European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
http://eelet.org.uk

Technology and Digital Virtual Asset in India

Dr. Mansi Kukreja*
Professor, CMS Business School, Faculty of Management Studies,
JAIN (Deemed-to-be University), Bangalore, India
Email: dr.mansi_kukreja@cms.ac.in

Dr. Manita D Shah
Professor, CMS Business School, Faculty of Management Studies,
JAIN (Deemed-to-be University), Bangalore, India.
Email: dr.manita_shah@cms.ac.in

ABSTRACT: Technological advancement in the digital asset management is one of the most effective part that creates a different working ad decision making approach in the usage. It has been found that India is rapidly becoming a tech hub, with a thriving tech startup scene and a growing number of skilled professionals in the tech industry. The Indian government has also implemented a number of policies to promote digital innovation, such as the "Digital India" campaign, which aims to transform India into a digitally empowered society. In this study the secondary data analysis ad collection has been used to collect information and making a proper decision in the context. Managing security system in the digital asset management also increases the sustainability in the asset management.

Keywords: Digital asset management (DAM), Cryptocurrency, Blockchain, Technological development, Asset management, Innovation, Artificial intelligence (AI)

1. INTRODUCTION:

Background

In order to discuss the digital virtual asset in India, several factors can be included to improve the knowledge. India is rapidly embracing technology and digital assets, and the country has witnessed significant growth in these areas in recent years. Mobile technology has enabled people to access digital services such as online banking, e-commerce, and social media (Alzoubi et al. 2022, p.1380). The Indian government's push towards a cashless economy has led to the growth of digital payment systems such as UPI , mobile wallets, and online banking. The adoption of these digital payment systems has increased significantly, especially after demonetization in 2016. While there is no clear regulatory framework for cryptocurrencies in India, they have gained popularity among Indian investors.

Several Indian cryptocurrency exchanges have emerged, and many people are investing in cryptocurrencies as a form of alternative investment. E-commerce has become a significant part of the Indian economy, with players like Amazon, Flipkart, and Snapdeal dominating the market (Jain et al. 2020, p.2450). The growth of e-commerce has been driven by the increasing adoption of mobile technology and digital payments. India is emerging as a hub for AI startups, with several Indian startups focusing on developing AI-based products and services. The Indian government has also announced plans to develop an AI strategy for the country. The technology and digital virtual assets are rapidly growing in India, and the country is poised to become a major player in the global technology landscape.

Rationale

The usage of cryptocurrencies in India has been on the rise due to the development of the technologies in the market. According to a report by Chainalysis, India ranks second globally in terms of cryptocurrency adoption, with over 15 million users as of May 2021. The report also states that India has seen a significant increase in cryptocurrency adoption since the lifting of the ban in 2020. Furthermore, several Indian cryptocurrency exchanges, such as WazirX, CoinDCX, and ZebPay, have reported a surge in trading volumes and user registrations in recent months (Babu et al. 2022, p.1715). This indicates that the usage of cryptocurrencies in India is on an upward trajectory. However, it is worth noting that cryptocurrencies are not yet regulated in India, and there is a lack of clarity on the legal status of cryptocurrencies. The Indian government is currently working on a bill to regulate cryptocurrencies, and its final outcome may impact the rate of usage of cryptocurrencies in the country.

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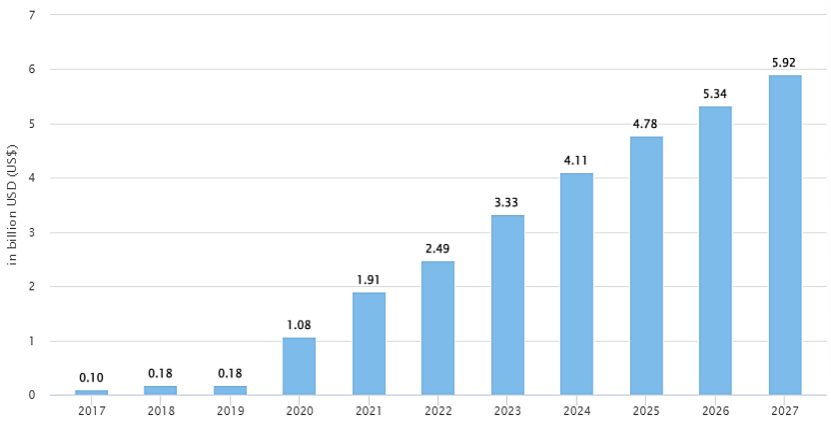

