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A LITERAL REVIEW OF THE CENTRAL BANK DIGITAL CURRENCY (CBDC)

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The recent interest in digital currency propels us to think about it in different scenarios. After introducing Bitcoin into the stock market and its rapid acceptance by customers, central banks then considered introducing a similar type of central currency on the line of digital cryptocurrencies. We are reviewing some of the latest articles in this literature to gain insights into the ongoing research in this field. We have noticed that most focus is on financial aspects such as financial inclusion, monetary policy impact, and people's perceptions. It is essential to see that the environmental aspect of the global economy is going on, and a recent article corroborated by the literal review. In this study, we are trying to capture the literal view of the central bank's digital currency. The purpose of the study is to keep a view of the ongoing literature in the field of our interest. Undoubtedly, the CBDC could have a significant ripple effect on the global economy after a crisis like COVID-19, augmenting their rapid acceptance and evolution in the direction of the digitalisation of currency.

Keywords: CBDC(Central bank digital currency) , Digital payments , Central Bank, BIS

Introduction

These days, terms related to digital currency are frequently encountered in daily life, whether they come from media sources like newspapers. Therefore, we can assume that everything will be digital in the near future, which compels us to consider applying digital technology to the field of digital payments. We are thinking about digital currency since payment systems are becoming more digital. When we discuss digital currency, we can define it as any money that is accessible in electronic or digital format. It is sometimes referred to as electronic or digital money, which means et al. In this digital age, central banks are not left behind. They have presented a report by a few central banks as well as the idea of central bank digital currency, or CBDC. According to a paper released by the BIS and seven central banks, a digital payment instrument denominated in the national unit of account and directly owed by the central bank is known as a CBDC. A digital version of Central Bank (CB) currency that is suitable for use in retail transactions. Said another way, a country's digital currency, known as CBDC, is issued and controlled by the central bank and can be used for a variety of purposes.Dionysopoulos and Associates, 2024). Physical currencies, on the other hand, such as coins and banknotes, are palpable and can only be

exchanged with their holders in person. This statistic helps to clarify the idea of digital currency issued by central banks.

The possible concepts of currency circulation are shown in the image above. The issuer (central bank or other), form (physical or electronic), accessibility (universal or restricted), and transfer mechanism (centralised or decentralised, i.e. peer-to-peer) are the combined features of money. This taxonomy separates two possible categories of CBCCs (Central bank cryptocurrencies), both of which are electronic: peer-to-peer and central bank-issued. It also represents what seems to be emerging in practice. Retail CBCC is available to the general public, while wholesale CBCC is exclusively offered to financial institutions. The above graph's four-ellipse version, dubbed the "money flower," illustrates how the two possible forms of CBCC fit into the larger scheme of things. Two types of CBCCs (the shaded region) and two types of central bank deposits make up the four main categories of electronic central bank money in theory. The most well-known kind of central bank deposits are those kept in commercial banks; these are often referred to as reserves or settlement accounts. The alternative is public deposits, at least in theory.(Garratt & Bech, 2017) .

Source: Adapted from Andrew Sheng, Financial Crisis and Global Governance: A Network Analysis, COMMISSION ON GROWTH AND DEVELOPMENT WORKING PAPER NO. 67 (Sheng 2010, p. 4 (with slight adaptation of the original figure)).

1. Literature review

2.1 (Dionysopoulos et al., 2024) Three phases can be identified in the evolution of the CBDC: *i*) Many CBs saw consistently low inflation levels for much of the decade that followed the 2008 financial crisis; as a result, CBDCs were suggested as a possible remedy. The advent of fintech, cryptocurrencies, and blockchain technology has sparked debates about the need for fundamental changes to the financial system in order to increase efficiency, reduce costs, increase transparency, and add new features. (*iii*) In more recent times, the rise in foreign and private money solutions has been perceived as a challenge to autonomous financial judgments, prompting the tentative introduction of CBDCs as a countermeasure. Apart from these reactive changes, a number of well-reasoned arguments have been advanced that have no direct bearing on the state of the economy. Examples include addressing the decline in the use of cash by utilising CBDCs, maintaining access to CB money in a world that is becoming more digitally connected, and promoting financial inclusion for all citizens.

