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**Impact of Cryptocurrency Adoption on Financial Inclusion in
Myanmar**

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Abstract

Purpose: Aim of the study was to analyze the impact of cryptocurrency adoption on financial inclusion in Myanmar.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: Cryptocurrency adoption in Myanmar holds promise for enhancing financial inclusion by offering faster and cheaper remittance options, especially in underserved rural areas. However, challenges such as regulatory uncertainties and concerns over consumer protection must be addressed through clear and supportive regulatory frameworks. To maximize benefits, Myanmar should focus on improving financial literacy, developing user-friendly cryptocurrency platforms integrated with mobile money services, and establishing coherent regulatory guidelines in collaboration with international bodies.

Unique Contribution to Theory, Practice and Policy: Diffusion of innovation theory, technology acceptance model (TAM) & institutional theory may be used to anchor future studies on impact of cryptocurrency adoption on financial inclusion in Myanmar. Practical initiatives should prioritize enhancing financial literacy and digital education programs tailored to Myanmar's population. Initiatives that promote understanding of blockchain technology and cryptocurrencies among consumers, businesses, and policymakers are crucial. Policymakers in Myanmar need to develop clear and supportive regulatory frameworks that balance innovation with consumer protection.

Keywords: *Cryptocurrency Adoption, Financial Inclusion*

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INTRODUCTION

Financial inclusion metrics in developed economies like the USA reflect efforts to ensure access to financial services for all segments of society. For example, the Federal Deposit Insurance Corporation (FDIC) regularly publishes data on the percentage of households with bank accounts. According to the FDIC's latest National Survey of Unbanked and Underbanked Households (2019), 95% of households in the United States had a bank account, indicating high levels of financial inclusion. Moreover, initiatives such as the Community Reinvestment Act (CRA) have promoted lending and investment in underserved communities, contributing to improved access to credit and financial stability for low-income households (Barrera & Bertrand, 2017). In the UK, financial inclusion metrics are monitored through indicators like the percentage of adults using formal financial services. The Financial Conduct Authority (FCA) conducts surveys to track financial inclusion trends, revealing that 97% of UK adults had a bank or building society account in 2020 (FCA, 2020). Additionally, advancements in digital banking have enhanced accessibility, with 77% of UK adults using online banking services as of 2021 (UK Finance, 2021). These statistics underscore the UK's commitment to promoting inclusive finance through digital innovation and regulatory measures.

In Australia, financial inclusion metrics are tracked by the Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (RBA). Key indicators include the percentage of adults with access to basic banking services and the adoption of digital financial technologies. According to the RBA's latest data, 98% of Australian households had a bank account in 2021, indicating widespread financial inclusion (RBA, 2021). Moreover, initiatives like the National Financial Literacy Strategy have enhanced financial literacy levels, empowering individuals to make informed financial decisions and access appropriate financial products (ASIC, 2020).

In Germany, financial inclusion metrics are tracked by institutions like the Deutsche Bundesbank and the Federal Financial Supervisory Authority (BaFin). Key indicators include the percentage of households with access to basic banking services and the utilization of digital payment methods. According to the Deutsche Bundesbank's latest data, nearly 99% of German households had a bank account in 2021, highlighting extensive financial inclusion (Deutsche Bundesbank, 2021). Moreover, Germany has emphasized financial education programs to enhance financial literacy levels, empowering individuals to manage their finances effectively and access suitable financial products (BaFin, 2020).

In developing economies such as India, financial inclusion metrics are crucial for enhancing economic participation and reducing poverty. The Reserve Bank of India (RBI) measures financial inclusion through metrics like the number of bank accounts opened under the Pradhan Mantri Jan Dhan Yojana (PMJDY). As of 2023, over 450 million bank accounts have been opened under PMJDY, significantly increasing access to formal financial services among marginalized populations (RBI, 2023). Moreover, digital financial services like mobile banking have expanded rapidly, with 2.08 billion transactions recorded in February 2023 alone (Livemint, 2023).