Figure 1: Rate of usage of digital asset in India
(Source: Babu et al. 2022, p.1715)

Research aim and objective

The aim of the research is to understand the details of the technological development and digital virtual assets in India. The main objective of the research is

- To understand the details of technological implementation in digital asset
- To evaluate the benefit of technical development in digital virtual asset in India
- To discuss the issues present in the digital virtual asset in India

Research questions

The main research question is

- What is the technological development in digital virtual asset management?
- How the benefits impact on digital visual asset management in India?
- Which are the major drawbacks present in digital asset management in India?

Significance of the research

The research is focused on developing and representing a detailed overview of the technological development in digital asset management. The benefit of the process and related issues will also be discussed in this study to create a better understanding and knowledge on the same in India. Therefore, the research will help the future researchers to gain a better knowledge on the topic. This will also improve the success level of the completion of the researchers better in the working area.

2. LITERATURE REVIEW:

Technological development in different types digital asset management

Digital Asset Management (DAM) refers to the process of organizing, storing, and retrieving digital assets such as images, videos, documents, and other multimedia files. Brand asset management is the type of DAM focused on managing digital assets related to a brand, such as logos, marketing materials, and brand guidelines. It ensures consistency and helps maintain the integrity of a brand across different channels. Creative asset management is focused on managing digital assets used in creative projects, such as artwork, images, and videos (Litvinenko, 2020, p.1530). It enables creative teams to collaborate effectively and access the required assets quickly and easily. Digital asset management (DAM) is a term that can be applied to many types of digital assets, including cryptocurrencies. In the context of cryptocurrency, DAM refers to the process of managing and organizing digital assets such as Bitcoin, Ethereum, and other cryptocurrencies.

Figure 2: Technological advancement of digital asset in India
(Source: Vangipuram et al. 2020, p.8725)

Cryptocurrencies are stored in digital wallets, and DAM involves managing these wallets and ensuring that they are secure. Cryptocurrency DAM involves tracking the movement of digital assets between different wallets and exchanges. This process is also responsible for generating reports that provide information about the performance of different cryptocurrencies and their respective wallets (Vangipuram et al. 2020, p.8725). Compliance involves ensuring that the management of digital assets is compliant with applicable laws and regulations. Cryptocurrency DAM can also involve managing the buying and selling of cryptocurrencies through exchanges.

Benefits of technical development in digital asset management

The main benefit of digital asset management is also based on several influencing factors that increase the entire working process. Technological development is another crucial part that emphasizes the working behavior and implementation technique better in the particular area. New technologies such as cloud computing and artificial intelligence (AI) have improved the speed and efficiency of DAM. Cloud-based DAM systems allow users to access their digital assets from anywhere with an internet connection, while AI-powered search tools enable users to find specific assets quickly and easily (Kamalaldin et al. 2020, p.320). Improved collaboration is the factor that can be obtained from this approach in asset management. This has made it easier for teams to collaborate on digital assets. Cloud-based DAM systems allow team members to work together in real-time, while project management tools facilitate communication and task allocation. Technical developments have also improved the security of digital assets. Blockchain technology, for example, provides a tamper-proof record of digital asset transactions, while biometric authentication tools enable secure access to sensitive assets.

