THE OUTLIER

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EDITORIAL

Bitcoin: Great Risk, Great Revolution

If you ask the average person what money is, it is likely you will receive the same response almost every time: money is the currency you use (rupees, dollars, yen, etc.) to obtain resources or services. Some might even expand the definition to include assets or some existing forms of barter. But all explanations of money are somehow anchored in the physical world. "Money", as it's understood by most people, is always tangible in *some* way, whether through government guarantee, gold or property. Not many people are willing to believe that money could be created in the digital world and have no presence of any sort in the world outside it.

This is likely to change in the future. The pioneer in this market is Bitcoin, a cryptocurrency that is most commonly associated with the new possibilities of digital commerce. Bitcoin was the 'first mover', created by the anonymous figure (or group) Satoshi Nakamoto. Though no one knows the identity/identities behind Nakamoto, this does not seem necessary for a decentralized currency with a public ledger. No one has the power to control Bitcoin, nor can anyone control the flow of Bitcoin. This cannot be said about fiat currency, which requires government backing and is also subject to government intervention. For instance, governments can freeze bank accounts, change the value of currency and even devalue a currency altogether through their decisions. Bitcoin does not suffer from this, being entirely digital and tracked by a ledger that no one can manipulate. For the ordinary person, this means greater freedom and more assurances that no one will prevent them from using or block exchange of their Bitcoin. Added to this, the transaction fees are lower, since there are no third parties involved. Since it is digital, it can be accessed from anywhere in the world without the exorbitant fees levied when transferring money overseas, or even using it locally at times.

This might make it sound as if Bitcoin is the solution to all problems with currency, and some will claim that it is. However, there is another side to this. Bitcoin is a concept that it still in its nascent stages. The number of people who own Bitcoin and trust it are a very small minority, making it difficult to use the currency in most places. Added to this, Bitcoin mining uses extremely large quantities of electricity, making it a drain on the environment. There's also the 'wild card' factor: one cannot predict or know what will happen next as far as Bitcoin is concerned. Will it collapse overnight? Or will it deliver us from the constant financial collapses caused by the volatility of the current system? In this matter, our guess is as good as yours. For this reason, Bitcoin is a possible revolution with incalculably high rewards, but uncomfortably high risks. As with any revolution, the results will only seem obvious in hindsight.

NUMBERS TELL A STORY

The Rise of Crypto

9 million

Nine million Pakistanis own Bitcoin, which accounts for 4.1% of the country's population.

20 billion $

Current value of cryptocurrency recorded in Pakistan.

3rd

Pakistan ranks third in Global Crypto Adoption Index.

2140

Is when the last Bitcoin will be mined .

21 million

The total amount of bitcoin is limited.

