



# Navigating Digital Currency Regulation: Implications for International Collaboration Effectiveness “Evidence from the UAE”

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## Abstract

*This study examines how regulatory frameworks, market dynamics, and international collaboration effectiveness (ICE) are related in the context of digital currency regulation. Quantitative investigation revealed strong positive correlations between regulatory frameworks, market dynamics, and ICE, highlighting their importance in promoting efficient cross-border collaboration. The study also points out drawbacks such as the possible neglect of other significant elements and the dependence on quantitative methodologies. Future studies should investigate more factors and use mixed-method approaches to comprehend better the complexity of regulating digital currencies. The findings highlight the significance of legal frameworks and market factors in influencing international collaboration and fostering innovation. Policymakers are encouraged to adjust regulatory strategies to navigate the changing financial technology environment, promoting stability while supporting growth and advancement in the worldwide digital economy. This study provides valuable insights into the current debates surrounding regulating digital money and its impact on international cooperation.*

**Keywords:** *Financial Technology, Digital Currency Regulation, International Collaboration, Market Dynamics, Regulatory Frameworks.*

## Introduction

The United Arab Emirates (UAE) has become a significant player in the rapidly evolving financial technology (FinTech) landscape, with a solid commitment to using digital currencies to stimulate economic growth and promote financial inclusivity. Nevertheless, the worldwide nature of banking necessitates international collaboration and the establishment of standards to navigate the complexities of digital currency ecosystems. Effective collaboration between governments and regulatory bodies is necessary to tackle critical issues, such as ensuring interoperability and facilitating cross-border transactions (Arner et al., 2020; Fernández-Villaverde & Sanches, 2018). Attempts have been undertaken to address these problems by establishing cooperative initiatives and regulatory structures to enhance the FinTech landscape in the UAE. However, ongoing challenges hinder the advancement of global cooperation and the establishment of standardized digital money protocols. Addressing these challenges in the UAE context is of utmost importance, considering the country's aspirations to establish itself as a dominant force in the global FinTech sector. This drive is fueled by recognizing the financial industry's strategic significance to the nation's economy (Cong & Mayer, 2022).

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The UAE's persistent challenges with international collaboration and adherence to digital currency regulations stem from multiple factors. Regulatory frameworks provide market participants with clear and stable guidelines (Dow, 2019). The presence of technological infrastructure is necessary to enable seamless transactions and guarantee the protection of digital assets. Market characteristics, such as consumer behavior and investor sentiment, also influence the success of regulatory actions. Moreover, the UAE's capacity to tackle transnational issues and align regulatory approaches with worldwide standards is enhanced by multinational partnerships (Cunha et al., 2021).

The independent factors for this investigation encompass legal frameworks, technical infrastructure, market dynamics, and foreign alliances, which are built upon prior research. The justification for these factors stems from their significant impact on the regulatory framework and their crucial role in the UAE's FinTech sector. Incorporating a moderate variable, such as regulatory agility, can enhance the outcome by mitigating the impact of regulatory constraints on innovation and market adaptation (Ospina et al., 2021). Considering this, the objectives of this investigation are as follows:

- 1- To investigate the significant influence of regulatory frameworks on digital currency norms and international collaboration effectiveness.
- 2- To examine the significant role of technological infrastructure on digital currency norms and international collaboration effectiveness.
- 3- To examine the significant impact of market dynamics on digital currency norms and international collaboration effectiveness.
- 4- To investigate the influential role of international partnerships on digital currency norms and global collaboration effectiveness.
- 5- To examine the moderating role of regulatory agility on the relationship between regulatory frameworks on digital currency norms and international collaboration effectiveness.