2.2 (Andolfatto, 2024)Central banks and regulators regularly face the challenges posed by technological progress, particularly in relation to monetary and payment systems. Nevertheless, the credit markets are currently experiencing substantial changes. The traditional knowledge and skills of bank credit officers are decreasing as a result of the implementation of artificial intelligence to evaluate the characteristics of debtors on a global scale. This move creates significant concerns around data privacy and ownership.

This article examines the possibility of a new technology in payments, specifically a money and payment system based on a decentralised autonomous organisation (DAO), being a significant financial danger for the global economy. Although the research is based on speculation, it emphasises the need for policymakers to monitor these developing technologies and diligently evaluate potential hazards closely, even if the apparent risk is initially minimal.

Currently, the level of systemic risk linked to money and payment systems based on DAOs seems to be less significant in retail settings compared to wholesale settings. Due to the US dollar's status as the global reserve currency, it is considered imperative for the US Federal Reserve to promptly issue a widely available wholesale Central Bank Digital Currency (CBDC). However, meticulous deliberation is needed for its design and its unforeseen repercussions. In addition to the possible displacement of global stablecoins, it could also have an influence on money market funds and Eurodollar deposits. If it is considered socially beneficial, the implementation of such an organisation necessitates careful deliberation and administration.

2.3 (Cheng, 2023) During the COVID-19 epidemic, there has been a significant change in how transactions are conducted globally. There has been a transition from traditional offline payment methods to online digital payment models. This change has also coincided with a growing interest in the development of Central Bank Digital Currencies (CBDCs) around the world. This article explores the neglected dimension of regulating digital currency by analysing the implementation and regulatory guidelines related to China's experimental Central Bank Digital Currency (CBDC). The analysis commences by examining the overarching design decisions made for digital currencies on a worldwide scale. It then proceeds to conduct a comparative assessment of the technical design of China's Central Bank Digital Currency (CBDC), often known as e-CNY. The article calls for a reassessment of the conventional regulations that govern the safeguarding of digital currency information. It does so by examining the differences between how e-CNY actually functions and its intended design, as well as the inconsistencies between pilot policies and existing laws such as the Cybersecurity Law, the Data Security Law, and the Personal Information Protection Law. The argument highlights the necessity of reevaluating the legislative equilibrium between protecting personal information and policing illegal financial activities in the "loosely coupled account link" system of e-CNY. At the same time, it emphasises the significance of redefining and clarifying the allocation of rights and obligations among institutions that distribute information, providers of payment services, and users.

This article provides a thorough analysis of central bank digital currency (CBDC) designs in different nations and focuses on the specific design decisions taken in China. This essay is the first to thoroughly examine the current practices and regulatory obstacles of e-CNY using empirical and doctrinal investigations. The study uncovers noticeable discrepancies, including differences between the design and execution of e-CNY, between real-world practices and regulatory frameworks, and between legislation and the expected information protection procedures.

Although e-CNY holds significant promise in China's financial services industry, there are tremendous obstacles that need to be resolved. Considering the significant participation of digital currency users in the retail central bank digital currency (CBDC), it is crucial to prioritise the enhancement of user information security. The essay highlights critical concerns identified in e-CNY trials and provides multiple suggestions for strengthening the protection of digital currency data. The document does not include detailed information on cross-currency and cross-border payments for e-CNY. However, it emphasises the importance of resolving practical and regulatory obstacles identified in the current DC/EP pilot program before considering the global expansion of e-CNY. This

study lays a strong groundwork for future research on the cooperation and transactions involving several Central Bank Digital Currencies (CBDCs).

2.4 (Gupta et al., 2023) This study examines the potential impact of earlier utilisation of UPI systems on the acceptance and implementation of Central Bank Digital Currency (CBDC) in nations such as India. Prior to analysing the motivating elements for the use of Central Bank Digital Currency (CBDC), the researchers developed a model that integrates performance expectancy and social impact. Additionally, user experience with the Unified Payments Interface (UPI) was considered as a moderator. The findings suggest that performance anticipation, perceived risk, and hedonic motivation play a crucial role in shaping behavioural intention when it comes to the usage of CBDC. The integration of these components, together with the influence of social factors, has a favourable effect on user behaviour, hence enhancing the model's usefulness in comprehending and encouraging the use of CBDCs.