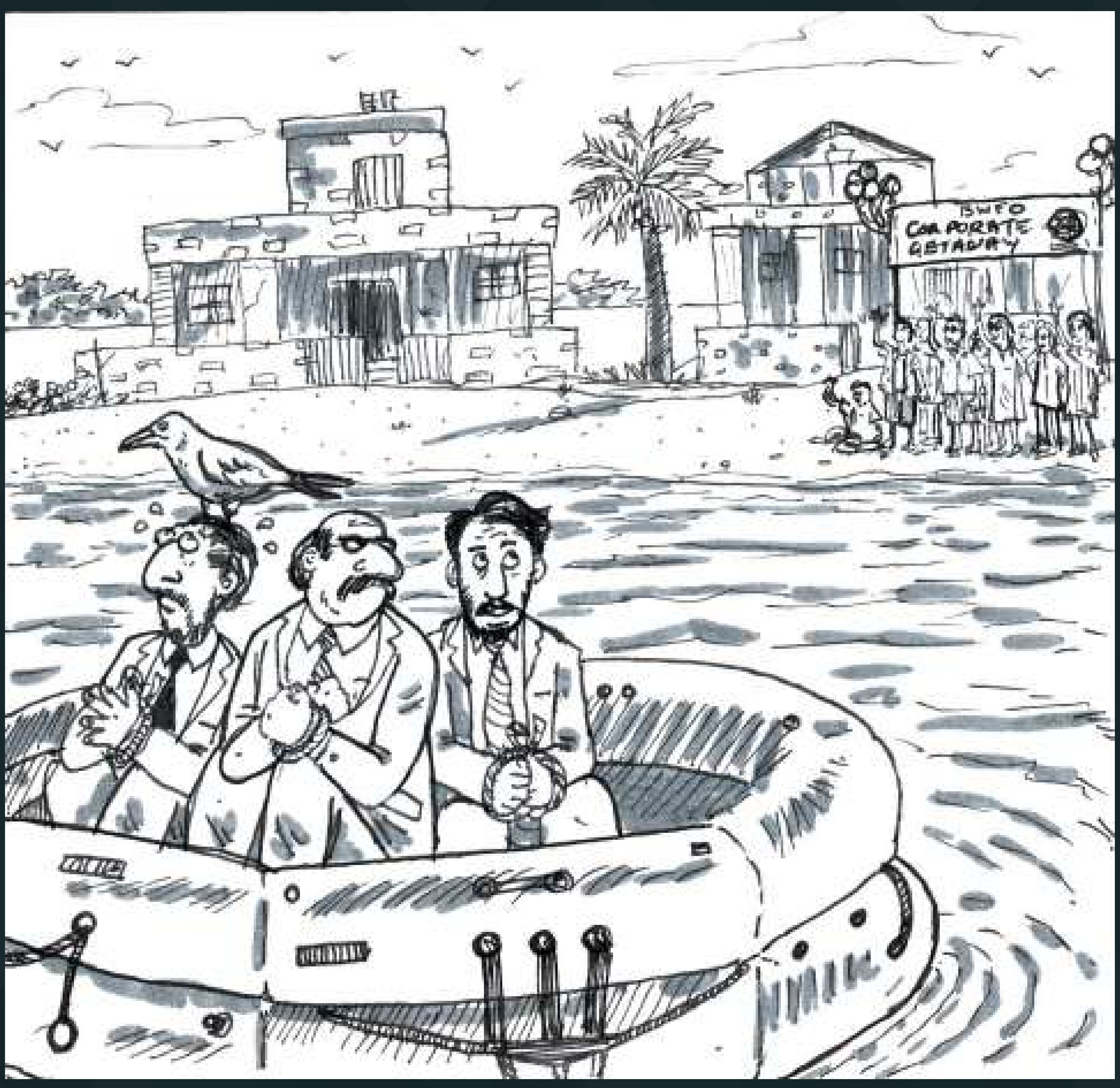
10%

Of the global population owns cryptocurrency.

https://triple-a.io/crypto-ownership-pakistan/#:~:text=How%20many%20crypto%20owners%20in,total%20population%2C%20currently%20own%20cryptocurrency.
https://www.arabnews.com/node/1993221/business-economy
https://www.theportugalnews.com/news/2022-02-14/10-of-the-global-population-owns-cryptocurrency/65227
https://www.fool.com/the-ascent/cryptocurrency/articles/7-facts-about-bitcoin-that-will-surprise-you/

WIT'S END

Zain Ashir



"Whose idea was it to let the employees organize the corporate get-away?!"

OBSERVATIONS FROM THE FIELD

An Introduction To Bitcoin

Saadi Agha

A topic as complex as Bitcoin requires time and effort on the part of the reader to truly grasp. This article aims to give a concise view of Bitcoin, its past, present and promising future.

What is money?

To really understand Bitcoin, we must first understand money. Money has three main functions: it is a store of value, unit of account and medium of exchange. In the simplest of terms, money allows humans to freely exchange goods and services without the coincidence of wants– if I sell a service to you, I do not have to hope that you are bartering a good that I need. Money is a token or a claim to future consumption.