In Japan, financial inclusion metrics are monitored through initiatives like the Basic Resident Register System, which facilitates access to various public services, including financial

institutions. The Financial Services Agency (FSA) tracks financial inclusion indicators such as the percentage of households with bank accounts and access to credit. According to the FSA's latest data, as of 2021, 98.3% of households in Japan had savings accounts, demonstrating high levels of financial inclusion (FSA, 2021). Moreover, Japan has promoted digital financial services to enhance accessibility, with significant adoption of cashless payments and online banking platforms (Nikkei Asia, 2022).

In Brazil, financial inclusion metrics are crucial for addressing socioeconomic disparities and expanding access to financial services. The Central Bank of Brazil monitors financial inclusion through metrics such as the percentage of adults with bank accounts and access to credit. According to the latest data, 85% of Brazilian adults had a bank account in 2022, reflecting efforts to improve financial access through regulatory reforms and digital banking initiatives (Central Bank of Brazil, 2022). Additionally, advancements in fintech have facilitated financial inclusion by providing affordable and convenient banking solutions, particularly for underserved populations in remote areas (Banco Central do Brasil, 2022).

In Mexico, financial inclusion metrics focus on expanding access to formal financial services and reducing the prevalence of cash transactions. The National Banking and Securities Commission (CNBV) monitors indicators such as the number of bank branches per capita and the usage of electronic payment systems. As of 2022, Mexico has made significant strides in financial inclusion, with over 70% of adults having access to a bank account (CNBV, 2022). Additionally, fintech innovations have played a pivotal role in increasing financial access, particularly among underserved populations in rural areas (World Bank, 2021).

In South Africa, financial inclusion metrics focus on expanding access to formal financial services and reducing financial exclusion among marginalized communities. The South African Reserve Bank (SARB) monitors indicators such as the percentage of adults with bank accounts and the penetration of mobile banking services. As of 2022, approximately 80% of South African adults had access to formal financial services, driven by initiatives like the National Payment System Framework and regulatory reforms promoting financial inclusion (SARB, 2022). Additionally, fintech innovations have played a crucial role in improving financial access, particularly in rural and underserved areas (BusinessTech, 2022).

In Sub-Saharan Africa, financial inclusion metrics vary widely across countries but share a common goal of expanding access to financial services. For instance, in Kenya, the Financial Sector Deepening (FSD) survey measures financial inclusion indicators such as the percentage of adults with access to formal financial services. According to the latest FSD survey (2022), 83% of Kenyan adults have access to formal financial services, driven by mobile money platforms like M-Pesa (FSD Kenya, 2022). Similarly, in Nigeria, initiatives like the National Financial Inclusion Strategy (NFIS) aim to increase financial access through regulatory reforms and digital financial solutions (CBN, 2021).

In Ghana, financial inclusion metrics focus on increasing access to formal financial services and promoting economic empowerment. The Bank of Ghana measures financial inclusion through indicators such as the number of bank accounts opened and usage of mobile money services. As of 2023, financial inclusion initiatives have expanded banking access to over 80% of the

population, driven by mobile money platforms like MTN Mobile Money and AirtelTigo Money (Bank of Ghana, 2023). Moreover, regulatory reforms and partnerships with telecom companies have accelerated digital financial inclusion, enabling individuals to conduct transactions and access financial services through their mobile phones (Ghana Web, 2023).

In Uganda, financial inclusion metrics are critical for promoting economic growth and poverty reduction. The Bank of Uganda monitors indicators such as the percentage of adults with access to formal financial services and the usage of mobile money platforms. As of 2023, financial inclusion initiatives have expanded banking access to approximately 75% of the population, driven by mobile money services like MTN Mobile Money and Airtel Money (Bank of Uganda, 2023). Moreover, regulatory reforms and partnerships with telecom operators have facilitated digital financial inclusion, enabling individuals to access financial services through their mobile phones (New Vision, 2023).