## Conceptual Review

### *Overview of FinTech in the UAE*

The United Arab Emirates (UAE) has experienced a significant surge in FinTech innovation in recent years, driven by economic and technological factors. Zarrouk, El Ghak, and Bakhouché (2021) assert that the progress and expansion of FinTech enterprises in the UAE are influenced by economic stability, technological infrastructure, and regulatory frameworks. Al Suwaidi, Sidek, and Al-Shami (2022) emphasize the emergence of the FinTech ecosystem by presenting a theoretical structure of FinTech rules and regulations, underscoring the crucial significance of risk management for financial institutions in the UAE. Schilirò (2021) states that the UAE actively fosters FinTech innovation by establishing conducive settings that stimulate entrepreneurial initiatives and technological advancements in the financial sector.

The growing significance of digital currencies is crucial for developing the UAE's financial environment. Dow (2019) suggests that introducing digital currencies has sparked conversations regarding changing monetary systems and central bank strategies, indicating a significant move toward digitalization in financial transactions. The transition from conventional to digital currencies aligns with the worldwide pattern of central bank digital currencies (CBDCs), as elucidated by Cunha, Melo, and Sebastião (2021). Within this framework, the UAE's utilization of digital currencies signifies its commitment to technological advancement and underscores its strategic standing in the evolving realm of global finance. Integrating digital currencies is crucial for enhancing the efficiency, transparency, and inclusivity of the UAE's financial ecosystem, impacting the country's journey towards sustainable economic growth and development.

### ***International Digital Currency Regulation Cooperation and Standards***

International cooperation is critical in regulating digital currencies, enabling collaboration among states to meet the complex difficulties faced by these innovative financial products. According to He et al. (2017), the linked character of the global financial system needs collaborative efforts to build unified regulatory frameworks capable of successfully governing digital currencies across borders. Such collaboration is critical for reducing money laundering risks, terrorism funding, and other illegal actions enabled by digital currencies (Kakavand, Kost De Sevres & Chilton, 2017). Furthermore, international collaboration promotes information sharing and the exchange of best practices, allowing regulators to stay current on developing trends and technological improvements in the digital currency sector (Adrian & Mancini-Griffoli, 2021). International collaboration improves market integrity, investor protection, and global financial stability by promoting a uniform regulatory environment (Singer, 2017).

In parallel, regulatory norms play a critical role in promoting global financial stability in the face of the spread of digital currencies. Adrian and Mancini-Griffoli (2021) underline the significance of developing solid regulatory frameworks to ensure openness, accountability, and consumer trust in digital currency marketplaces. These standards provide clarity for market players by assuring compliance with anti-money laundering (AML) and know-your-customer (KYC) regulations to reduce financial crime risks (Arner et al., 2020). Furthermore, regulatory standards address market fragmentation and arbitrage issues by encouraging uniformity and coherence in digital currency regulation across countries (Tallberg & Zürn, 2019). Regulators can promote innovation while maintaining financial stability by establishing clear guidelines and standards, supporting the appropriate development and acceptance of digital currencies in the global financial system (Gabor & Brooks, 2020).

### ***Previous Research on Digital Currency Regulation Factors***

Previous research has extensively examined many factors that influence digital currency regulation. The determinants encompass technology infrastructure, market dynamics, international cooperation, and regulatory frameworks. The regulatory frameworks have a crucial impact on the governance of digital currencies, shaping the institutional and legal context in which they operate (Carapella & Flemming, 2020). Scholars emphasize the significance of adaptable policies that foster innovation and mitigate the possible risks associated with digital currencies (Engert & Fung, 2017). Furthermore, it is essential to highlight that efficient regulatory frameworks enhance financial stability, safeguard investor interests, and uphold market integrity (Mancini-Griffoli et al., 2018).

As a result, the regulation of digital currencies is strongly influenced by the technological infrastructure. Research highlights the interconnectedness between regulatory frameworks and technology progress, underscoring the importance of aligning regulatory strategies with the constantly evolving technical landscape (Janssen et al., 2020). In addition, adopting blockchain technology, which forms the basis for several digital currencies, poses unique challenges and opportunities for regulators (Kakavand et al., 2017). Academics highlight the significance of regulators encouraging innovation in digital currency transactions while ensuring the protection of security and efficiency (Truby, 2018).

