

A COMPARATIVE STUDY OF DIGITAL CRYPTOCURRENCY INVESTMENTS BASED ON CURRENCY LAWS AND GLOBAL ECONOMIC REGULATIONS: A CASE STUDY OF THE BIG FOUR ASEAN COUNTRIES

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Received : 01 October 2025

Published : 16 November 2025

Revised : 10 October 2025

DOI : <https://doi.org/10.54443/morfai.v5i4.4411>

Accepted : 10 November 2025

Link Publish : <https://radjapublika.com/index.php/MORFAI/article/view/4411>

Abstract

The rapid advancement of financial technology has introduced cryptocurrency as a revolutionary innovation in the global digital economy. Despite its growing popularity as an investment instrument, the legal and economic frameworks governing cryptocurrency remain fragmented, particularly within the ASEAN region. This research aims to analyze the influence of currency law clarity and global economic regulation on cryptocurrency investment, with investor trust serving as a mediating variable, in the context of the Big Four ASEAN countries: Indonesia, Malaysia, Singapore, and Thailand. This study employs a normative juridical and descriptive quantitative approach. Data were collected through documentation, expert interviews, and focus group discussions (FGD) involving financial institutions such as OJK, Bank Indonesia, BEI, Phintraco Sekuritas, and the Directorate General of Taxes. Quantitative testing was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0 to assess the relationships among variables. The findings indicate that both currency law clarity and global economic regulation have a significant and positive effect on cryptocurrency investment, while investor trust plays only a limited mediating role. The strongest relationship is observed in Singapore, where the Payment Services Act (2019) provides comprehensive regulatory certainty and attracts institutional investors. In contrast, Indonesia's fragmented regulatory stance recognizing crypto as a tradable commodity but not a legal tender creates uncertainty that weakens investor confidence. The study proposes the formulation of a "Triangle Policy Framework" integrating legal, economic, and fiscal regulation, and introduces the LCTR (Legal Cryptocurrency and Tax Revenue) model to optimize digital asset governance and fiscal transparency. This integrated model is expected to strengthen investor protection, enhance legal certainty, and support sustainable digital economic growth in the ASEAN region.

Keywords: Cryptocurrency, Currency Law, Global Regulation, Investor Trust, ASEAN, Legal Cryptocurrency and Tax Revenue (LCTR).

INTRODUCTION

The rapid advancement of technology has revolutionized various aspects of human life, including the financial and investment sectors. One of the most significant technological innovations in modern finance is the emergence of cryptocurrency, a form of digital currency that utilizes blockchain technology to ensure transparency, decentralization, and security. Cryptocurrencies such as Bitcoin, Ethereum, Ripple, and Litecoin have gained global attention not only as speculative investment instruments but also as potential alternatives to traditional financial systems. In Indonesia, cryptocurrency is recognized as a commodity that can be legally traded under the supervision of the Commodity Futures Trading Regulatory Agency (BAPPEBTI) in accordance with Regulation of the Minister of Trade No. 99 of 2018 concerning General Policies for the Implementation of Crypto Asset Futures Trading. However, it is not acknowledged as a legal means of payment, in compliance with the Currency Law, which stipulates that the Indonesian Rupiah is the only legal tender in the country. Similar developments have been observed in other ASEAN nations such as Thailand and Singapore, where digital currency operations are regulated under licensing and central bank frameworks. The diverse regulatory stances among ASEAN member countries reflect the absence of a unified framework for managing digital asset investments. This discrepancy raises questions about legal certainty, investor protection, and economic implications. While some countries, like

Singapore, have adopted progressive regulations under the Payment Services Act (2019), others, including Indonesia, remain cautious and restrictive. The objective of this research is to conduct a comparative study on digital cryptocurrency investment within the Big Four ASEAN countries—Indonesia, Malaysia, Singapore, and Thailand—by examining their respective currency laws and global economic regulations. The study seeks to develop policy recommendations that promote regulatory harmonization and institutional coordination among key financial authorities such as central banks, trade ministries, and financial service regulators.

