або до іншої соціальної мережі. Працівники поліції повинні завжди про це пам'ятати, а також дотримуватись професійних етичних засад при користування соціальними мережами.

О.П. Косолап визначив основні напрями використання у практичній діяльності правоохоронних органів соціальних мереж : 1) отримання довідково-допоміжної інформації щодо конкретних осіб та їх контактів, стосовно конкретного кримінального провадження, свідків, потерпілих, підозрюваних тощо; 2) пошук інформації щодо соціальних зв'язків правопорушників, їх каналів злочинних контактів тощо; 3) встановлення достовірності алібі, місця знаходження особи та ін.; 3) підвищення рівня правової культури громадян; 4) ведення заходів, профілактично спрямованих на усунення умов, що сприяють вчиненню кримінальних правопорушень; 5) встановлення осіб з яскраво вираженою криміногенною поведінкою або схильністю до такого; 6) можливість використання техніки «ловля на живця» для розкриття правопорушників та злочинів; 7) поширення суспільно значимої інформації (щодо правопорушень, правопорушників, пошук свідків, доказів тощо); 8) розміщення звітної інформації та налагодження системи електронних звернень громадян; 9) підвищення рівня довіри громадськості правоохоронним органам тощо [2].

Закон України «Про Національну поліцію» у ст. 9 визначає засади відкритості та прозорості, згідно якої поліція забезпечує постійне інформування органів державної влади та органів місцевого самоврядування, а також громадськості про свою діяльність у сфері охорони та захисту прав і свобод людини, протидії злочинності, забезпечення публічної безпеки і порядку [4]. Згідно цього положення на офіційному веб-сайті МВС та НПУ розміщуються в актуальному стані інформаційні матеріали про діяльність підрозділів, нормативно-правова база, звіти, корисна інформація, а також новини. За допомогою веб-сайту МВС та соціальних ме-