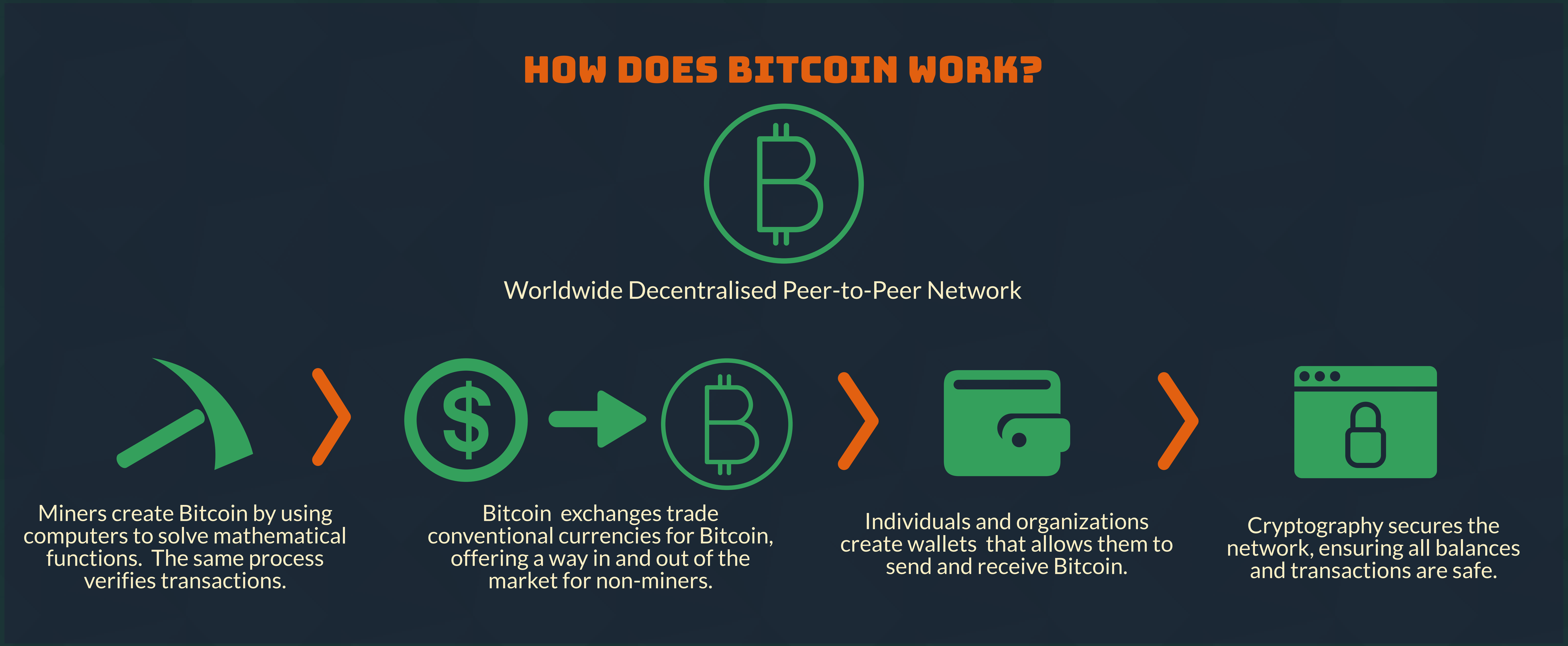
Throughout history, humans have always tried to find commodities that are scarce, and outside the control of third parties, to act as money. For instance, in the primitive societies of Western Africa, the primary source of money was Aggry beads. The reason for the use of glass beads as money was its scarcity, which led to society highly valuing them. However, once European traders and explorers realized that they could bring cheaper beads from Europe, and subsequently flooded Africa with this "cheap" money, the value of these beads fell dramatically and very quickly ceased to act as money. Fast forward to the 20th century, and we have a similar story– all money until the 1970s was backed by gold. A hard commodity that was outside the control of governments and bankers. In 1971, President Nixon closed the 'gold window', i.e. counties could no longer switch their dollars for gold. All dollars from that point onwards were backed by the "full faith of the US government". This was an experiment that has lasted 50 years, but is now showing signs of cracking.