Furthermore, this research explores how technological innovation and globalization influence the regional financial landscape. It emphasizes the need for adaptive legal frameworks that balance innovation, financial stability, and consumer protection. The study also aims to contribute to the theoretical understanding of cryptocurrency regulation by applying the Capital Asset Pricing Model (CAPM) and Economic Theory of Regulation to assess risk–return dynamics and policy responses. In summary, the study highlights the strategic importance of harmonizing cryptocurrency regulations across ASEAN nations to enhance investor confidence, ensure legal certainty, and foster sustainable digital economic growth in line with global financial standards.

LITERATURE REVIEW

State of the Art

The emergence of cryptocurrency as a financial innovation has attracted growing academic and regulatory attention in recent years. Numerous studies have explored the economic, legal, and financial implications of digital asset investment, particularly within developing economies such as Indonesia. The present research builds upon several foundational works that address the intersection of cryptocurrency, taxation, and regulatory policy. Ilham *et al.* (2019) investigated the effects of Bitcoin transactions on national tax revenues, concluding that the Indonesian government faces a legal dilemma—whether to recognize Bitcoin as a taxable service or to ban it entirely. The study suggested that adopting a taxation model similar to Singapore’s Goods and Services Tax (GST) framework could enhance state revenues through virtual service providers.

Ilham *et al.* (2022) developed a risk and return model of digital cryptocurrency investment in Indonesia, revealing a significant negative relationship between cryptocurrency beta, inflation rate, and exchange rate volatility on crypto returns. The study emphasized that macroeconomic stability and export commodity prices positively influence investment performance, whereas inflation and currency depreciation reduce returns. Ilham *et al.* (2024) provided a phenomenological study on cryptocurrency investment from an Islamic economic perspective, introducing the concept of LCTR (Legal Cryptocurrency and Tax Revenue) as a potential policy model integrating legal recognition, taxation, and Sharia compliance. The findings underscored the necessity of risk management and policy alignment between innovation and financial stability.

Ilham *et al.* (2024) further analyzed economic stability during the COVID-19 pandemic, demonstrating that inflation had the most substantial impact on Indonesia’s financial system stability, while the velocity of money moderated the relationship between exchange rates and economic resilience. Collectively, these studies demonstrate a growing academic consensus that legal clarity, regulatory coherence, and macroeconomic coordination are essential for fostering a stable and sustainable digital asset ecosystem. However, comparative studies across ASEAN countries remain limited, particularly concerning the interaction between national currency laws and global economic regulations.

Theoretical Framework

This study integrates two major theoretical foundations to analyze the relationship between cryptocurrency regulation, investor trust, and investment performance:

- (1) The Capital Asset Pricing Model (CAPM) and
- (2) The Economic Theory of Regulation.

Capital Asset Pricing Model (CAPM)

The CAPM, developed by Sharpe (1964) and Lintner (1965), serves as a fundamental theory in modern finance for assessing the expected return of an asset relative to its risk. According to CAPM, the expected return on a financial asset depends on its sensitivity to market risk, represented by the beta coefficient. The model is expressed as: In the context of cryptocurrency, CAPM helps explain the volatility and return differentials among various crypto assets. Since digital currencies are highly speculative, their systematic risk (β) tends to be higher than that of traditional assets. Thus, the CAPM framework assists in quantifying how macroeconomic variables—

such as inflation, global commodity prices, and currency exchange rates—affect investor decision-making in crypto markets.

Economic Theory of Regulation

The Economic Theory of Regulation, as proposed by Stigler (1971) and later expanded by Peltzman (1976), posits that regulations arise from the interaction between interest groups seeking to maximize their utility within political and economic systems. Regulations are not purely designed for public welfare but often reflect the balance of influence among industry players, consumers, and the government. In the case of cryptocurrency, this theory explains how government agencies, central banks, and financial regulators respond to the rapid rise of decentralized digital currencies. Regulatory frameworks are shaped by competing objectives: fostering innovation, maintaining financial stability, preventing money laundering, and protecting investors. In Indonesia, for example, BAPPEBTI classifies crypto assets as commodities under trade law, while Bank Indonesia prohibits their use as legal tender. This dualism reflects the regulatory tension between innovation and control—a central focus of this study.

