Blockchain Palestine

By Yahya Al-Salqan

Blockchain has been the foremost emerging technology of this digital era. Organizations have increasingly leveraged distributed ledger technology since its advent with Bitcoin in 2008. It continues to drive technological innovation and disruption that will have a major impact on how we live and do business.

Blockchain technology has emerged as a game-changing innovation that has the potential to reshape economies, industries, and governance structures worldwide. The Middle East, known for its rich history and vibrant culture, is no exception to the global blockchain revolution. As governments and businesses across the region recognize its transformative power, they are embracing this technology to usher in a new era of transparency, efficiency, and prosperity.

Blockchain is making its mark in the Middle East, driving economic growth, fostering financial inclusion, enhancing supply chain management, transforming government services, and empowering renewable energy initiatives. As Palestine is a unique case, adopting blockchain technology can play an important role and provide an opportunity for economic development and freedom for our country. Whether in land registration and protection or in adopting Bitcoin as legal tender, the beauty of blockchain and the use of the underpinning crypto phenomena stems from its fundamental and intrinsic building blocks: crypto is revolutionary in moving towards a more inclusive economy; it is freedom, based on the trust of science; ethical; and – I argue – it is Halal, more so than any traditional fiat currency counterpart.

Let us look at some examples from the region and explore how Palestine can follow suit.

Blockchain is driving economic growth and financial inclusion. The United Arab Emirates (UAE), for example, has been at the forefront of blockchain adoption in the Middle East. The Dubai government launched the Blockchain Strategy 2021, aiming to conduct all government transactions on blockchain by 2021. The Emirates Blockchain Strategy seeks to streamline government services, promote paperless transactions, ensure data integrity and security, and position the UAE as a major crypto hub in the world.

The growth of the ecosystem in the UAE has been staggering as entrepreneurs, startups, investors, global enterprises, and governments recognize blockchain as a transformative technology with the ability to improve returns and disrupt existing business models. Around 1,400 organizations in the UAE were operating in the crypto ecosystem in late September 2022, with over 7,000 individuals working in the industry, contributing to one of the country's most diverse and fastest-growing industries. The industry is divided into native and non-native companies, where the former account for 64 percent and are those that started out in the blockchain space. Non-native, at 36 percent, are organizations from other industries that have adopted blockchain or ventured into blockchain to improve their processes and profits.

The UAE has leading economic zones, such as the ADGM, DIFC, DMCC, and DWTC, that have become hotspots for crypto activity because of the ease and convenience they offer to startups. Other economic zones in the country have created areas of capital, knowledge, and entrepreneurship with attractive business policies and infrastructure.[i] Dubai, for example, has been identified as the fifth crypto-friendly city in the world, and Abu Dhabi was ranked sixth.[ii]

The Middle East is experiencing a digital transformation, with technological advancements playing a pivotal role in shaping its future. Blockchain, as a decentralized, tamper-proof, and secure technology, holds immense promise in unlocking opportunities for sustainable growth and development in the region. Given the lack of natural resources and the reality of being controlled by an occupying power, adopting the blockchain opportunity in Palestine opens up an opportunity for technological freedom and economic independence.

Blockchain enhances supply chain management. For example, Saudi Arabia, being a major player in global trade, has recognized the potential of blockchain in supply chain management. The Saudi Customs Authority partnered with tech giant IBM to implement a blockchain-based platform to enhance the efficiency and transparency of the country's cross-border trade processes. This platform allows stakeholders to track shipments in real time, reducing delays and ensuring compliance with regulatory requirements.

Blockchain transforms government services. For example, Bahrain, one of the early adopters of blockchain technology

in the region, launched Bahrain Fintech Bay, a leading fintech and blockchain hub. The government of Bahrain has been actively exploring blockchain applications in various sectors. It has focused on blockchain-based identity management systems to improve citizen services and data security. In addition, the Bahraini government is utilizing blockchain for land registration and intellectual property protection, simplifying processes and reducing the risk of fraud.

Blockchain empowers renewable energy initiatives. For example, Jordan has embraced blockchain technology to promote renewable energy initiatives. The country launched a blockchain-based pilot project that allows consumers with solar panels to sell excess energy directly to other consumers through smart contracts, eliminating the need for intermediaries. This initiative not only encourages the use of renewable energy sources but also promotes energy independence and decentralization.

While some Middle Eastern countries have made significant strides in blockchain adoption, others are still in the early stages of exploring its potential. The rate of blockchain implementation varies from country to country, with the UAE, Saudi Arabia, Bahrain, and Jordan leading the way. Other countries such as Kuwait, Oman, and Qatar have also shown interest in blockchain technology and are gradually exploring its applications across different sectors.

In Palestine, blockchain can add value as well. Simply put, Palestine does not have a national currency and, absurdly, is using that of its occupier, which renders economic ties and dependency intrinsic. In Palestine, land and property ownership remain major struggles for Palestinians. I argue in this article that these two, among other cases, are ideal for blockchain Palestine. Don't we want to protect our land and be economically independent from the occupier!? Here I offer a few suggestions on how Palestine could adopt and therefore benefit from the blockchain.

Digital Identity Management: Develop a blockchain-based digital identity system that allows Palestinians to securely store and control their personal data, facilitating access to government and banking services and financial inclusion.