Enter Bitcoin

In 2008, we faced a massive collapse of the global monetary system. The Great Recession fueled a new era of 'government (fiat) money'. Banks, who were responsible for engaging in high-risk lending were on the verge of failing across the board. To prevent this inevitable collapse, the Federal Reserve stepped in and created billions of dollars, other banks around the world followed suit. This new money caused the debasement of currencies across the world. An average blue-collar worker, who worked 40 hours a week and saved as much money as possible quickly realized that the house they wanted had become *much* more expensive. Money was debased through inflation, without the consent of the average worker, who had the most to lose.

Luckily, in the works was another experiment, a cyberpunk working under the alias of Satoshi Nakamoto created a network protocol called Bitcoin. The philosophy behind Bitcoin is simple, but also extremely complex. In simple terms, the Bitcoin network created a native currency called bitcoin. The network was programmed to ensure that there would only be 21M bitcoin ever produced, with an exact schedule of how many would be produced every year. In addition, for the first time, any transactions happening on the Bitcoin network were viewable by anyone on Earth. All transactions since its initiation are on a public Blockchain. This property also meant that all transactions are verifiable by anyone. Keep in mind that, while transactions are viewable, the identities associated with the transactions are not, thus providing more privacy to individuals.

Just like that, we had entered a new world, we had an unstoppable, 'permission less' network in which anyone on the earth could participate. Whether that is a woman looking to escape the tyrannical regime in Afghanistan (true story) or a Wall Street banker looking to trade the new currency. No longer was money controlled by a select few individuals in smoke-filled back rooms that would affect all of humanity, but by a computer algorithm that was unbiased, apolitical, and with a hard supply cap of 21M.



...So what?

Bitcoin was initially an experiment that no one was sure would survive. The first bitcoin was sold for a few cents. Fast forward to 2022, and the currency that was less than a dollar in 2009, is now close to $40,000 today. This is an incredible feat- the value of bitcoin comes from people adopting it, using it, and saving in it. As currencies around the world start to tank, individuals will look to harder assets to maintain their purchasing power. This has played out as expected in countries whose local currency is rapidly losing value, making everything more expensive each year. Pakistan, India, Sudan, Ghana, El Salvador, Iran, are a few examples where we can see bitcoin adoption become meaningful. Bitcoin is 'permissionless', it does not require third parties to approve your transactions, it does not care what you do, what ethnicity you are or what religion you belong to. You can buy hundreds of bitcoins or a fraction of one. You control your bitcoin through self-custody. No third party can stop you, confiscate it from you, or debase it. This technological breakthrough could eventually usher in a new civilization, one in which individuals do not work countless hours a week just to make enough money to make rent. Instead one that allows us to feel secure in knowing that our savings will not decrease, but increase in value over time as the bitcoin we hold goes up in value.

Final thoughts

This is not going to be an easy transition. As with any technology that disrupts the incumbents, we can expect a lot of pushback from vested interests. However, there is a mathematical certainty: all fiat currencies will eventually fail. When they do, there will be uncertainty, there could be hard times ahead and there could be serious violations of privacy and control of our individual lives as governments try harder to maintain control of the money. Bitcoin offers a way out, it offers a raft to a shrinking ship, most importantly, it offers a chance to the 99% to hold, save, and make a better life for their offspring. Let's work together towards this abundant future.

OBSERVATIONS FROM THE FIELD

Dr. Saifedean Ammous on The Dynamics Of Bitcoin

Dr. Saifedean Ammous generously allowed The Outlier to reprint some of his statements in interviews and a paper he wrote on Bitcoin and its possibilities for developing countries. Below are excerpts that share some of his most valuable insights.

Dr. Saifedean Ammous is the author of The Bitcoin Standard: The Decentralized Alternative to Central Banking, the best-selling groundbreaking study of the economics of bitcoin. The book was a pioneer in explaining bitcoin's value proposition as the hardest money ever discovered, and the only working alternative to national central banks for international payments.
Dr. Ammous holds a PhD in Sustainable Development from Columbia University, where his doctoral thesis studied the economics of biofuels and alternative energy sources. He also holds an MSc in Development Management from the London School of Economics, and a Bachelor of Engineering from the American University of Beirut.