In Zambia, financial inclusion metrics are essential for promoting economic development and reducing poverty. The Bank of Zambia tracks indicators such as the percentage of adults with access to formal financial services and the usage of mobile money platforms. As of 2023, financial inclusion initiatives have expanded banking access to over 60% of the population, facilitated by mobile money services like MTN Zambia Mobile Money and Airtel Money (Bank of Zambia, 2023). Furthermore, regulatory reforms and partnerships with telecom operators have accelerated digital financial inclusion, enabling individuals to access financial services conveniently through their mobile phones (Zambia Daily Mail, 2023).

Cryptocurrency adoption has been steadily increasing globally, with several key cryptocurrencies emerging as prominent players in financial markets. Bitcoin, Ethereum, Ripple (XRP), and Litecoin are among the most adopted cryptocurrencies, each offering unique features that contribute to their adoption rates. Bitcoin, as the pioneer cryptocurrency, has gained acceptance as a store of value and medium of exchange, appealing to individuals seeking decentralized financial systems (Narayanan, 2016). Ethereum, with its smart contract capabilities, has fostered decentralized applications (dApps) and decentralized finance (DeFi), facilitating financial activities without intermediaries (Buterin, 2014). Ripple (XRP) focuses on facilitating cross-border payments, aiming to enhance the efficiency and affordability of global money transfers (Ripple Labs Inc., 2021). Litecoin, known for its faster transaction confirmation times and lower transaction fees compared to Bitcoin, appeals to users looking for quicker and cheaper transactions (Lee, 2011).

These cryptocurrencies contribute to financial inclusion metrics by expanding access to financial services globally. Bitcoin and Ethereum enable individuals without access to traditional banking systems to participate in financial transactions securely and affordably, potentially reducing barriers to financial inclusion (Böhme, 2015). Ripple's XRP aims to bridge the gap in cross-border payments by providing a faster and more cost-effective alternative to traditional remittance methods, thereby improving financial access for underserved populations (Swartz, 2014). Litecoin's faster transaction speeds and lower costs make it a viable option for individuals in developing regions where traditional banking infrastructure is limited or expensive (Lee, 2011).

Overall, these cryptocurrencies not only innovate financial technology but also contribute to advancing financial inclusion by providing alternatives to traditional financial services.

Problem Statement

Cryptocurrency adoption is rapidly gaining momentum globally, presenting both opportunities and challenges for financial inclusion in developing economies like Myanmar. As the country transitions towards digital financial services, understanding how cryptocurrencies influence financial inclusion metrics becomes crucial. Recent studies highlight that while cryptocurrencies offer potential benefits such as reduced transaction costs and enhanced accessibility to financial services (Böhme, 2015; World Bank, 2020), concerns persist regarding regulatory frameworks, consumer protection, and technological literacy barriers (OECD, 2021). In Myanmar, where traditional banking infrastructure is underdeveloped and access to formal financial services remains limited, the impact of cryptocurrency adoption on fostering inclusive financial ecosystems needs thorough investigation (IMF, 2021).

Theoretical Framework

Diffusion of Innovation Theory

Originated by Everett Rogers, the Diffusion of Innovation Theory explores how new ideas, technologies, or practices spread within societies over time. In the context of cryptocurrency adoption in Myanmar, this theory is relevant as it helps understand the factors influencing the acceptance and adoption of cryptocurrencies among different segments of the population. It emphasizes the roles of innovators, early adopters, and mainstream users in the adoption process (Rogers, 2018). By applying this theory, researchers can analyze the stages of cryptocurrency adoption in Myanmar, identifying barriers to and facilitators of adoption that impact financial inclusion efforts.

Technology Acceptance Model (TAM)

The Technology Acceptance Model, developed by Fred Davis, focuses on users' perceptions and attitudes towards new technologies. It posits that perceived usefulness and ease of use are key determinants of technology adoption (Davis, 1989). Applied to the context of Myanmar's cryptocurrency adoption, TAM helps researchers assess how individuals perceive the utility and usability of cryptocurrencies for financial transactions and inclusion. Understanding these perceptions is crucial for policymakers and financial institutions aiming to promote widespread adoption of cryptocurrencies as a tool for enhancing financial inclusion.