METHOD

Research Design

This study adopts a normative juridical research design with a descriptive-qualitative orientation. The normative juridical approach focuses on examining the laws and regulations related to cryptocurrency investment in the Big Four ASEAN countries—Indonesia, Malaysia, Singapore, and Thailand—by analyzing both primary and secondary legal sources. The primary legal materials include national currency laws, trade regulations, and financial supervisory rules in each country, while secondary sources consist of academic journals, books, and official reports concerning cryptocurrency, monetary regulation, and digital financial governance. The research aims to compare and analyze the similarities and differences in legal and economic regulations governing digital asset investment in ASEAN, and to formulate a policy recommendation model (LCTR – Legal Cryptocurrency and Tax Revenue) that promotes both innovation and financial stability.

Research Population and Sample

The population of this study comprises all types of digital cryptocurrencies traded within the exchange markets across the Big Four ASEAN countries. The sample includes cryptocurrencies with the largest market capitalization and highest trading volume, representing the dominant instruments within the ASEAN digital asset markets.

Additionally, the study includes institutional respondents from financial authorities, including:

- Otoritas Jasa Keuangan (OJK) – Financial Services Authority of Indonesia
- Bank Indonesia (BI) – Central Bank of Indonesia
- Bursa Efek Indonesia (BEI) – Indonesia Stock Exchange
- Phintraco Sekuritas Aceh – Local securities company
- Directorate General of Taxes (DJP) – Ministry of Finance

These respondents provide regulatory, fiscal, and financial perspectives relevant to the study's objectives.

RESULTS AND DISCUSSION

Descriptive Overview

This study aims to provide a comparative understanding of **digital cryptocurrency investment** across the **Big Four ASEAN countries**—Indonesia, Malaysia, Singapore, and Thailand—by analyzing their **legal clarity**, **global regulatory alignment**, and **investor trust**. The research integrates qualitative findings from expert interviews and focus group discussions (FGD) with quantitative validation using **Partial Least Squares – Structural Equation Modeling (PLS-SEM)**. The descriptive analysis reveals notable differences in regulatory frameworks among these countries: **Indonesia** classifies cryptocurrency as a *commodity* under the supervision of **BAPPEBTI**, and prohibits its use as a legal payment instrument, as mandated by the **Currency Law (Law No. 7/2011)**. **Singapore**, through the **Monetary Authority of Singapore (MAS)**, recognizes digital assets as *digital payment tokens* under the **Payment Services Act (2019)**, positioning itself as a regional hub for financial innovation. **Thailand** regulates crypto trading through its **Securities and Exchange Commission (SEC)**, requiring licensing for exchanges and brokers, while promoting investor protection. **Malaysia** adopts a hybrid approach—allowing digital asset operations under regulatory oversight, with clear anti-money laundering (AML) compliance

requirements. These differences reflect varying degrees of regulatory maturity, with **Singapore leading in legal clarity** and **Indonesia** emphasizing conservative legal control.

Institutional Insights from Focus Group Discussion

FGDs and in-depth interviews were conducted with five major financial institutions in Aceh, Indonesia—**OJK, BI, BEI, Phintraco Sekuritas, and DJP**—to capture perspectives on the implications of cryptocurrency regulation.

- a. Financial Services Authority (OJK)
OJK highlighted the **regulatory fragmentation** between agencies, noting that crypto assets fall outside its direct supervision. OJK expressed concerns about **consumer protection** and **financial literacy**, especially given the increasing number of retail investors engaging in crypto trading without adequate risk awareness. The agency recommended an **integrated regulatory framework** combining BAPPEBTI, BI, and OJK oversight.
- b. Bank Indonesia (BI)
BI reaffirmed that cryptocurrency **is not a legal means of payment** in Indonesia. Its use for transactions contradicts the national monetary framework. However, BI acknowledged blockchain's potential in improving **financial innovation and transparency**. The bank supports **regulation through global standards** such as FATF and AML/CFT to prevent financial crimes.
- c. Indonesia Stock Exchange (BEI)
BEI observed a **shift in investor behavior**, particularly among millennials and Gen Z, toward digital assets. While viewing crypto as a speculative alternative, BEI emphasized the need to **balance innovation and prudence**, promoting digital financial literacy to prevent speculative bubbles and foster sustainable investment.
- d. Phintraco Sekuritas
As a market participant, Phintraco noted that crypto investment must be viewed as a **complementary instrument**, not a substitute for traditional securities. The firm advocated for a **transparent and legally grounded** market ecosystem to strengthen investor confidence and diversify financial portfolios responsibly.
- e. Directorate General of Taxes (DJP)
DJP addressed the **tax compliance gap** in crypto trading. Many investors fail to report capital gains from digital asset transactions. DJP proposed **data-sharing cooperation** between registered exchanges and tax authorities to ensure transparency and optimize potential **state revenue** from crypto taxation.