THE SCALABILITY OF BITCOIN

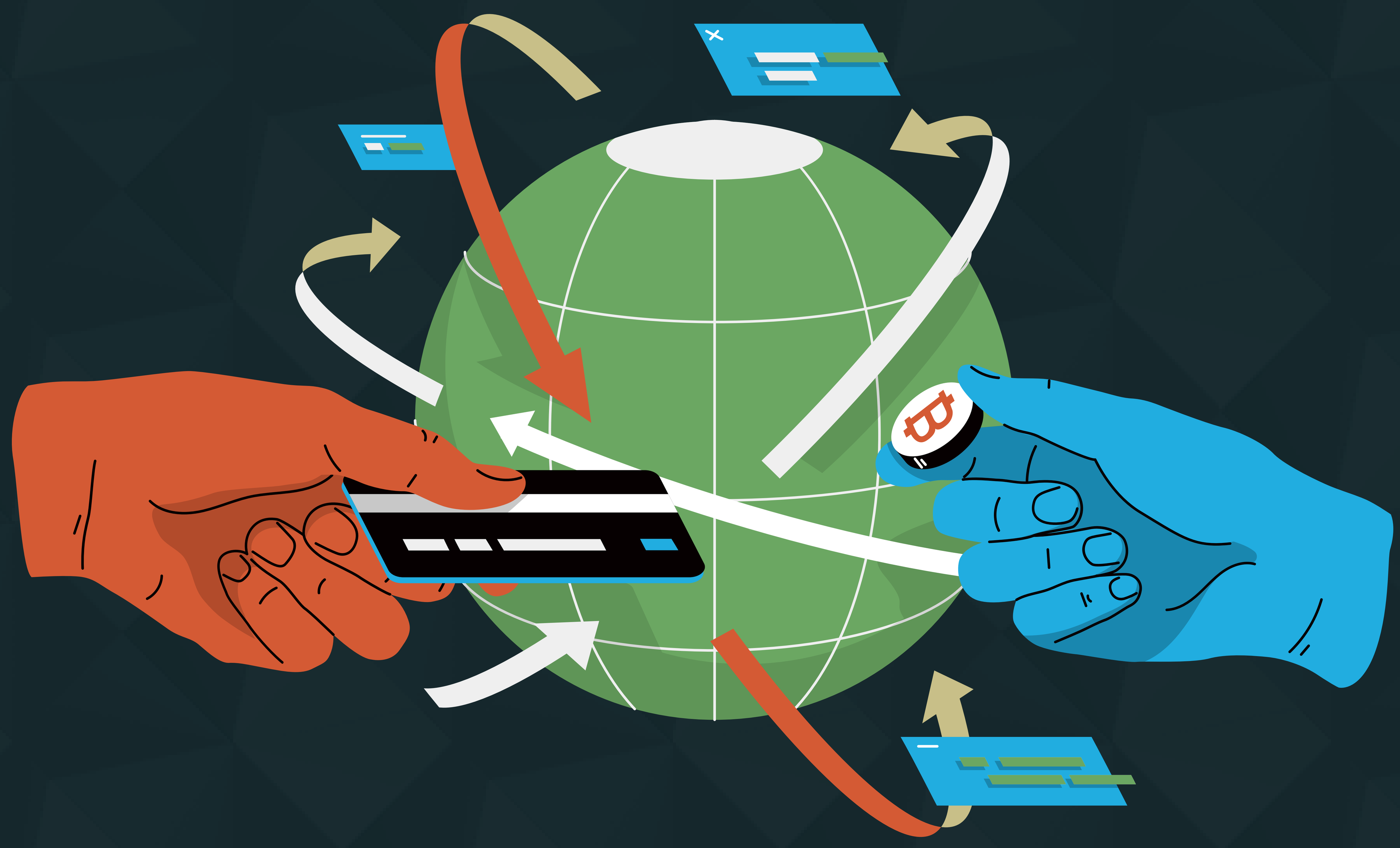
"Bitcoin is scaling technically I think, quite successfully. The main issue, the way that I see it, is a matter of liquidity. Bitcoin needs to build up liquidity and that's just not something that can happen overnight, because the way that it's going to happen is that first people need to hear about Bitcoin. Then people need to understand why it is and then they need to learn how it functions. Then they need to find a way to buy and that's just not easy. So I remember 2013, lots of people heard about Bitcoin, we're trying to buy Bitcoin and couldn't. I couldn't buy at this point, as back then I was in Lebanon and it takes a lot of time for people to find somebody who has Bitcoin to be able to connect with them and to buy from them. So then that process needs to take time for people to spread it and for Bitcoin to continue to operate successfully and for its values to go up, to attract more people, to bring in more people. So we're now at a point where we have maybe maximum 1% of the world's population own Bitcoin I would say. There's still a lot of people and a lot of money to go. It can't just happen overnight."