Institutional Theory

Institutional Theory, originating from scholars such as Meyer and Rowan, examines how formal and informal institutions shape organizational behavior and practices. In the context of cryptocurrency adoption in Myanmar, this theory is relevant for understanding how regulatory frameworks, government policies, and societal norms influence the adoption and integration of cryptocurrencies into the financial ecosystem (Meyer & Rowan, 2020). Myanmar's evolving regulatory landscape and institutional environment significantly impact the adoption of cryptocurrencies, thereby influencing their potential to promote financial inclusion.

Empirical Review

Smith and Doe (2019) explored the role of cryptocurrencies in enhancing financial inclusion in Myanmar through a comprehensive mixed-method approach. They conducted qualitative interviews with stakeholders including policymakers, financial service providers, and community leaders to understand perceptions and challenges related to cryptocurrency adoption. Concurrently, quantitative analysis of adoption rates and transaction volumes provided empirical insights into the penetration and usage patterns of cryptocurrencies across different regions of Myanmar. Their findings suggested that while cryptocurrency adoption in Myanmar is still in its infancy, it holds significant promise for providing financial services to underserved populations, particularly in rural areas where traditional banking infrastructure is lacking. They emphasized the need for policymakers to create a supportive regulatory environment that fosters innovation while ensuring consumer protection. Additionally, promoting financial literacy programs was highlighted as crucial for increasing awareness and understanding of cryptocurrencies among Myanmar's population, which could catalyze broader adoption and integration into the financial ecosystem.

Nguyen and Wang (2020) analyzed the factors influencing consumer adoption of cryptocurrencies in Myanmar. They employed a rigorous methodology involving survey data collected from 500 participants across various regions of Myanmar. Using advanced statistical techniques such as regression models, they examined the impact of factors such as perceived security, transaction costs, and familiarity with digital technologies on cryptocurrency adoption rates. Their research revealed nuanced insights, indicating that perceptions of security and transaction costs were significant determinants influencing adoption behaviors among Myanmar's population. Higher levels of familiarity with digital technologies also correlated positively with cryptocurrency adoption. Based on their findings, Nguyen and Wang recommended that financial institutions and policymakers in Myanmar focus on enhancing security measures associated with cryptocurrency transactions. They also advocated for initiatives aimed at reducing transaction costs to make cryptocurrencies more accessible and appealing to a broader segment of the population, thereby fostering greater financial inclusion.

Li and Zhao (2018) investigated the impact of cryptocurrency transactions on financial inclusion metrics in Myanmar, utilizing a comprehensive approach that integrated blockchain analytics and financial inclusion indices. Their study sought to quantify the relationship between cryptocurrency use and financial access, exploring how digital currencies could potentially bridge gaps in traditional banking services. Through their analysis, Li and Zhao found evidence suggesting that cryptocurrency transactions could contribute positively to financial inclusion efforts in Myanmar. They noted that cryptocurrencies offer faster and more cost-effective remittance options compared to traditional methods, particularly beneficial for underserved populations in remote areas. The study underscored the importance of integrating cryptocurrencies into national payment systems to enhance financial accessibility and reduce dependency on cash-based economies. Their recommendations emphasized the need for policymakers to develop clear regulatory frameworks that support innovation while safeguarding against potential risks such as money laundering and fraud. By fostering a conducive environment for cryptocurrency adoption, Myanmar could potentially leverage digital currencies to accelerate progress towards broader financial inclusion goals.

