

Local Economy Coinization: The Potential of Regional Cryptocurrency to Strengthen the Competitiveness of Traditional Markets

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ABSTRACT

This research examines the potential implementation of regional cryptocurrency or local economic coinization as an innovative strategy to strengthen traditional market competitiveness. Through a systematic literature review of 30 recent studies, this research analyzes the opportunities, challenges, and impacts of regional crypto on transaction efficiency, financial inclusion, and economic diversification. Findings show that regional crypto can improve transparency, reduce overhead costs, and expand access to global markets. Case studies in Australia, Latin America, and Asia demonstrate that crypto adoption is driven by novelty effects, ease of adoption, and low transaction costs. However, implementation faces significant challenges including regulatory uncertainty, price volatility, lack of digital literacy, and consumer trust issues. This research finds that crypto can enhance economic competitiveness through blockchain technology innovation, increased competition, and GDP growth, but also brings risks of market manipulation, environmental impact, and economic instability. The research conclusion emphasizes that the success of local economic coinization depends heavily on adaptive regulation, improved digital literacy, and readiness of local technology ecosystems.

Keywords: regional cryptocurrency, traditional markets, economic competitiveness, financial inclusion, blockchain technology

INTRODUCTION

Digital transformation has fundamentally changed the global economic landscape, driving innovation in payment systems and financial transactions. In this context, cryptocurrency has emerged as a promising alternative to improve economic efficiency and expand financial inclusion. The concept of local economic coinization, namely the use of cryptocurrency specifically designed for certain regions or communities, is increasingly gaining attention as a strategy to strengthen traditional market competitiveness (Chen & Tham, 2022).

Traditional markets, as the backbone of local economies in many developing countries, face various challenges in the digitalization era. Limited access to modern payment systems, high cross-border transaction costs, and lack of transparency in supply chains are major obstacles for local business actors to compete effectively (Khidirberdievich & Mamadillayevich, 2021). In this context, regional cryptocurrency implementation offers innovative solutions that can improve operational efficiency, reduce transaction costs, and open access to broader global markets.

The phenomenon of cryptocurrency adoption in various countries shows diverse trends. In Latin America, crypto has become an alternative for savings and remittance transfer tools that are cheaper and faster, especially in countries with high inflation or



tight capital controls (Marcelino et al., 2023). Meanwhile, in Australian tourism areas, crypto adoption by local business actors not only improves operational efficiency but also becomes an additional attraction for tourists (Chen & Tham, 2022). In Zimbabwe, crypto provides benefits in the form of ease of remittances, price stability, and improved economic governance (Masama, 2022).

The potential of regional crypto in improving economic competitiveness is also supported by blockchain technology development that enables higher transparency and efficiency. Central Bank Digital Currency (CBDC) in China shows that digital currency implementation can increase economic growth, lower leverage ratios, and reduce systemic financial risks (Tong & Chen, 2021). However, crypto implementation also faces significant challenges, including price volatility, regulatory uncertainty, fraud risks, and environmental impacts from mining activities (Badea & Mungiu-Pupăzan, 2021).

In understanding the phenomenon of local economic coinization, this research is based on several interrelated theoretical perspectives. From Rogers' innovation diffusion theory perspective, cryptocurrency adoption in local economic contexts is influenced by factors such as relative advantage (low transaction costs, transfer speed), compatibility with existing systems, ease of use, and benefit observability (Chen & Tham, 2022). Coase's institutional economic theory is also relevant in this context, where blockchain technology can reduce transaction costs and economic coordination through creating more transparent systems and reducing the need for intermediaries (Khidirberdievich & Mamadillayevich, 2021).

The concept of financial inclusion becomes an important theoretical foundation in understanding the role of regional crypto as an enabler of financial service access for populations underserved by conventional banking systems (Marcelino et al., 2023). Meanwhile, Markowitz's modern portfolio theory provides perspective on crypto diversification benefits in improving portfolio efficiency, despite challenges from high volatility (Letho et al., 2022). From Porter's competitive advantage viewpoint, regional crypto implementation can create differentiation and cost efficiency that enhances traditional market competitiveness (Lee & Kim, 2023). Finally, optimal regulation theory emphasizes the need for balance between encouraging innovation and protecting consumers in crypto policy frameworks (Ferreira & Sandner, 2021; Biju & Thomas, 2023).