Nevertheless, the study has certain constraints. Initially, it should be noted that the development of CBDC in India is still in its early phases and has only been established in a few locations as part of a pilot program. Therefore, it is essential to avoid making broad generalisations. The sample, which represents a small fraction (4.82%) of the overall population in select cities such as Mumbai, New Delhi, Bengaluru, and Bhubaneswar, may not accurately reflect the larger population as a whole. In order to achieve a successful deployment of digital money, it is crucial to conduct a thorough analysis of the elements that influence its usage and adoption. Analysing statewide parameters such as gender, age, education, profession, and income is essential for gaining a comprehensive picture of their impact. Furthermore, it is essential to thoroughly investigate various factors that influence the utilisation of digital currency in comparison to traditional currency. These factors include network effects, regulatory policies, individual preferences, and technological advancements. Such comprehensive research is crucial for understanding the future adoption and usage of Central Bank Digital Currency (CBDC).

2.5 (Hofmann, 2023) Many central banks worldwide are currently investigating the possibility of creating a Central Bank Digital Currency (CBDC) in light of modern trends such as the declining use of physical currency and the rise of cryptocurrencies and stablecoins. The Central Bank Digital Currency (CBDC) is conceived as an innovative type of currency issued by a central bank, with the goal of resolving concerns regarding the preservation of value and the availability of electronic payment alternatives.

Although the use of Central Bank Digital Currency (CBDC) may introduce potential dangers to the banking industry and pose challenges for central banks in managing liquidity, previous research recommends the inclusion of risk-reducing characteristics to mitigate these issues. This article argues that these characteristics may conflict with the desired goals of introducing a Central Bank Digital Currency (CBDC) and considers them to be unfeasible. Instead, it promotes a thorough analysis of the fundamental inquiry: Which markets truly necessitate Central Bank Digital Currency (CBDC)? The paper argues that the answer depends on the complexities of the financial system infrastructure. China currently possesses both logical justifications and the essential capacity to execute a digital Renminbi successfully. Currently, Eurozone member states are highly likely to adopt a digital euro since their central banks have shown a strong preference for implementing policies that involve significant monetary easing, which in turn has had a notable effect on the banking industry. Although there were changes in circumstances in 2023, the article nevertheless uses the situation that was prevalent until 2022 as an essential example of market settings where CBDC shows excellent potential.

2.6 (“Investigating The Adoption Factors of Indonesia’s Central Bank Digital Currency,” 2023) The main objective of this study was to provide essential insights into the current understanding of Central Bank Digital Currencies (CBDCs), with a specific focus on how households perceive CBDCs. The aim was to assist central banks in designing and encouraging the broad adoption of CBDCs. The results indicate that variables such as the perceived ease of use, the perceived usefulness, and the influence of others can have a favourable effect on the desire to use digital money. The user-friendly nature of the system, coupled with its diverse range of features, can significantly improve financial transaction operations. The various conveniences provided, including as easy

payment options, quick reaction, high service quality, and the positive perception associated with using Central Bank Digital Currency (CBDC), all contribute to the increased acceptance of this technology.

Furthermore, the anticipated effectiveness of Central Bank Digital Currencies (CBDCs) in enhancing swift financial transactions, especially in today's high-speed period where transaction velocity is vital, enhances productivity. CBDC usage is significantly influenced by social variables, including peer information and personal image. The findings support previous research, highlighting that behavioural intention is a dependable indicator of actual behaviour. This suggests that people who have a goal of using CBDCs are likely to embrace them in the future. The study emphasises the significance of confidence in Central Bank Digital Currencies (CBDCs) and how it complements the Unified Theory of Acceptance and Use of Technology (UTAUT) to ensure a thorough knowledge of the CBDC adoption process. Central banks are advised to develop user-friendly currencies with improved characteristics that encourage productivity. Establishing public trust in the central bank as a dependable issuer and in Central Bank Digital Currencies (CBDCs) for financial transactions is of utmost importance. Instilling faith in the currency system and highlighting its value to clients facilitates the acknowledgement of its effectiveness and user-friendliness. The study shows that the geographical region does not have an impact on the relationship between effort expectancy, performance expectancy, social influence, and the intention to utilise CBDCs. This implies that there is no disparity in ascertaining the intention to use CBDC (Central Bank Digital Currency) between inhabitants within the studied region and those outside of it, supporting a consistent strategy for CBDC initiatives throughout different regions. The consistency of this uniformity is a vital factor that central banks must carefully address while implementing CBDC programs.