HOW BITCOIN CAN HELP YOU SAVE

"Yeah, it's amazing how many people have told me the same thing on Bitcoin. Even before I wrote my book, I'd heard so many people who would say the same thing, that once they started having Bitcoin and having the ability to put their money in a reliable store of value that begins to appreciate over time, they started finally understanding the meaning of saving.
I think most people my age have not, well I don't know most, but a lot of people my age maybe more than any generation recently, have no conception of saving. You go through your childhood, you don't save a penny, you spend everything your parents give you and then you go to college and you get into debt, you get out of college, then you get into more debt for a house and a car and a wedding and maybe you pay it off before you die or maybe your kid's are burdened with it and life goes on. If you make more money, you just take on more debt. It's amazing! If you think about it, that's just part of the reason that many people are so miserable, because they're constantly with that worry of debt, "what if I miss this payment" or "what if I miss that payment?"

DIGITAL CURRENCIES' POSSIBILITIES FOR GROWTH POVERTY ALLEVIATION, & INTERNATIONAL DEVELOPMENT

"As the former chairman of the US Federal Reserve System Paul Volcker famously put it, the "single most important" innovation the financial industry has witnessed in the past 25 years was the introduction of Automated Teller Machines. "I wish someone would give me one shred of neutral evidence that financial innovation has led to economic growth"(Hosking and Jagger, 2009). While banks have produced various new financial instruments and methods of hedging risk and maximizing their profitability, the banking experience for the consumer has not changed by much since the ATM allowed withdrawals outside bank branch locations and opening hours. Transferring money in any way other than in person continues to cost significant amounts of money and time for the majority of people. The most common method for payment today is still the credit card, which was invented in 1949, back when the vinyl record was the most prevalent method of listening to music recordings. Since 1949, the quaint vinyl records have evolved to tape cartridges, 4-tracks, compact cassettes, compact discs (CDs), and finally mass storage digital music players, while credit cards are still in use today, featuring glaring failures which modern technology could easily fix: Most notably, payment is still initiated by the recipient, meaning the payer must disclose their sensitive information to the recipient and risk compromising it every time they want to make a payment. Further, payment can only be received by people who own a credit card terminal, which involves significant set-up costs and high commissions. These high payment transaction costs constitute a small problem for the populations of rich industrial nations, but they are an insurmountable obstacle for much of the world's poor, who do not present an attractive market for financial institutions, and thus remain largely unbanked and unable to access financial services altogether. When they must use financial services for remittances, the fees they pay are exorbitantly high compared to the small amounts transferred.