METHODS

This research uses a systematic literature review method to analyze the potential of local economic coinization in strengthening traditional market competitiveness. This approach was chosen to provide a comprehensive overview of recent research on regional cryptocurrency and its impact on local economies.

2.1 Search Strategy

Literature searches were conducted using major academic databases including Google Scholar, JSTOR, and Consensus AI. Keywords used include "cryptocurrency regional", "local crypto adoption", "traditional market competitiveness", "blockchain economics", "digital currency implementation", and "crypto economic impact". The search period covers publications from 2021 to 2025 to ensure data relevance and novelty.

2.2 Inclusion and Exclusion Criteria

Inclusion criteria include: (1) studies discussing cryptocurrency implementation in local or regional economic contexts; (2) research analyzing crypto impact on economic competitiveness; (3) case studies of crypto adoption in traditional markets or developing economies; (4) publications in English or Indonesian; (5) clear and valid research

methodology. Exclusion criteria include publications that only discuss technical aspects of cryptocurrency without economic analysis, as well as studies focusing solely on global cryptocurrency without local context.

2.3 Selection and Analysis Process

The selection process was conducted in three stages: (1) title and abstract screening; (2) full-text review for relevance; (3) data extraction and quality analysis. A total of 30 publications were selected for in-depth analysis based on relevance and methodology quality. Extracted data includes research methodology, study location, main findings, and policy recommendations.

2.4 Analysis Framework

Analysis was conducted using a thematic framework that categorizes findings into five main dimensions: (1) regional crypto opportunities and benefits; (2) implementation challenges; (3) impact on economic competitiveness; (4) economic and portfolio diversification; (5) regulatory and policy implications. Each theme is analyzed in depth by comparing findings from various case studies and geographical contexts.

RESULTS AND DISCUSSION

3.1 Regional Cryptocurrency Opportunities and Benefits

Literature analysis shows that regional cryptocurrency offers various significant opportunities for local economic strengthening. The following is a comprehensive summary of identified opportunities and challenges:

Table 1. Summary of Regional Cryptocurrency Opportunities and Challenges

Aspect	Opportunities	Challenges	Policy Recommendations
Transaction Efficiency	Low costs, high speed, blockchain transparency	Price volatility, scalability issues	Regional stablecoin development, technology infrastructure
Financial Inclusion	Universal access, 24/7 services, microtransactions	Digital divide, limited literacy	Education programs, internet access subsidies
Competitiveness	Innovation, disintermediation, global market access	Regulatory uncertainty, unfair competition	Clear regulatory framework, level playing field
Diversification	Currency risk hedging, portfolio optimization	High correlation during crises, liquidity risk	Risk management guidelines, investor protection
Regulation	Standardization, consumer protection	Compliance complexity, regulatory lag	Sandboxing approach, stakeholder collaboration

3.1.1 Transaction Efficiency and Cost Reduction

Analysis results show that regional cryptocurrency provides significant benefits in improving transaction efficiency and reducing operational costs. Studies in Australia show that crypto adoption by local tourism business actors is driven by three main factors: novelty effects that attract tourists, ease of technology adoption, and lower transaction costs compared to conventional payment systems (Chen & Tham, 2022). This cost reduction is particularly significant for cross-border transactions and microtransactions, where traditional fees often become economic barriers.

Efficiency benefits are also reflected in transaction processing speed. Blockchain technology enables faster settlement compared to traditional banking systems, especially for international transactions that typically require several working days. This provides competitive advantage for traditional markets in serving consumers who prioritize speed and transaction convenience (Miśkiewicz et al., 2022).

3.1.2 Financial Inclusion and Global Market Access

Regional cryptocurrency has proven effective in improving financial inclusion, especially in countries with suboptimally developed banking systems. Studies in Latin America show that crypto has become an alternative for savings and remittance transfer tools that are cheaper and faster, especially in countries with high inflation or tight capital controls (Marcelino et al., 2023). This phenomenon enables small and medium enterprises in traditional markets to access financial services that were previously unavailable or too expensive.

Access to global markets also increases through ease of crypto payments that can be accepted by international merchants. This opens export opportunities and cross-country business cooperation for local business actors who were previously limited by international payment system complexity. In Zimbabwe, these benefits include ease of remittances, price stability relative to local currency experiencing inflation, and improved governance through blockchain transparency (Masama, 2022).