2.7 (Chaum et al., 2021) Central banks are encountering growing competition from entities that provide digital alternatives to physical cash as Bitcoin gains popularity and substantial internet companies, such as Diem (previously Libra), introduce digital currencies. The issuance of a Central Bank Digital Currency (CBDC) by central banks depends on their evaluation of the advantages and drawbacks linked to such a CBDC, taking into account the distinctive jurisdictional circumstances of each nation.

If a central bank chooses to implement a retail central bank digital currency (CBDC), we recommend a token-based CBDC that maintains a balance between transaction privacy and compliance with Know Your Customer (KYC) and Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) regulations. The purpose of this Central Bank Digital Currency (CBDC) is not to rival commercial bank deposits but to replicate the characteristics of physical currency in order to reduce potential dangers to financial stability and monetary policy. Our study suggests that this proposed plan is equally efficient and cost-effective compared to contemporary Real-Time Gross Settlement systems managed by central banks. Utilising this Central Bank Digital Currency (CBDC) for electronic payments would entail simple database transactions and require low bandwidth use.

The scheme's efficacy, cost-efficiency, and enhanced user-friendliness, achieved through a transition from authentication to authorisation, position it as a possible trailblazer in advancing the longstanding objective of online micropayments. Moreover, the utilisation of coins for cryptographically signing electronic contracts has the potential to facilitate the execution of smart contracts, hence creating opportunities for innovative payment system applications. Although the system does not rely on Distributed Ledger Technology (DLT), it can easily be incorporated with such technologies if future financial market infrastructures require it.

Essentially, in order for a retail Central Bank Digital Currency (CBDC) to be successful, it is imperative that it maintains the confidentiality of currency, which is often controlled by individual residents. The strategy suggested in this study successfully accomplishes this goal, enabling central banks to use digital technology without causing significant disruptions to monetary policy and financial stability while still benefiting from the advantages of digitalisation.

2.8 (Ozili, 2023a) Prior to proposing the gradual adoption of a Central Bank Digital Currency (CBDC) in India, the Reserve Bank of India (RBI) frequently voiced its disapproval of privately issued digital currencies. The

prevailing belief is that the emergence of private digital currencies, specifically Bitcoin, has had a significant impact on the RBI's decision to initiate preparations for the introduction of a Central Bank Digital Currency (CBDC) in the form of a digital Rupee. In order to simplify this process, the Reserve Bank of India (RBI) suggested modifications to the Reserve Bank of India Act of 1934.

The government, in accordance with the RBI's position, plans to ban all private digital currencies in India, with specific exemptions. The RBI's justification for this prohibition is based on the assertion that private digital currencies have the potential to enable money laundering, terrorism financing, and tax evasion. In addition, the Reserve Bank of India (RBI) emphasised a substantial surge in Unified Payments Interface (UPI) transactions in India, with a remarkable 427 per cent rise observed from March 2020 to August 2022. As of July 2022, the number of UPI QR code-enabled payment acceptance points increased by 86% compared to the previous year. The Reserve Bank of India (RBI) views these patterns in the digital payment sector as a sign of increasing adoption and inclination towards digital contactless payments in India. Consequently, this indicates that India is prepared to adopt a digital currency issued by its central bank. Inspired by these advancements, the RBI commenced a gradual implementation approach for CBDC. In addition, the Reserve Bank of India (RBI) is dedicated to evaluating the suitable applications for the India Central Bank Digital Currency (CBDC) and intends to release a CBDC that does not cause disruption. This research explores the benefits and difficulties associated with the digital Rupee, also known as e-Rupee or the central bank digital currency (CBDC) in India. Individuals in India who showed an interest in 'cryptocurrency' also displayed curiosity about information related to 'central bank digital currency'. The results suggest that the implementation of CBDC could have advantages, including reduced dependence on physical currency, greater seigniorage due to lower transaction expenses, and decreased settlement risk. Nevertheless, the report emphasises that the introduction of Central Bank Digital Currency (CBDC) in India carries inherent dangers that necessitate a thorough assessment when weighed against the possible advantages. Implementing a digital Rupee or Central Bank Digital Currency (CBDC) in India requires making necessary legal and regulatory changes to ensure a smooth and gradual adoption of CBDC.