Figure 3: Issue in digital asset management
(Source: Kamalaldin et al. 2020, p.320)

Related drawbacks of the digital asset management

Technological implementation in digital asset management can also be a hectic process in the area that might create major issues. DAM systems can be complex and require a significant amount of time and resources to implement and maintain. This can be a challenge for smaller organizations that may not have the necessary resources to manage a DAM system effectively. Digital assets are often valuable and sensitive, and thus require strong data security measures to protect against theft, loss, or misuse. If not implemented properly, a DAM system could potentially create vulnerabilities for data breaches or cyberattacks (Sartipi, 2021, p.7). Some users may resist changes to the way they currently manage their digital assets, particularly if they have become accustomed to using other systems or processes. This can make it challenging to implement a new DAM system. In the case of users not adopting the new DAM system, it can limit the potential benefits and ROI of the system. This can be particularly problematic if users find the system difficult to use or do not understand its full capabilities. DAM can provide many benefits, it is essential to carefully consider the potential drawbacks and

challenges of implementing a DAM system. Proper planning, implementation, and training can help mitigate these challenges and ensure a successful adoption of DAM in an organization.

Figure 4: Challenges in digital asset management
(Source: Sartipi, 2021, p.7)

Theoretical overview

Technology acceptance model is one of the most effective approaches that increases the user perception on a particular implementation process of the data set. This creates a better value of the work and evaluation of the performance in the particular process area. The Technology Acceptance Model (TAM) is a theoretical framework that is widely used in the field of information systems to understand how users adopt and use new technology. The TAM model proposes that two main factors determine the intention to use a new technology. The degree to which the user believes that using the technology will improve their performance or make tasks easier to complete (Kemp et al. 2019, p.2413). The degree to which the user believes that using the technology will be easy and require minimal effort. According to the model, these two factors influence the user's attitude towards the technology, which in turn affects their intention to use it. The user's intention to use the technology is a strong predictor of their actual use of the technology.

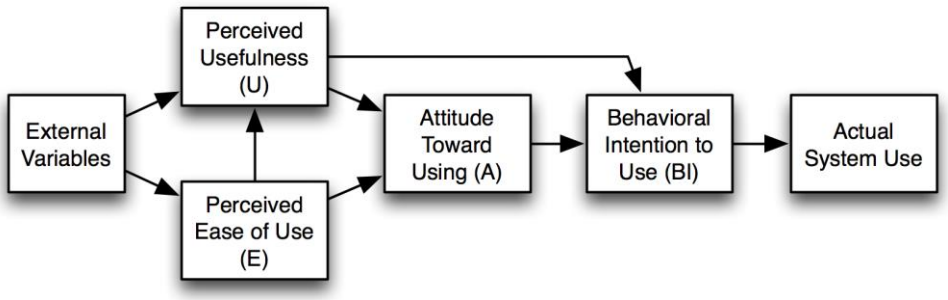

Figure 5: Technology acceptance model
(Source: Kemp et al. 2019, p.2413)

3. RESEARCH METHODOLOGY:

Methodological direction is another important part in the research study that enhances the working process and decision making. Adoption of a proper research philosophy is important in the research that creates the data features and variables in the research work. In this particular research study, interpretivism research philosophy has been used to perform the work properly. This evaluates the working process and features of the related data in the particular research study. Descriptive research design has also been used in this particular research to enhance the working effectiveness and evaluation of the performance in the particular area (Pandiangan et al. 2021, p.7791). The systematically obtaining the information to explain the related factors will be crucial for evaluating the performance measures in the research study. This is helpful for the researcher to make proper decisions on the data management process in the research study. On the

other hand, enhancement of the data management and gathering will also draw a superior vision on the information to derive the performance measures in the working area.

Inductive research approach has been used in this study to execute the overall working process in a proper way. On the other hand, this approach is based on the theoretical perception that will deploy a better ability of work and measuring of the values in the particular segment of the discussion. Researchers analyze the data to identify patterns, themes, or relationships that emerge from the data. The identified patterns are then used to generate hypotheses or theories about the phenomenon under investigation. The inductive approach is often used in exploratory research, where the goal is to understand a phenomenon or problem that is not well understood (Varpio et al. 2020, p.990). One of the benefits of the inductive approach is that it allows researchers to gain a deep understanding of a phenomenon from the perspectives of the people who experience it. This approach is also flexible and allows researchers to adjust their research questions or hypotheses based on the data they collect. However, a potential limitation of the inductive approach is that it can be time-consuming and resource-intensive. Additionally, the inductive approach can sometimes lead to biased or incomplete conclusions if researchers do not collect enough data or if their analysis is not rigorous enough. In this particular research study, secondary data collections and analysis has been adopted to make the process effective and better in the particular area. Secondary thematic analysis has been performed in this study to make proper discussion and make a decision on the same.