Moreover, international relationships and market dynamics heavily influence the regulatory framework for digital currencies. Researchers (Chiu et al., 2023) emphasize that the critical elements of digital currency markets are their dynamism, quick innovation, market volatility, and global interconnection. To tackle issues that span across different countries and promote the alignment of regulations, it is necessary to have international cooperation and collaboration to create unified regulatory frameworks (Singer, 2017). Regulators can effectively navigate the complexities of regulating digital currency, foster innovation, and protect the integrity of financial systems by using international collaborations (Tallberg & Zürn, 2019).

### ***Persistent Issues with UAE Regulation of Digital Currency***

The current challenges in regulating digital currency in the UAE encompass diverse, intricate subjects. Initially, the obstacles to interoperability and facilitating cross-border transactions remain significant (Krimmer et al., 2021). Ensuring seamless compatibility between different digital currency systems is crucial for enhancing acceptance and enabling streamlined international transactions (Protopappas et al., 2020). The lack of defined protocols and regulatory frameworks impedes interoperability, leading to inefficiencies and increased transaction costs (Viñuela et al., 2020).

Furthermore, the effective regulation of digital currencies is impeded by the presence of complex regulatory obstacles and exploitable gaps (Cumming et al., 2019). The rapid expansion of digital currencies often surpasses the rate of legislative modifications, leading to ambiguity and legal complications (Bossu et al., 2020). Regulators face the challenge of finding a delicate equilibrium between fostering innovation, safeguarding against potential risks such as money laundering fraud, and ensuring consumer protection (Lee et al., 2021). Moreover, the absence of comprehensive legal frameworks could erode investor confidence and impede the expansion of the digital currency ecosystem (He, 2021).

Technological limitations now hinder the widespread adoption and regulation of digital currencies in the UAE (Sovbetov, 2018). Regulators and market actors have significant problems in terms of scalability, security, and privacy (Ilham et al., 2019). Moreover, regulators must possess specialized knowledge and expertise to effectively oversee and control emerging financial products, such as digital currencies, which heavily rely on intricate blockchain technology (Janssen et al., 2020). It is crucial to tackle these technological limitations to enhance the resilience and durability of digital currency systems in the UAE. This will promote greater financial inclusivity and encourage innovation (Auer et al., 2020).

### ***Regulatory Agility as a Moderating Variable***

Ongoing difficulties encountered with digital currency. Regulatory adaptability is crucial in shaping the framework of digital currency regulation. The regulatory agility conceptual framework emphasizes the dynamic and adaptive nature of regulatory processes, enabling authorities to effectively respond to evolving market conditions (Cumming et al., 2019). This framework comprises tools for expeditious policy modifications, accelerated decision-making processes, and proactive involvement with industry stakeholders to foster innovation while ensuring adherence to regulations (Bossu et al., 2020). By integrating regulatory flexibility into the governance of digital currencies, authorities may navigate the intricacies of the rapidly evolving fintech industry while upholding financial stability and safeguarding consumer interests (Lee et al., 2021).

Moreover, the significance of adapting to evolving market conditions quickly cannot be overstated. With the expansion of digital currency markets, it is crucial for regulatory frameworks to be flexible and able to accommodate emerging trends and technological improvements (Viñuela et al., 2020). Studies have shown that regulatory agility is crucial in reducing risks, improving market efficiency, and fostering investor trust in digital currency ecosystems (Krimmer et al., 2021). To foster sustained growth and advancement in the digital currency sector, regulators must maintain a harmonious equilibrium between promoting innovation and effectively managing risks (Protopappas et al., 2020).

Regulatory agility plays a crucial role in digital currency regulation by enabling adaptive governance structures to effectively address the challenges of changing market conditions (Al Najdawi et al., 2024; Alzoubi et al., 2025; Kurdi et al., 2025; Shwede, 2024a, 2024b; Shwede, Nour, et al., 2024; Shwede, Yas, et al., 2024; H. Yas et al., 2024; N. Yas et al., 2024).