2.9 (Wang & Gao, 2024) CBDCs have the potential to establish a network that might significantly disrupt the worldwide financial system and is expected to revolutionise currency and its associated data. It is anticipated that the gradual introduction of Central Bank Digital Currencies (CBDCs) by various economies will result in the establishment of a CBDC network or many CBDC networks. These networks are likely to be decentralised and structured as an uncoordinated network rather than a network with a central authority. The implementation of the CBDC network has significant regulatory consequences, which can lead to the spread of policies through learning and adaptation, although it may not necessarily result in convergence. It is expected that countries would strategically react to the disruptive impact of CBDC inside the network, which could result in restricted collaboration and increased conflict. The disagreement has the potential to divide the global monetary system, requiring the resolution of disputes inside the CBDC network to prevent negative consequences for all parties involved.

International organisations play a vital role in resolving conflicts and fostering cooperation. They serve as essential platforms for collaboration on essential Bank Digital Currency (CBDC) initiatives, primarily due to their legitimacy, reliance on established pathways, and capacity to ease the exchange of information and engagement with stakeholders. (Kahler, 2011). International organisations can facilitate cooperation by acting as intermediaries or offering platforms. They can also provide technical help, which reflects the influence of past decisions on the development of the network.(van der Heijden, 2021).

Moreover, it is crucial to avoid a situation where there is competition among nodes in the CBDC network to attract international users by reducing regulatory obligations, which could lead to a decline in regulatory standards. Regulatory coordination is crucial for establishing minimum standards and improving transparency, particularly in essential areas such as data protection and payments. The BIS has the potential to play a crucial role in facilitating this cooperation, and implementing a code of conduct might be an essential first step in

tackling considerable problems. Regulatory co-opetition, which combines elements of competition and cooperation, has the potential to promote good governance when implemented effectively.

Finally, it is essential to proactively establish regulations to tackle future problems, such as making provisions for foreign Central Bank Digital Currencies (CBDCs) and ensuring consistency with exchange control systems. Legal frameworks should progress in parallel with the technical design and practice of Central Bank Digital Currencies (CBDCs), with an emphasis on establishing common standards to mitigate risks and maintain global financial stability. (Raghuveera & Bray, 2020). International regime analysis is relevant when formal norms align, and results of Central Bank Digital Currencies (CBDCs) are affected by a set of regulations.(Egelston et al., 2019). Due to the constantly changing makeup of the CBDC network across different jurisdictions, it is crucial to monitor its evolution and impacts closely. The reference "Buocz et al., 2019" is provided.

2.10 (Lee Soohyang & Park Jinhee, 2022) Currently, almost two-thirds of central banks in the East Asia and Pacific (EAP) area are in the process of researching or testing the deployment of a Central Bank Digital Currency (CBDC). Considering that the region is responsible for approximately one-third of worldwide CO2 emissions and is highly vulnerable to climate-related dangers, it is crucial to prioritise environmental concerns. This has been emphasised in public statements made by the Group of 7 (G7), European Central Bank (ECB), and Bank of England (BoE). Although the importance of this factor for the area is notable, only a restricted number of succinct investigations have examined the environmental consequences of CBDC.

This note explores the environmental factors of Central Bank Digital Currency (CBDC) by examining the technical procedures and energy usage in its decentralised structure. In addition, it emphasises differences in the ecological impact between CBDC and other payment mechanisms, including bitcoin, cash, and card networks. Significantly, Central Bank Digital Currency (CBDC), deriving its legitimacy from the trust placed in central banks, does not require the validation of its validity through intricate technological frameworks. CBDC, or Central Bank Digital Currency, differs from cryptocurrencies in that it does not depend on energy-intensive consensus or mining procedures. As a result, CBDC has lower energy consumption, similar to a credit card system. In addition, CBDC provides versatility in its structure, enabling other systems such as Real Time Gross Settlement (RTGS), Distributed Ledger Technology (DLT), or a hybrid of the two. Thoroughly analysing the goals and consequences is essential, as CBDC has the capacity to stimulate financial advancement.