3.1.3 Transparency and Shadow Economy Combat

Implementation of blockchain technology in regional cryptocurrency can improve economic transparency and help combat shadow economy. Studies on the potential conversion of national currency to blockchain in Uzbekistan show that digitalization can strengthen transparency, accelerate public services, and reduce illegal economic activities (Khidirberdievich & Mamadillayevich, 2021). This transparency provides dual benefits: increasing consumer trust and facilitating tax regulation compliance.

In traditional market contexts, blockchain transparency can improve product traceability, verify goods authenticity, and provide accurate information to consumers about supply chains. This becomes an important competitive advantage in an era where consumers are increasingly concerned about the origin and quality of products they purchase.

3.2 Implementation Challenges and Barriers

3.2.1 Regulatory Uncertainty

The main challenge in regional cryptocurrency implementation is regulatory uncertainty that continues in many countries. Analysis shows that lack of legal framework clarity becomes the main barrier to crypto adoption, especially for business actors who prioritize compliance and legal risk mitigation (Budania et al., 2025). This uncertainty creates high risk premium and reduces investor and consumer confidence in crypto as a legitimate payment instrument.

Regional studies show that countries with clearer crypto regulations tend to have higher adoption rates. Conversely, jurisdictions with ambiguous or overly restrictive regulations experience significant barriers in local crypto ecosystem development (Ferreira & Sandner, 2021). This emphasizes the importance of coordination between regulators and industry to create frameworks that support innovation while protecting consumers.

3.2.2 Price Volatility and Market Risk

High cryptocurrency volatility becomes a fundamental barrier in adoption as daily payment instruments. Extreme price fluctuations can create uncertainty in business planning and reduce crypto function as a stable store of value (Lee & Kim, 2023). For

traditional markets operating with thin profit margins, this volatility can threaten financial stability and operational sustainability.

Market risk also includes potential manipulation by whale traders and exchanges, as found in studies on trading volume manipulation in centralized crypto exchanges (Amiram et al., 2025). This manipulation can provide short-term benefits for exchanges but harm long-term reputation and performance of the overall crypto ecosystem, thus reducing local business actor confidence.

3.2.3 Digital Literacy and Technology Adoption

Lack of digital literacy becomes a significant barrier in regional cryptocurrency adoption, especially among traditional traders who generally have limited educational and technological backgrounds. Studies show that crypto adoption success depends heavily on effective education and training programs to build understanding of blockchain technology and crypto risk management (Khichi, 2024).

Inadequate technology infrastructure also becomes a constraint, especially in areas with limited or unstable internet connectivity. This creates digital divide that can widen gaps between business actors who can adopt crypto technology and those who cannot, potentially reducing economic inclusion that is one of the main goals of regional crypto implementation.

3.2.4 Trust and Security Issues

Consumer trust in cryptocurrency remains relatively low due to various security incidents, scams, and exchange failures in the past. Studies show that trust issues depend heavily on consumer interest and readiness, which varies significantly across demographics and geography (Chen & Tham, 2022). Building trust requires time and consistency in providing positive experiences to users.

Technical security also becomes a major concern, especially regarding hacking risks, phishing, and private key loss. The complexity of crypto security management can become an entry barrier for non-tech-savvy users, thus requiring user-friendly solutions that do not sacrifice security aspects.

3.3 Impact on Economic Competitiveness

Implementation of regional cryptocurrency shows multidimensional impact on economic competitiveness. The following table summarizes empirical evidence from various studies:

Table 2. Regional Cryptocurrency Impact on Economic Competitiveness

Indicator	Positive Impact	Risk/Challenge	Empirical Evidence	Source
GDP Growth	Efficiency improvement, new investment	Macroeconomic volatility	China CBDC: positive growth	(Tong & Chen, 2021)
Transaction Costs	30-50% reduction vs conventional	Technical failures, vs network congestion	Australia tourism: adoption driven by low costs	(Chen & Tham, 2022)
Financial Inclusion	24/7 access, global remittance	Digital literacy barriers	Latin America: alternative savings remittance	(Marcelino et al., & 2023)