The world's poorest are citizens who live in countries with limited financial services, unaccountable governments, fast-depreciating currencies, corrupt judicial systems, and economic institutions that perpetuate the advantages of elites while excluding the majority of the population, with little incentive to reform—what Acemoglu, Johnson, and Robinson (2001) and Engerman and Sokoloff (1997) term 'Extractive Institutions'. These institutions do not seek to maximize economic growth and increase output, but rather to maximize the predation of the elites over the majority of the population. A significant contribution to the survival of predatory and unproductive economic institutions is their ability to have a monopoly over their captive populations, who have no alternative to dealing with them. In the physical world of industry and trade, such monopolies are easy to enforce through brute bureaucratic force and controls on capital movement, information, and production. But the rise of the virtual economy introduces an escape hatch for these populations, who can now access information, trade, and transact while subverting the physical controls placed by predatory elites. Bitcoin may provide populations living under predatory institutions with what Albert Hirschmann (1970) terms 'exit': to withdraw from the relationship with the institutions that ill-serve them. The mere threat of exit makes 'voice' more powerful: elites will feel more pressed to listen to the masses' problems and grievances if the masses have a credible fallback position that is harmful to the elites. This can have a twofold impact: it would allow these populations to deal with productive private property institutions, and it would threaten the elites of these societies with mass exit of their populations from their political and economic control, forcing them to reform their institutional arrangements. The Bitcoin network is the potential institutional competition to which the world's poor can defect. Elites and governments can rely far less on the safety of their territorial monopolies in a world where payment is virtual. Bitcoin offers the most promise and potential to the billions of people who to this day remain unbanked and unable to access financial services. The high cost of financial intermediation makes the world's poor unattractive to financial institutions; the small market value of transactions means that the small fees charged on them cannot cover the costs of intermediation. Further, in developing countries where political instability is higher, financial institutions face difficulties in operating that reduce their services and reach. The developing world is well behind the developed world in terms of financial development, and would require extensive investment in infrastructure, education, training and capital accumulation to be able to catch up.

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OBSERVATIONS FROM THE FIELD

Dr. Saifedean Ammous on The Dynamics Of Bitcoin

Continued from previous page

But Bitcoin offers the intriguing possibility that developing countries could sidestep the development of a traditional financial system and move to mass adoption of international online digital currency. Many developing countries also have underdeveloped telecommunication networks and very little telephone penetration, but the invention of the mobile phone has allowed for the spread of telecommunication without the need for large infrastructure spending or the prerequisite institutional and political reform (See Aker and Mbiti, 2010).

One particularly promising application of this is in the case of natural disasters, which can severely damage the financial infrastructure of an area, posing severe challenges to mobilization of resources for relief efforts. Digital currencies can transform disaster relief by allowing for donations from around the globe to go to the stricken areas immediately when they are most needed. Resources and relief efforts can be mobilized far faster when those afflicted by disaster have the financial ability to pay for them directly. Their local knowledge and their pressing need would direct their spending far better than a centralized solution from above would.

The rapid rise in the value of bitcoins over the past five years makes it a potential haven for citizens of countries whose currencies are devaluing, on top of the traditional havens of safe currencies and precious metals, which are easier to control by virtue of being physical. The appearance of an easier and more convenient inflation haven could increase the pressure on the value of the domestic currency. While this could theoretically lead to a hyperinflationary collapse, a more likely immediate consequence is that the threat of exit to Bitcoin could force governments to act with more monetary responsibility in the handling of their currencies. The world's poorest are usually citizens of countries that continuously witness devaluation of the value of their currency. Should the world's poor begin to transact and accumulate savings in an appreciating currency, they would be able to accumulate capital far more effectively. Accruing higher levels of capital also leads to increases in marginal productivity of labor.

These currencies have so far been the focus of attention for their role as financial investments and currencies, but more significant than these considerations is the role that these currencies can play in the process of development and poverty alleviation. It is precisely in developing countries that the costs of intermediation are highest, and where the intermediation institutions are the most corrupt and least accountable."

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READERS TALK BACK

Tech Education: A Growing Necessity in Pakistan

Zareef Baloch

An enormous transformation continues to take place around the globe, in which the demand for a tech education has been accelerating significantly. Similarly, demand for a tech education has been rapidly growing in Pakistan. It will not be an exaggeration to say that technology will soon penetrate into every vein of even an underdeveloped country like Pakistan. This pervasion of technology in every sector of the country will boost the demand for tech education and professionals.

It has been vividly seen that the country stands at the point of inflection from which many tech professionals will be required to operate the system. According to reports, Pakistani start-ups raised over $300 million in 2021, a major increase over preceding years. These start-ups mostly aim to provide solutions to their consumers through tech-based products. For that, they generally hire people who possess skills in IT and technology. Due to this, the demand has been growing.

Secondly, owing to competitive salaries abroad, qualified tech professionals often wish to work for foreign companies. This becomes another reason that the gap between demand and supply has been widening. In addition to that, Pakistan has not yet invested much in this sector within its education system, so there remains a severe shortage of talented tech professionals within the country.