4. RESULTS AND FINDINGS:

Theme 1: Blockchain has a superior impact on the asset management in digital platform

Discussing the technological advancement in digital asset management, blockchain technology is one of the most effective approaches that can be adopted. Blockchain technology has the potential to have a significant impact on asset management in digital platforms. One of the key advantages of blockchain technology is that it enables decentralized and secure transactions without the need for intermediaries such as banks or other financial institutions (Merlec et al. 2022, p.1271). In the context of asset management, blockchain can facilitate the creation of digital assets such as tokens or cryptocurrencies, which can be easily traded and transferred without the need for traditional financial intermediaries. Developing the technology will also be helpful to evaluate the performance measures better in the particular segment.

This can increase the speed and efficiency of transactions, reduce costs, and enable greater accessibility to investment opportunities for individuals and organizations. Blockchain technology can also enable greater transparency and accountability in asset management by providing a secure and immutable record of all transactions. This can help to reduce the risk of fraud and improve trust between investors and asset managers (Kuhle et al. 2021, p.103393). In addition, blockchain technology can facilitate the automation of certain asset management processes, such as portfolio rebalancing and risk management, which can help to improve efficiency and reduce costs. The impact of blockchain technology on asset management in digital platforms is still in its early stages, but it has the potential to bring significant benefits to investors, asset managers, and other stakeholders in the financial ecosystem.

Theme 2: Virtual asset management has the risk that need to be managed to improve the structure

Virtual asset management is a rapidly growing area of investment that involves the management of digital assets such as cryptocurrencies, tokens, and other virtual assets. While virtual asset management presents opportunities for diversification and potential high returns, it also comes with significant risks that need to be managed in order to improve the overall structure of the industry (McMaster et al. 2020, p.173). One of the key risks associated with virtual asset management is the lack of regulatory oversight. Unlike traditional financial markets, the virtual asset market is largely unregulated, which can increase the risk of fraud, market manipulation, and other illicit activities. In order to improve the structure of the virtual asset management industry, it is essential to establish a comprehensive regulatory framework that can help to mitigate these risks. Another risk associated with virtual asset management is the potential for cybersecurity breaches. Virtual assets are stored on digital wallets or exchanges, which can be vulnerable to hacking or other cyber attacks (Hang et al. 2020, p.2282). In order to mitigate this risk, virtual asset managers should implement robust cybersecurity protocols and ensure that their clients' assets are stored securely. In addition, virtual asset management also comes with the risk of volatility and liquidity. Virtual assets can be subject to significant price fluctuations and may be illiquid, meaning that they cannot be easily bought or sold.

Theme 3: Cloud platform has a positive influence in digital asset management

In the technological implementation, cloud platforms have a greater impact on the data and asset management to secure better working progress. In digital asset management, the impact of cloud platforms can be found in several areas that emphasize the data management procedure. Cloud platforms have had a significant positive influence on digital asset management in recent years. One of the key advantages of cloud platforms is that they provide a secure and scalable infrastructure for storing and managing digital assets. Cloud platforms can help digital asset managers to store and manage large volumes of data more efficiently and effectively, without the need for expensive on-premises infrastructure (Dincă et al. 2019, p.820). This can help to reduce costs, improve flexibility, and increase accessibility to digital assets for investors and managers. Cloud platforms also provide a high level of security for digital assets, with many cloud providers offering advanced security features such as encryption, multi-factor authentication, and data backup and recovery. This can help to reduce the risk of cyber attacks and data breaches, which are a major concern in the digital asset management industry.

In addition, cloud platforms can help digital asset managers to collaborate more effectively with other stakeholders in the industry, such as regulators, exchanges, and other service providers. Providing a centralized platform for communication and collaboration, cloud platforms can help to improve transparency and accountability in the industry, which is essential for building trust and confidence among investors (Ali et al. 2021, p.700). Cloud platforms have had a positive influence on digital asset management by providing a secure and scalable infrastructure for storing and managing digital assets. Leveraging the benefits of cloud platforms, digital asset managers can improve efficiency, reduce costs, and increase accessibility and security for investors and other stakeholders in the industry.