2.11 (Ozili, 2023b) The review indicates a general agreement that a Central Bank Digital Currency (CBDC) is a financial obligation of the central bank and possesses characteristics similar to physical currency. The assessment additionally outlines the rationale and advantages of implementing a Central Bank Digital Currency (CBDC), including the imperative to enhance financial inclusivity, optimise the execution of monetary policy, and facilitate streamlined digital transactions. The assessment also indicates that numerous central banks are conducting research on the feasibility of issuing Central Bank Digital Currencies (CBDCs) owing to their manifold advantages. However, multiple studies have highlighted the importance of being cautiously optimistic about the potential benefits of Central Bank Digital Currencies (CBDCs) due to the limiting features of their design and the difficulty they face in concurrently achieving different conflicting goals. The citation is from Keister and Sanches in 2023. Areas for future research include identifying the optimal design for a Central Bank Digital Currency (CBDC) that satisfies all competing objectives, gathering empirical evidence on the impact of CBDC on credit costs and financial stability, striking a balance between restricting CBDC holdings while allowing users to hold desired amounts and conducting country-specific and regional case studies on CBDC design.

2.12 (Son et al., 2023) This study examines the impact of issuing a central bank digital currency (CBDC) on consumers' selection of payment methods and the profitability of financial intermediaries. The article presents a theoretical framework that discusses the possibilities of interest-bearing central bank digital currencies (CBDCs) in terms of payments and investments. The customer's selection of payment method is influenced by other external factors, and this can be assessed by a straightforward analysis. The findings of this study indicate that the implementation of Central Bank Digital Currency (CBDC) can have both positive and negative consequences.

While it offers market participants more payment and investment choices, it also intensifies competition and diminishes the profit margins of financial intermediaries.

2.13 (Engert & Fung, 2017) The article examined the rationale for implementing the Central Bank digital currency (CBDC) and its economic ramifications. CBDC motivations include lowering the effective lower bound on interest rates and improving the transmission of monetary policy, preventing criminal activity, promoting financial inclusion in emerging economies, enhancing economic stability, increasing competition and efficiency in payments, ensuring sufficient central bank money for the public, and preserving central bank seigniorage revenue.

The economic consequences of Central Bank Digital Currency (CBDC) are substantial. It is expected to have a considerable impact on central bank seigniorage revenue, monetary policy, and the banking system. However, it is important to note that CBDC may also assist criminal activity due to the prevalence of anonymity unless appropriate limits are implemented. While it may enhance competition and lead to increased efficiency in retail payments, it is unlikely to result in significant advantages for high-value payments.

2.14 (Cœuré & Loh, 2018)There has been a recent increase in interest regarding central bank digital currencies (CBDCs). The Committee on Payments and Market Infrastructures and the Markets Committee of the Bank of International Settlements have released a report examining the possible impact of Central Bank Digital Currencies (CBDCs) on three key areas of central banking: payments, monetary policy implementation and financial stability. This research examines two primary versions of Central Bank Digital Currency (CBDC): wholesale and general purpose. The wholesale variant would restrict access to a predetermined group of users, but the general-purpose variant would be available to a wide range of people. CBDC does not have a direct impact on the monetary policy instruments or the central bank's ability to control them. Every action taken in the direction of potentially launching a Central Bank Digital Currency (CBDC) should undergo meticulous and comprehensive evaluation. Additional investigation is necessary to examine the potential impacts on interest rates, the arrangement of intermediation, financial stability, and financial oversight.