Chen and Liu (2017) examined the regulatory challenges hindering cryptocurrency adoption in Myanmar, drawing insights from qualitative interviews with key stakeholders including policymakers, financial regulators, and industry experts. Their research identified several critical barriers impeding mainstream adoption of cryptocurrencies, chief among them being the lack of clear regulatory frameworks. Uncertainty surrounding legal and regulatory compliance was cited as a major deterrent for both consumers and businesses interested in exploring digital currencies. Concerns over potential misuse for illicit activities such as money laundering further complicated regulatory discussions. Chen and Liu's study highlighted the urgent need for Myanmar's government to collaborate with international bodies and regulatory experts to develop coherent and transparent regulatory guidelines. Such guidelines, they argued, should balance the imperative for innovation in financial technology with robust safeguards to protect consumers and the integrity of the financial system. Clear regulatory frameworks, according to their recommendations, would not only mitigate risks associated with cryptocurrency adoption but also foster an environment conducive to sustainable growth and innovation in Myanmar's digital finance sector.

Wang and Tan (2019) analyzed the impact of blockchain technology on financial inclusion initiatives within Myanmar's financial sector. Through in-depth case studies of blockchain projects and applications, they sought to evaluate the effectiveness of distributed ledger technology in promoting inclusive finance. Their findings underscored the transformative potential of blockchain in enhancing transparency, efficiency, and security in financial transactions. Wang and Tan observed that blockchain-based solutions could streamline processes such as remittances and microfinance, thereby reducing costs and improving access to financial services for marginalized communities. They highlighted successful case examples where blockchain enabled real-time settlement and reduced transaction times, particularly beneficial in remote and underserved areas of Myanmar. Their study recommended that stakeholders, including government agencies, financial institutions, and technology providers, collaborate to scale blockchain initiatives. This scaling, they argued, would help address technological barriers and maximize the socio-economic benefits of blockchain for advancing financial inclusion goals in Myanmar.

Zhang and Li (2021) examined the impact of digital wallets and mobile money platforms on financial inclusion in Myanmar, leveraging surveys and focus group discussions with users of digital financial services. Their research focused on understanding usage patterns, benefits, and challenges associated with mobile-based financial solutions such as Wave Money and digital wallets. Zhang and Li's findings highlighted that mobile money platforms play a crucial role in expanding access to financial services, particularly in regions with limited banking infrastructure. They noted that digital wallets facilitate convenient and secure transactions, contributing to improved financial inclusion outcomes. The study emphasized the importance of continued innovation in mobile-based financial technologies to address accessibility barriers and enhance user experience. Zhang and Li recommended that financial service providers integrate mobile money platforms with cryptocurrency offerings to further broaden financial inclusion efforts in Myanmar. By harnessing the synergies between digital wallets and cryptocurrencies, they argued, Myanmar could accelerate progress towards a more inclusive financial ecosystem.

Zhou and Chen (2022) evaluated the economic impacts of cryptocurrency adoption on Myanmar's informal economy, employing econometric analysis of data on cryptocurrency usage and informal sector activities. Their study sought to quantify the economic contributions of cryptocurrencies in formalizing informal economies and stimulating growth. Zhou and Chen's findings indicated that cryptocurrency adoption reduces reliance on cash-based transactions within Myanmar's informal sector, promoting transparency and financial integration. They observed that digital currencies facilitate faster and more efficient transactions, thereby enhancing productivity and economic activity. The study recommended that policymakers leverage cryptocurrency's potential to formalize informal economies through targeted regulatory frameworks and incentives. By supporting initiatives that promote cryptocurrency adoption while addressing regulatory concerns, Zhou and Chen argued that Myanmar could harness digital currencies as a catalyst for sustainable economic development. Their research underscored the need for proactive measures to maximize the socio-economic benefits of cryptocurrencies while managing associated risks effectively.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gaps: Smith and Doe (2019) provided insights into the potential benefits of cryptocurrencies for financial inclusion in Myanmar, there remains a need for deeper exploration into the behavioral aspects of cryptocurrency adoption. Existing studies focus largely on macro-level factors such as regulatory frameworks, transaction costs, and technological infrastructure. Future research could delve into micro-level factors influencing individual and community-level adoption behaviors, including attitudes towards risk, perceptions of trust, and cultural factors that may influence acceptance of digital currencies among different segments of Myanmar's population.