Theme 4: Data security is one of the major risk in digital asset management

Proper implementation of the strategy is one of the key success factors that enables a better working scope and evaluation of the performance measures. Data security is indeed one of the major risks in digital asset management. Digital assets are typically stored on digital wallets or on digital exchanges, which can be vulnerable to hacking or other cyber attacks. This can result in the loss of digital assets, or even the theft of sensitive data such as personal and financial information. In addition, digital asset management often involves the use of complex technologies such as blockchain, which can be difficult to secure (Zheng et al. 2019, p.2019). While blockchain technology is designed to be highly secure, it is not immune to hacking or other cyber attacks, especially if there are vulnerabilities in the underlying code or infrastructure. Another risk associated with data security in digital asset management is the potential for human error. However, digital assets can be lost or stolen due to mistakes such as misplacing a private key or sending funds to the wrong address. In order to mitigate this risk, digital asset managers should implement robust security protocols and ensure that all staff are trained to follow best practices for handling digital assets.

5. CONCLUSION AND RECOMMENDATIONS:

It can be concluded that technological advancement in the digital virtual data management is one of the most effective approaches in the business that executes the process successfully in the data management. In order to manage the risks associated with data security in digital asset management, it is important to implement a comprehensive security framework that includes a range of measures such as encryption, multi-factor authentication, and regular security audits. It is also essential to stay up-to-date with the latest developments in cybersecurity and to work with trusted partners and service providers who have a strong track record in digital asset security.

It can be recommended that to manage these risks, virtual asset managers should implement risk management strategies that can help to reduce the impact of market volatility on clients' portfolios. Virtual asset management has significant risks that need to be managed in order to improve the structure of the industry. Establishment of a comprehensive regulatory framework, implementing robust cybersecurity protocols, and implementing effective risk management strategies, virtual asset managers can help to mitigate these risks and create a more stable and sustainable industry for investors.

References

1. Ali, O., Shrestha, A., Osmanaj, V., & Muhammed, S. (2021). Cloud computing technology adoption: an evaluation of key factors in local governments. *Information Technology & People*, *34*(2), 666-703. https://www.researchgate.net/profile/Shahnawaz-Muhammed/publication/340970278_Cloud_computing_technology_adoption_an_evaluation_of_key_factors_in_local_govern

ments/links/5fb399eea6fdcc9ae05b41a9/Cloud-computing-technology-adoption-an-evaluation-of-key-factors-in-local-governments.pdf