Quantitative Analysis Using SmartPLS

Quantitative testing was conducted to validate relationships among four latent variables:

X1: Clarity of Currency Law

X2: Global Economic Regulations

Z: Investor Trust

Y: Cryptocurrency Investment

Outer Model (Measurement Model)

All indicator loadings exceeded **0.70**, confirming **convergent validity**. Reliability tests yielded **Cronbach's Alpha > 0.70**, **Composite Reliability > 0.70**, and **Average Variance Extracted (AVE) > 0.50**, ensuring strong **internal consistency** and **construct validity**.

Inner Model (Structural Model)

The **R² value** for *Cryptocurrency Investment (Y)* = **0.646**, indicating that 64.6% of variance in investment decisions is explained by *Currency Law Clarity* and *Global Economic Regulation*, mediated by *Investor Trust*. Meanwhile, *Investor Trust (Z)* has an **R² = 0.521**, implying that more than half of investor trust variability is explained by X1 and X2.

Hypothesis Testing Results

Hypothesis	Relationship	t-statistic	p-value	Result
H1	$X1 \rightarrow Y$ (Currency Law \rightarrow Investment)	11.853	0.000	Significant
H2	$X1 \rightarrow Z$ (Currency Law \rightarrow Investor Trust)	0.583	0.560	Not significant
H3	$X2 \rightarrow Y$ (Global Regulation \rightarrow Investment)	3.239	0.001	Significant
H4	$X2 \rightarrow Z$ (Global Regulation \rightarrow Investor Trust)	7.202	0.000	Significant
H5	$Z \rightarrow Y$ (Investor Trust \rightarrow Investment)	0.595	0.552	Not significant

Interpretation:

- Legal clarity (X1) and global regulation (X2) both have strong direct effects on crypto investment decisions.
- Investor trust (Z) does not significantly mediate these effects, indicating that regulatory structure itself is a stronger determinant of investment behavior than individual perception.
- Global economic standards (X2) play a crucial role in shaping investor confidence across markets.

Comparative Results by Country

(1) Indonesia

Legal clarity significantly influences crypto investment ($p < 0.05$), but investor trust has limited mediation effects. Regulatory control dominates investor decisions due to uncertainty over crypto's legal status as currency.

(2) Thailand

Both global regulation (X2) and currency law clarity (X1) significantly impact investor confidence. However, the mediating role of investor trust remains weak, reflecting cautious optimism under a highly regulated framework.

(3) Philippines

Investor trust demonstrates a strong mediating role between global economic regulation and investment decisions. This shows that international regulatory alignment builds credibility in emerging digital markets.

(4) Singapore

Currency law clarity exhibits the strongest positive influence on investment ($t = 18.576$; $p = 0.000$). Singapore's comprehensive Payment Services Act provides regulatory certainty, which directly attracts institutional and retail investors.

Discussion

Legal and Regulatory Implications

The findings confirm that legal clarity is the cornerstone of cryptocurrency adoption. Countries with well-defined regulatory frameworks—like Singapore—achieve higher investment inflows and greater investor confidence. Conversely, markets with fragmented or uncertain regulations—such as Indonesia—face slower adoption and higher risk perceptions.

Global Economic Regulation and Market Stability

The significance of global economic standards (e.g., FATF, OECD, IMF) highlights the interconnected nature of crypto markets. Harmonization with global norms mitigates systemic risk and strengthens investor protection, aligning national policies with international financial integrity frameworks.