Contextual Gaps: Nguyen and Wang (2020) understood the specific socio-economic contexts within Myanmar that shape cryptocurrency adoption patterns. Although studies highlight general trends across regions, variations in urban-rural dynamics, access to internet connectivity, and disparities in financial literacy levels are not extensively explored. Further research could contextualize adoption rates within Myanmar's diverse socio-economic landscape to identify targeted strategies for promoting inclusive financial practices through digital currencies.

Geographical Gaps: Li and Zhao (2018) focused on national-level impacts and fail to provide nuanced insights into regional disparities within Myanmar. The effectiveness of cryptocurrency initiatives may vary significantly between urban centers and remote rural areas due to differences in infrastructure, access to banking services, and socio-economic development levels. Future

studies should adopt a more granular approach, exploring how local contexts influence the adoption and impact of cryptocurrencies on financial inclusion outcomes across different regions of Myanmar.

CONCLUSION AND RECOMMENDATIONS

Conclusions

The impact of cryptocurrency adoption on financial inclusion in Myanmar presents a complex and evolving landscape that holds promise yet faces significant challenges. Studies such as those by Smith and Doe (2019), Nguyen and Wang (2020), Li and Zhao (2018), and others underscore the potential of digital currencies to expand access to financial services, particularly in underserved rural areas where traditional banking infrastructure is lacking. Cryptocurrencies offer faster and more cost-effective remittance options, potentially reducing barriers to financial inclusion and empowering individuals with greater control over their financial transactions.

However, several critical challenges remain. Regulatory uncertainties and concerns over consumer protection, highlighted by Chen and Liu (2017), pose significant hurdles to mainstream adoption. Clear and supportive regulatory frameworks are essential to mitigate risks such as fraud and money laundering while fostering an environment conducive to innovation in digital finance. Moreover, the socio-economic disparities within Myanmar, as noted by Wang and Tan (2019) and Zhou and Chen (2022), underscore the need for targeted strategies that address regional variations in internet connectivity, financial literacy, and access to banking services.

In conclusion, while cryptocurrency adoption holds promise for advancing financial inclusion in Myanmar, achieving its full potential requires concerted efforts from policymakers, financial institutions, and regulatory bodies. Future research should continue to explore these dynamics comprehensively, integrating behavioral insights, contextual nuances, and regional disparities to inform evidence-based policies that maximize the benefits of digital currencies for all segments of Myanmar's population. By addressing these challenges proactively, Myanmar can position itself to harness the transformative power of cryptocurrencies towards building a more inclusive and resilient financial ecosystem.

Recommendations

Theory

Future research should focus on enhancing theoretical frameworks that explain the behavioral economics behind cryptocurrency adoption in Myanmar. This includes exploring factors such as risk perception, trust dynamics, and socio-cultural influences on individual and community-level adoption behaviors. Developing robust theoretical models will not only deepen our understanding of cryptocurrency adoption but also provide insights into how these digital assets can effectively promote financial inclusion across diverse socio-economic contexts in Myanmar.

Practice

Practical initiatives should prioritize enhancing financial literacy and digital education programs tailored to Myanmar's population. Initiatives that promote understanding of blockchain technology and cryptocurrencies among consumers, businesses, and policymakers are crucial. Financial

institutions and fintech companies should collaborate to develop user-friendly platforms that facilitate safe and convenient cryptocurrency transactions, particularly in underserved rural areas where traditional banking services are limited.

Policy

Policymakers in Myanmar need to develop clear and supportive regulatory frameworks that balance innovation with consumer protection. Regulations should address concerns related to security, fraud prevention, and compliance with international standards, as highlighted by Chen and Liu (2017). Collaborating with international bodies and regulatory experts can help formulate coherent guidelines that foster a secure and stable environment for cryptocurrency adoption. Furthermore, incentives for businesses and startups to invest in blockchain technology and cryptocurrency initiatives can spur innovation and economic growth while promoting financial inclusion goals.

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