2.15 (Fung & Halaburda, 2016) Central banks have the primary responsibility of issuing banknotes and ensuring the security and effectiveness of payment systems. In recent times, numerous technological advancements and progressions have significantly transformed the global payment industry. The article presents a methodology for examining whether a central bank should contemplate the issuance of its own digital currency as a means to enhance the effectiveness of retail payments. Equally crucial for this discourse is a structure to analyse the characteristics that such a digital currency should have in order to enhance the effectiveness of the system and encourage its acceptance and utilisation. It is pretty probable that ongoing technological advancements will lead to the creation of novel payment products that can address present payment limitations in unforeseen ways.

2. A brief Bibliometric view of the Ongoing Research related to CBDC.

To conduct the bibliometric analysis on central bank digital money, we obtained the data from the Scopus database. Scopus is the world's largest and most widely utilised database for research purposes. (Burnham, 2006). Upon analysing the Scopus data, it is evident that approximately 716 documents were retrieved from the search for the term "central bank digital currency." The problem is being discussed in various domains, and the significance of digital currency is steadily increasing. This can be observed in the study diagram, which illustrates the interdisciplinary investigation of central bank digital currency.
Due to the focus on the topic following the 2008 financial crisis, our bibliometric analysis is limited to the period from 2008 to the latest available data in 2024. Out of the materials we are focusing on, a total of 692 belong to this specific period.

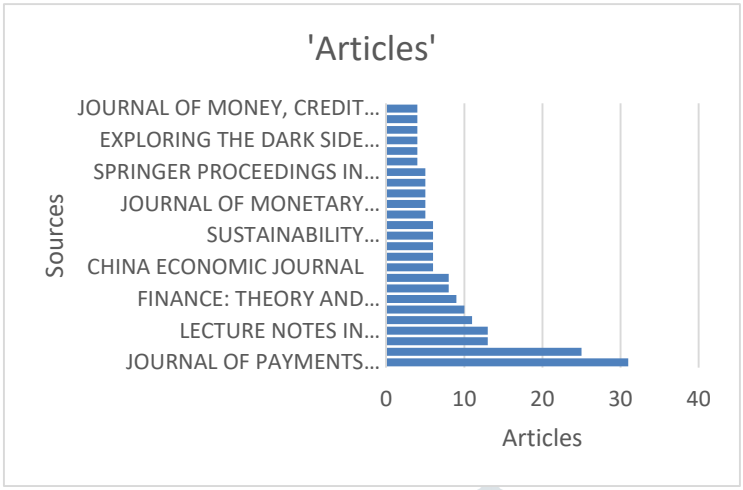


Figure-3

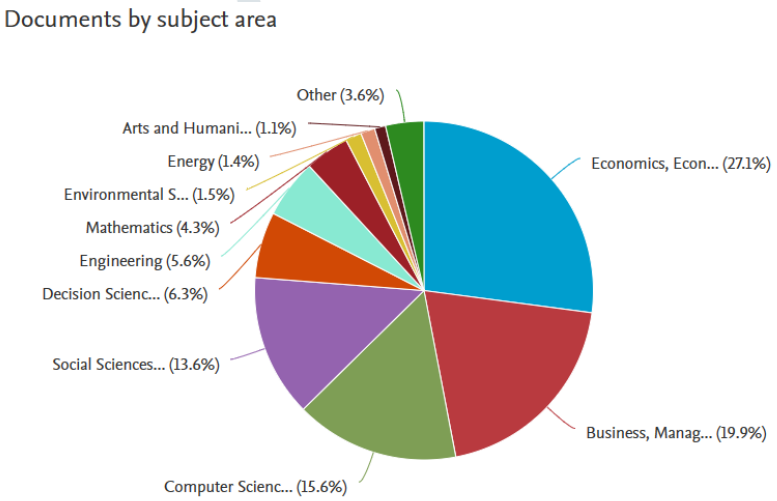
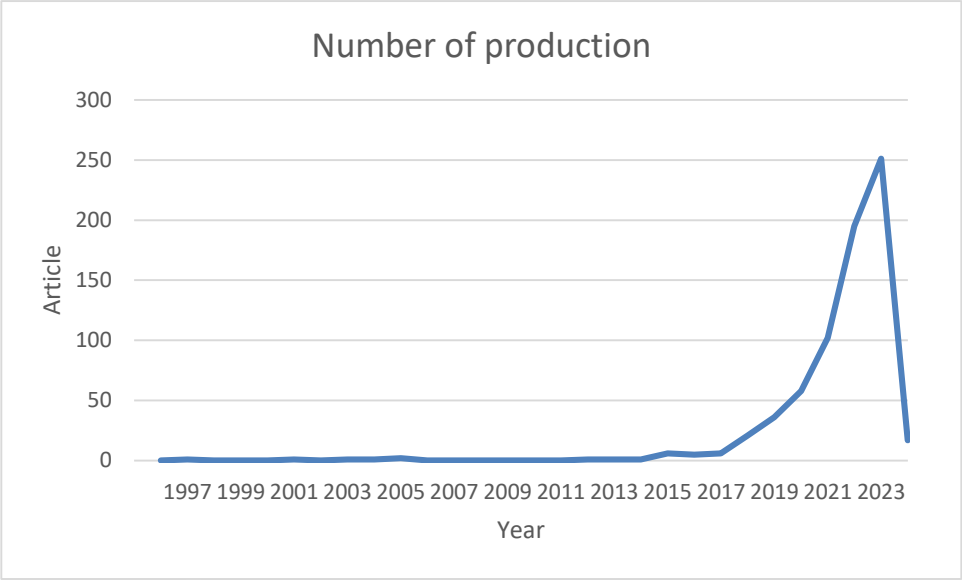