2. Alzoubi, H., Alshurideh, M., Kurdi, B., Alhyasat, K., & Ghazal, T. (2022). The effect of e-payment and online shopping on sales growth: Evidence from banking industry. *International Journal of Data and Network Science*, *6*(4), 1369-1380. doi: 10.5267/j.ijdns.2022.5.014
3. Babu, P. V., Mannava, P. R., Ganesh, N., & Seethamahalakshmi, Y. (2022). Taxation Of Crypto Currency and Virtual Digital Assets In India: A Critical Analysis. *Specialusis Ugdymas*, *1*(43), 1713-1717. file:///C:/Users/manash/Downloads/Venkaiah_Babu_-_Scopus__Anand_Sir.pdf
4. Dincă, V. M., Dima, A. M., & Rozsa, Z. (2019). Determinants of cloud computing adoption by Romanian SMEs in the digital economy. *Journal of Business Economics and Management*, *20*(4), 798-820. https://jau.vgtu.lt/index.php/JBEM/article/download/9856/8879
5. Hang, T. T. B., Nhung, D. T. H., Huy, D. T. N., Hung, N. M., & Pham, M. D. (2020). Where Beta is going–case of Viet Nam hotel, airlines and tourism company groups after the low inflation period. *Entrepreneurship and Sustainability Issues*, *7*(3), 2282. http://jssidoi.org/jesi/article/download/521/Hang_Where_Beta_is_going__case_of_Viet_Nam_hotel_airlines_and_tourism_company_groups_after_the_low_inflation_period.pdf
6. Jain, A., Sarupria, A., & Kothari, A. (2020). The Impact of COVID-19 on E-wallet's Payments in Indian Economy. *International Journal of Creative Research Thoughts*, *8*(6), 2447-2454. https://www.researchgate.net/profile/Anil-Jain-19/publication/342599649_The_Impact_of_COVID-19_on_E-wallet's_Payments_in_Indian_Economy_bharatiya_artha_vyavasra_mem_i-vole_ta_ke_bhu_gatana_para_COVID-19_ke_prakopa_ka_prabhava/links/5efc8dc692851c52d60cbef6/The-Impact-of-COVID-19-on-E-wallets-Payments-in-Indian-Economy-bharatiya-artha-vyavasra-mem-i-vole-ta-ke-bhu-gatana-para-COVID-19-ke-prakopa-ka-prabhava.pdf
7. Kamalaldin, A., Linde, L., Sjödin, D., & Parida, V. (2020). Transforming provider-customer relationships in digital servitization: A relational view on digitalization. *Industrial Marketing Management*, *89*, 306-325. https://doi.org/10.1016/j.indmarman.2020.02.004
8. Kemp, A., Palmer, E., & Strelan, P. (2019). A taxonomy of factors affecting attitudes towards educational technologies for use with technology acceptance models. *British Journal of Educational Technology*, *50*(5), 2394-2413. doi:10.1111/bjet.12833
9. Kuhle, P., Arroyo, D., & Schuster, E. (2021). Building A blockchain-based decentralized digital asset management system for commercial aircraft leasing. *Computers in Industry*, *126*, 103393. https://digital.csic.es/bitstream/10261/240471/1/Building_a_blockchain_based.pdf
10. Litvinenko, V. S. (2020). Digital economy as a factor in the technological development of the mineral sector. *Natural Resources Research*, *29*(3), 1521-1541. https://doi.org/10.1007/s11053-018-9432-1.
11. McMaster, M., Nettleton, C., Tom, C., Xu, B., Cao, C., & Qiao, P. (2020). Risk management: Rethinking fashion supply chain management for multinational corporations in light of the COVID-19 outbreak. *Journal of Risk and Financial Management*, *13*(8), 173. https://www.mdpi.com/1911-8074/13/8/173/pdf
12. Merlec, M. M., Islam, M. M., Lee, Y. K., & In, H. P. (2022). A consortium blockchain-based secure and trusted electronic portfolio management scheme. *Sensors*, *22*(3), 1271. https://www.mdpi.com/1424-8220/22/3/1271/pdf
13. Pandiangan, S. M. T., Resmawa, I., Simanjuntak, O. D. P., Sitompul, P. N., & Jefri, R. (2021). Effect of e-satisfaction on repurchase intention in Shopee user students. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *4*(4), 7785-7791. http://repository.stieyapan.ac.id/id/eprint/118/2/Turnitin%20-%20Effect%20of%20E-Satisfaction%20on%20Repurchase%20Intention%20in%20Shopee%20User%20Students.pdf
14. Sartipi, F. (2021). Publicizing construction firms by cryptocurrency. *Journal of Construction Materials*, *2*(3), 1-8. https://iconsmat.com.au/wp-content/uploads/2021/03/v2.3.1.pdf
15. Vangipuram, S. L., Mohanty, S. P., Kougianos, E., & Ray, C. (2022). G-DaM: A Distributed Data Storage with Blockchain Framework for Management of Groundwater Quality Data. *Sensors*, *22*(22), 8725. https://www.mdpi.com/1424-8220/22/22/8725/pdf
16. Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2020). The distinctions between theory, theoretical framework, and conceptual framework. *Academic Medicine*, *95*(7), 989-994. 10.1097/ACM.0000000000003075
17. Zheng, R., Jiang, J., Hao, X., Ren, W., Xiong, F., & Ren, Y. (2019). bcBIM: A blockchain-based big data model for BIM modification audit and provenance in mobile cloud. *Mathematical Problems in Engineering*, *2019*. https://www.hindawi.com/journals/mpe/2019/5349538/