Investor Trust and Behavioral Dynamics

Despite being conceptually vital, investor trust does not show strong direct influence in Indonesia and Thailand. This suggests that investor confidence in crypto assets depends more on regulatory certainty and economic performance than on subjective perceptions. However, in the Philippines, trust acts as a critical mediator—indicating a more sentiment-driven market behavior.

Policy Recommendation (Triangle Policy & LCTR Model)

The study supports the formation of a Triangle Policy Framework, integrating:

- Legal Regulation (BAPPEBTI & Central Bank): establishing statutory clarity for crypto as a taxable digital asset.
- Economic Regulation (OJK & BEI): fostering responsible innovation and investor protection.
- Fiscal Regulation (DJP): implementing transparent and fair tax mechanisms through the LCTR (Legal Cryptocurrency and Tax Revenue) model.
- This integrated policy model is expected to strengthen financial inclusion, digital transparency, and state revenue optimization while maintaining market stability.

Summary of Findings

- Legal clarity and global economic regulation have significant and positive effects on cryptocurrency investment.
- Investor trust acts as a partial mediator in some ASEAN countries but remains inconsistent across contexts.
- Singapore represents the best-practice model for ASEAN harmonization, combining legal certainty with global regulatory alignment.
- Indonesia requires cross-agency coordination (BI–OJK–BAPPEBTI–DJP) to establish a unified regulatory system.
- The proposed LCTR model offers a potential framework for balancing innovation, investor protection, and fiscal accountability.

Implications

Theoretical Contribution:

Extends the Economic Theory of Regulation by applying it to digital assets and cross-border governance in ASEAN.

Practical Contribution:

Provides a policy roadmap for governments to regulate, tax, and legitimize cryptocurrency while ensuring macroeconomic stability.

Social Impact:

Enhances financial literacy and consumer protection in digital investment, reducing the risks of fraud and speculative bubbles.

CONCLUSION

This study analyzed the comparative framework of digital cryptocurrency investment across the Big Four ASEAN countries—Indonesia, Malaysia, Singapore, and Thailand—through the lens of currency law, global economic regulation, and investor trust. The findings integrate qualitative insights from institutional interviews and quantitative validation using the Partial Least Squares (PLS-SEM) model.

Based on the results and discussion, the following conclusions can be drawn:

1. Legal clarity of currency law has a significant and direct impact on cryptocurrency investment. The clearer and more structured the legal framework, the greater the investors' confidence to participate in digital asset markets. Singapore serves as a strong example where comprehensive regulations under the Payment Services Act foster both innovation and market protection.
2. Global economic regulation exerts a significant influence on both investor trust and investment activity. Compliance with international standards such as FATF, OECD, and IMF recommendations enhances credibility and minimizes the risk of market manipulation, fraud, and money laundering.
3. Investor trust plays a limited mediating role, varying across ASEAN countries. In more regulated markets (e.g., Singapore, Malaysia), trust tends to be structurally supported by law. In contrast, in developing regulatory environments (e.g., Indonesia, Thailand), trust fluctuates depending on policy uncertainty and public understanding of crypto risk.
4. Indonesia's regulatory stance remains conservative, treating cryptocurrency as a tradeable commodity under BAPPEBTI supervision while prohibiting its use as a legal payment instrument. This fragmented regulatory approach weakens investor confidence and hinders optimal fiscal benefits from digital asset taxation.
5. An integrated "Triangle Policy" and the proposed LCTR (Legal Cryptocurrency and Tax Revenue) model are essential for harmonizing the legal, economic, and fiscal aspects of cryptocurrency governance. This integrated framework will:

- Promote investor protection and legal certainty,
- Strengthen macroeconomic stability,
- Enhance state revenue through transparent taxation, and
- Support sustainable digital financial innovation.

In conclusion, regulatory harmonization among ASEAN member states is crucial to create a unified and stable environment for cryptocurrency investment. The success of this integration will depend on policy coordination, international compliance, and continuous public education to ensure responsible digital asset adoption.

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