Land Registry and Property Rights: Utilize blockchain to create a transparent and tamper-proof land registry system, ensuring secure property ownership records and titles and reducing land disputes. Putting the land titles (*tabou*) in the tamper-resistant blockchain is a natural way to protect the land titles from forgery or illegal transfer of deeds.

Supply Chain Management: Implement blockchain in the agricultural and manufacturing sectors to track and verify the origin and authenticity of products, improving transparency and trust in the supply chain and resisting the colonies' "settlement" products.

Remittances and Cross-Border Payments: Using blockchain-based solutions to facilitate faster, cheaper, and more secure cross-border remittances and payments, reducing dependency on traditional channels, especially since the Palestinian diaspora is spread all over the world.

Healthcare Data Management: Develop blockchain solutions to securely store and share medical records, improving the efficiency and accuracy of healthcare services.

Education and Credential Verification (VeriCert): VeriCert is using blockchain to store and verify educational credentials and certifications, enhancing trust in the authenticity of qualifications.

Financial Inclusion through Decentralized Finance (DeFi) and Innovation: Foster the growth of DeFi platforms that offer financial services without traditional intermediaries, promoting financial inclusion and accessibility to financial products. That would open the door for more innovation and more startups exploring this vast opportunity. One of the significant potential benefits of blockchain in Palestine is its ability to foster financial inclusion. The region has a large unbanked population due to various challenges, including limited access to traditional financial services. Blockchain-powered financial applications can offer a more accessible and secure way for people to engage in financial transactions, savings, and investments. By using blockchain-based digital wallets and payment platforms, individuals in Palestine could participate in the global economy, receive remittances, and access financial services without the need for a traditional bank account.

Aid and Humanitarian Support and Reduction of Corruption: Blockchain technology has the potential to enhance the transparency and efficiency of aid distribution and humanitarian support in Palestine. Given the sensitive political situation and the complexity of the aid ecosystem, implementing blockchain for aid delivery could ensure that resources reach those in need more effectively. Blockchain's immutable ledger can trace the flow of funds and ensure that donations are allocated to the intended recipients, reducing the risk of mismanagement and corruption.

Digital Content and Intellectual Property Rights: Adopting blockchain-based solutions for protecting intellectual property rights and ensuring fair compensation for content creators.

It is essential to involve relevant stakeholders, including the government, the private sector, and academic institutions in the adoption process. In addition, investing in blockchain education and research can foster innovation and create a skilled workforce in this emerging technology. Hence I call upon the Palestinian Monetary Authority (PMA) to ease the crypto ban, as have many countries in the region, and unleash the potential of this revolutionary technology.

Despite these potential benefits, there are some challenges to consider for blockchain adoption in Palestine.

Infrastructure and Connectivity: Palestine's technology infrastructure and internet connectivity are improving significantly, especially after the introduction of the fiber networks that make high-speed internet available to homes and businesses. The successful implementation of blockchain applications often relies on a stable and reliable internet connection, which could pose a challenge in some areas like Gaza.

Regulatory Environment: The regulatory environment in Palestine regarding blockchain and cryptocurrencies is backward and way too conservative, to say the least. Clear regulations are essential to foster innovation and protect

I hope to see Bitcoin ATMs in the streets of Ramallah, Nablus, Rawabi as a modern city, Hebron, and Gaza and to be able to pay my grocery bill in satoshis using my Wallet-of-Satoshi. That's the future, and I think the new generation is ready to adopt and to be part of the revolution towards building a national digital economy. Can we embrace it before it's too late?! Let's Blockchain Palestine.

consumers while also providing a supportive environment for businesses and startups to develop blockchain solutions.

Funding and Investment: The development and implementation of blockchain projects require adequate funding and investment. Given the challenging economic situation in Palestine, securing the necessary resources for blockchain initiatives might be a hurdle. Hence the role of government is essential to embrace such revolutionary technology.

Blockchain technology is transforming the Middle East, paving the way for greater economic growth, financial inclusion, supply chain efficiency, transparent governance, and sustainable energy initiatives. As governments, businesses, and citizens collaborate to harness the potential of blockchain, the region is poised for a technological renaissance. Embracing this digital transformation will not only position the Middle East as a global leader in blockchain adoption but also drive progress toward a more prosperous and sustainable future for all its inhabitants. By fostering collaboration and creating robust regulatory frameworks, Palestine can unlock the full potential of blockchain and position itself as a player in the field of innovation in the digital age.

With a PhD in electrical and computer engineering from the University of Illinois, Dr. Al-Salqan is the co-founder and CEO of Jaffa.Net Software. Previous work experience includes serving as a senior security engineer at Sun Microsystems in Silicon Valley, USA, and as a research professor at West Virginia University. He has registered ten patents in the United States and Europe in Internet Security and PKI; has chaired and spoken at many international conferences, including RSA Conference, JavaOne, IEEE COMPSAC, and IEEE Enterprise Security Workshop; and published more than 50 referred articles. Voted as a Bitcoin Superstar, he is a mentor to Non-Fungible Token (NFT) Talents, Distributed Ledger Technology (DLT) Talents, and Bitcoin Talents programs organized by the Frankfurt School Blockchain Center.

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[i] "The Crypto Oasis Ecosystem Report 2022," United Arab Emirates.

[ii] https://www.coindesk.com/consensus-magazine/2023/06/27/crypto-hubs-2023-where-to-live-freely-and-work-smart/.