Figure-4

The figure above illustrates that the majority of articles pertaining to central bank digital currency focus on economic and econometrics aspects. However, a significant number of articles also explore the fields of business



management, computer science, and social science, collectively accounting for approximately 50% of the searched documents. Mathematics, environmental science, engineering science, and decision-making science are also areas of ongoing research in this domain. While their contribution is relatively small, their future growth appears to be promising.

Figure-5

Based on Figure 5, it is evident that the volume of documents pertaining to this topic has significantly increased starting from 2015. The year 2023 had the most number of comments cited and published, marking the end of the last year. Starting with the start of 2024, it is evident that several publications have been published in this particular domain. These articles are anticipated to make significant contributions to the field as the interest in this area is increasing. This interest is mainly driven by some nations, such as China and India, which have introduced digital currencies. The Reserve Bank of India has been undertaking a pilot program for the introduction of a central digital currency.

3. Areas for further research

Based on the literature study conducted above, it is evident that the following areas require further investigation and research in order to address the existing gaps.

4.1 Differences in the use of the Central Bank Digital Currency (CBDC) between urban and rural areas

The lifestyle and living situations of rural populations differ from those of urban populations. It is necessary to examine if rural individuals are comfortable with the implementation of Central Bank Digital Currency (CBDC) and whether they can enhance the objectives of adopting CBDC compared to their urban counterparts. The disparity in financial knowledge between rural and urban areas will also have a substantial impact on the adoption of Central Bank Digital Currency (CBDC).

4.2 The polarised characteristics of digital infrastructure, particular to different regions.

Numerous poor nations have insufficient digital infrastructure; therefore, the viability of CBDC relies on the presence of digital infrastructure. The Brandt Line is a visual representation of global disparities and inequalities, explicitly focusing on the economic divide between the affluent North and the less prosperous Global South (Lees, 2021).

4.3 The intersection of Sustainable Development Goals and Central Bank Digital Currency (CBDC)

The world is facing an urgent imperative to accomplish sustainable development targets by 2030 (Chu, 2023). Several of the objectives are directly and indirectly associated with digitalisation. We must investigate the potential of CBDC to serve as a role-playing entity in the realm of green financing. Countries that have cleaner sources of electricity supply will be able to operate their Central Bank Digital Currencies (CBDCs) stably. Alonso, 2023

4. Anticipated Result

Upon completion of the study, we will get a comprehensive understanding of the principles surrounding Central Bank Digital Currencies (CBDCs), enabling us to develop a novel and insightful viewpoint on these digital currencies. Given the dynamic nature of Bitcoin and blockchain, it is imperative to comprehend their application in diverse domains such as real estate, smart contracts, digital money, supply chains, and more. To remain in sync with current advancements, it is imperative to do thorough assessments of central bank digital currencies (CBDCs) and blockchain technology since they will be pivotal in shaping the future of currency.

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