Indicator	Positive Impact	Risk/Challenge	Empirical Evidence	Source
Market Competition	Level playing field, SME empowerment	Market manipulation risks	Exchange competition effects	(Amiram et al., 2025)
Technology Innovation	Blockchain adoption, fintech growth	Regulatory uncertainty	Uzbekistan: transparency improvement	(Khidirberdievich & Mamadillayevich, 2021)

3.3.1 Innovation and Efficiency Improvement

Regional cryptocurrency implementation has proven to drive innovation and economic efficiency improvement through several mechanisms. Blockchain technology underlying crypto reduces transaction costs, accelerates fund transfers, and reduces need for intermediaries, thus improving overall economic system efficiency (Lee & Kim, 2023). This creates competitive advantage for business actors adopting crypto technology compared to those still using conventional systems.

This efficiency is also reflected in operational productivity improvement. Payment and settlement process automation through smart contracts can reduce administrative overhead and human error, thus enabling more optimal resource allocation for other value-added activities. Studies show that this efficiency improvement can contribute significantly to financial sector and overall economic competitiveness enhancement (Ssaharti, 2022).

3.3.2 Competition Enhancement and Decentralization

Cryptocurrency and Web3 technology promote decentralization that challenges large company dominance and opens new opportunities for small and medium enterprises. This decentralization creates a more level playing field and enables fairer competition based on merit and innovation rather than market power (Lee & Kim, 2023). In traditional market contexts, this means small traders can have equal access to advanced payment technology without having to invest heavily in infrastructure.

Crypto platforms also enable disintermediation in various economic activities, reducing dependence on traditional intermediaries such as banks and payment processors. This not only reduces costs but also increases control and autonomy of business actors over their own operations. However, decentralization also brings challenges in terms of standardization and interoperability between platforms (Pillai, 2024).

3.3.3 Contribution to Economic Growth

Empirical evidence shows that cryptocurrency trading and adoption can contribute positively to national economic growth. Studies on crypto impact on macroeconomics show GDP increase, fixed capital formation, and economic globalization in countries that significantly adopt crypto (Miśkiewicz et al., 2022). This contribution occurs through several channels: transaction efficiency improvement, foreign investment attraction, and technology sector stimulation.

Central Bank Digital Currency (CBDC) as a form of government-issued crypto shows greater potential in supporting economic growth. Case study of CBDC implementation in China shows that digital currency can increase economic growth, lower leverage ratios, and reduce systemic financial risks, thus strengthening the country's position in global competition (Tong & Chen, 2021).

3.3.4 Innovative Funding Sources

Cryptocurrency opens access to innovative funding sources such as Initial Coin Offering (ICO), Security Token Offering (STO), and Decentralized Finance (DeFi) protocols. These funding mechanisms enable local business actors to access capital

without going through traditional banking systems that often have strict requirements and lengthy processes (Ssaharti, 2022).

Crypto-based crowdfunding also enables investment democratization, where small investors can participate in project funding that was previously only accessible to institutional investors. This can increase liquidity in local markets and encourage entrepreneurship and innovation at grassroots level.

3.4 Economic and Portfolio Diversification

3.4.1 Portfolio Efficiency Improvement

Empirical analysis shows that adding cryptocurrency to traditional investment portfolios can improve risk-adjusted returns and provide significant diversification benefits. Studies in emerging market countries show that crypto can improve portfolio efficiency by providing exposure to assets with low correlation with conventional investment instruments such as stocks, bonds, and commodities (Letho et al., 2022).

Diversification benefits are particularly visible during periods of high economic uncertainty, where crypto can function as alternative investment providing returns independent of traditional market performance. However, it should be noted that correlation between crypto and traditional assets tends to increase during market stress periods, thus reducing diversification benefits when most needed (Song & Lin, 2022).

3.4.2 Currency Devaluation Hedge

In economies with unstable currencies or experiencing chronic depreciation, cryptocurrency can function as a hedge against currency risk. Studies in high-inflation countries show that communities and business actors use crypto as alternative store of value that can maintain purchasing power better than local currency (Marcelino et al., 2023).

This hedging function provides special benefits for traditional markets operating in volatile economies, enabling them to maintain asset value stability and cash flow in more stable currency. However, inherent volatility of cryptocurrency itself creates trade-offs between currency risk and crypto risk that need careful management.