According to various reports, Pakistan will be requiring at least three IT professionals out of every ten employees in the coming decades. This growing demand further exacerbates the gap between demand and supply of IT professionals. When it comes to the challenges of this sector, there exists a substantial lack of budgetary allocation, sound infrastructure, and conducive environment for the exponential growth of the tech sector.

Most importantly, Pakistan significantly falls short of providing a culture of research and innovation, which impedes the growth of the tech sector. However, certain measures such as considerable allocation of funds and creation of a conducive environment can mitigate the emerging challenges of this sector.
In short, this entire discussion can be boiled down to a point that, in this age of technological revolution, the demand for tech education and tech professionals has been experiencing an upward surge that needs to catered to by paying considerable attention to this sector.

QUOTE OF THE MONTH

"I would encourage newcomers to spend a few months developing a solid understanding of why Bitcoin is different – why Bitcoin is the revolution. It's a money system that is beyond the control of any one group of people, and we've never had anything like that before."- Alex Gladstein

Alex Gladstein is Chief Strategy Officer at the Human Rights Foundation. He has also served as Vice President of Strategy for the Oslo Freedom Forum since its inception in 2009. In his work Alex has connected hundreds of dissidents and civil society groups with business leaders, technologists, journalists, philanthropists, policymakers, and artists to promote free and open societies..

FEATURE STORY

Working Hobbies: Rural Women and Market Access

A story based on our work-related experiences

Sabeen Rizvi

The women of the village had many hobbies. Asma loved to cook big meals. Shahista made jewellery and loved taking care of her family's livestock. Neha made jewellery alongside Shahista and was known to be a great field worker and excelled at farming-related work. Seema made beautiful clothes and lace. In fact, they were all so good at their hobbies, that they had started making money from the products they made. Asma would get orders to cater gatherings and events. Neha and Shahista would sell jewelry whenever they got a chance, and Shahista would ask her husband to sell any livestock when funds were needed. Seema had started selling the clothes and lace she made to a business owner who paid her for her work.

All the women saved their money and tried to manage it to increase their choices and benefit their children. However, they would hit many snags in trying to do this. Asma had tried to take a loan to expand her growing catering business, but was told that "women can't take loans" at the local bank branch. Apparently, loans to women were considered "risky" for several reasons. She had considered getting a smaller loan from elsewhere, but her sister had warned her that the interest was very high and would cause her trouble if she couldn't pay it quickly.

Seema asked around to see if she could sell her creations directly, since she had heard that her employer made much more on the products than he paid her for them. It seemed unfair and she thought of all the things she could do if she could keep the profits she had rightfully earned. She was told that all the work she did was sold in the city or in larger towns she would be unable to access without affordable and safe transport. Sadly, she was unable to find it or afford the many fees it would take for her to start her own business.

Shahista could only sell the jewellery her and Neha made when she was allowed to go to the extremely rare women-led livestock sales. The little her and Neha were able to sell informally required transport or help from family members which was not always forthcoming. It was usually considered frivolous. Many of the people who wore jewellery often had said the products looked "unfinished" and were not "sturdy". Unfortunately, neither Neha nor Shahista knew how to make them "finished" or any sturdier than they already were. They had heard there were ways to learn how to do this, but could find no one to teach them or do the work it might take to get them up to "market standard".

All five of the women worked very hard to overcome obstacles and gain the approval of their families and fellow villagers. Yet, for every hurdle they crossed, there were usually several more waiting just a few steps ahead. They continued to do their best and were able to have a small, steady income to help themselves and their families with when needed. They were all very proud of the work they did and being able to sell their products for a good price.

Sadly, for these women, and several around Pakistan, their hobbies remained mostly that: ways to pass the time. It doesn't have to be this way. With the right support, these pastimes can become professions and even economy-benefiting businesses that help grow Pakistan's struggling economy.

Source: *Revised Final Report-Nationwide Gender Sector Assessment For Office Of Economic Growth and Agriculture (EGA) – 2015, USAID/Pakistan's Office of Economic Growth and Agriculture (EGA), by AASA Consulting*

READERS TALK BACK

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