3.4.3 Green Economy Access

Development of environmentally friendly cryptocurrency (clean cryptocurrencies) opens diversification opportunities toward sustainable economy. Studies show that clean crypto has stronger correlation with green economy indices, thus potentially becoming instruments for investing in green economy transition (Sharif et al., 2023).

This provides opportunities for traditional markets to integrate sustainability considerations into their business strategies through environmentally friendly crypto adoption. However, majority of major cryptocurrencies still have significant carbon footprint, thus requiring careful selection in sustainable regional crypto implementation.

3.4.4 Geographic Diversification and Market Access

Cryptocurrency enables easier geographic diversification by providing access to international markets without complexity of regulations and administration typically associated with foreign exchange. This enables traditional markets to expand their customer base beyond domestic markets and access global supply chains more efficiently.

This geographic diversification also reduces dependence on local economic conditions and provides resilience against regional economic shocks. However, regulatory arbitrage and compliance with multiple jurisdictions can create operational complexity that needs management with proper risk management framework.

3.5 Policy and Regulatory Implications

Analysis of various studies shows the importance of structured implementation strategies to maximize regional cryptocurrency benefits. The following is the recommended implementation framework:

Table 3. Regional Cryptocurrency Implementation Strategy

Phase	Timeline	Main Activities	Target Stakeholders	Expected Outcomes
Preparation Phase	0-12 months	Regulatory framework, stakeholder mapping	Regulators, financial industry	Legal certainty, industry buy-in
Pilot Program	12-24 months	Limited scope implementation, user education	Selected traditional markets, early adopters	Proof of concept, user feedback
Scaling Up	24-36 months	Broader deployment, infrastructure development	All traditional markets, consumers	Mass adoption, network effects
Optimization	36+ months	Performance monitoring, continuous improvement	Entire ecosystem	Sustainable operation, economic impact

3.5.1 Need for Comprehensive Regulatory Framework

Analysis results emphasize the importance of developing comprehensive and coordinated regulatory frameworks to maximize regional cryptocurrency benefits while minimizing risks. Optimal regulation must balance between encouraging innovation and protecting consumers and financial system stability (Ferreira & Sandner, 2021). This framework needs to include AML/CFT aspects, consumer protection, market integrity, and systemic risk management.

Coordination between countries and regional bodies is also important to avoid regulatory arbitrage and ensure consistent standards supporting regional crypto interoperability. Studies show that regulatory fragmentation can hinder integrated and efficient crypto ecosystem development (Biju & Thomas, 2023).

3.5.2 Education Programs and Literacy Enhancement

Public policy needs to include comprehensive education programs to improve digital literacy and public understanding of cryptocurrency. These programs must target multiple stakeholders: business actors, consumers, and regulators themselves to keep up with rapid technology development (Khichi, 2024).

Education also needs to include risk awareness and best practices in crypto use, including security measures, fraud prevention, and responsible investment. This is important to prevent premature adoption without adequate understanding of involved risks.

3.5.3 Infrastructure and Standards Development

Government needs to support technology infrastructure development necessary for successful regional crypto implementation. This includes internet connectivity, digital identity systems, and robust cybersecurity infrastructure (Budania et al., 2025).

Standards development is also crucial to ensure interoperability and security. Government can play a role as facilitator in developing technical standards that enable seamless integration between regional crypto and existing financial systems.

CONCLUSIONS

This research shows that local economic coinization through regional cryptocurrency implementation has significant potential to strengthen traditional market competitiveness, despite facing substantial implementation challenges. Main benefits include transaction efficiency improvement, operational cost reduction, financial inclusion enhancement, and broader access to global markets. Empirical evidence from case studies in Australia, Latin America, China, and other developing countries shows that regional crypto can increase GDP, drive technology innovation, and provide portfolio diversification alternatives. However, regulatory uncertainty, price volatility, lack of digital literacy, and consumer trust issues become critical barriers requiring careful management.

The success of local economic coinization depends heavily on three critical factors: adaptive and supportive regulation, digital literacy improvement and trust building among stakeholders, and robust local technology ecosystem readiness. Optimal implementation requires a holistic approach that includes comprehensive regulatory framework development, education programs for digital literacy improvement, technology infrastructure investment, and regional coordination to avoid fragmentation. With proper management of challenges and risks, regional cryptocurrency can become a catalyzer for traditional market transformation and modernization, thus enhancing their competitive advantage in the global digital economy.

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