By implementing a regulatory agility framework, regulators may effectively navigate the complexities of the fintech ecosystem while simultaneously promoting innovation, safeguarding financial stability,

and upholding consumer interests. To enhance our comprehension of regulatory agility and its impact on digital currency administration in a linked global economy, it is necessary to do additional research and foster collaboration.

### The Problem of the Study

The study seeks to understand **how regulatory frameworks and market dynamics influence the effectiveness of international collaboration** in the regulation of digital currencies, especially in light of the challenges posed by rapidly evolving financial technologies and the diversity of regulatory policies across countries.

Despite international efforts to regulate digital currencies, there remains **significant variation in national legislation**, which hinders global coordination and creates governance and enforcement gaps. Moreover, many previous studies have focused on isolated aspects of regulation or technology without integrating regulatory, economic, and international factors into a comprehensive framework.

Accordingly, the problem of the study can be formulated as follows:

**To what extent do regulatory frameworks and market dynamics influence the effectiveness of international collaboration in digital currency regulation?**

The study also seeks to address the following sub-questions:

- How do legal frameworks facilitate or hinder international cooperation in digital currency regulation?
- What role do market dynamics play in enhancing or undermining such cooperation?
- Is there a synergistic relationship between these factors that impacts the effectiveness of international regulation?

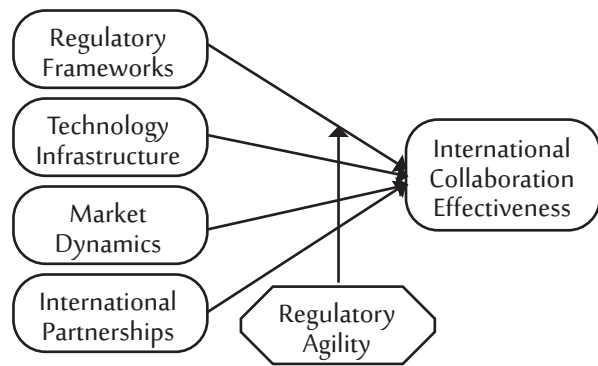
### Objectives of the Study

- **To analyze the relationship between regulatory frameworks and the effectiveness of international collaboration** in digital currency regulation.
- **To explore the impact of market dynamics** on countries' ability to cooperate in regulating digital assets.
- **To determine the interconnection between legal frameworks, market factors, and international collaboration effectiveness** in the context of financial technology.
- **To provide recommendations for policymakers** on how to develop regulatory frameworks that enhance stability and innovation in the global digital economy.

### Research Hypothesis

Based on the framework presented above, the research hypotheses in this investigation are given as:

- 1- Regulatory frameworks on digital currency norms significantly influence the effectiveness of international collaboration.
- 2- Technology infrastructure significantly influences digital currency norms and effectiveness in international collaboration.
- 3- A significant relationship exists between market dynamics on digital currency norms and international collaboration effectiveness.



**Fig 1: Research Frameworks**

- 4- International partnerships significantly impact digital currency norms and global collaboration effectiveness.
- 5- Regulatory agility significantly moderates the relationship between regulatory frameworks on digital currency norms and international collaboration effectiveness.

## Application of Institutional Theory to Digital Currency Regulation

Institutional theory offers a complete framework for comprehending the dynamics of regulating digital money in the broader context of institutional environments. Institutional theory primarily investigates the influence of both formal and informal institutions on organizational behavior and practices (Hinings et al., 2018). Within regulating digital currency, this theory explains how regulatory frameworks are shaped by institutional forces arising from government policies, industry standards, and social expectations (Janssen et al., 2020). Regulators can enhance their understanding of regulatory change and develop effective methods to manage complicated regulatory environments, promote innovation, and ensure stability by adopting an institutional approach (Van Zanten & Van Tulder, 2018).

Furthermore, utilizing institutional theory in digital currency regulation highlights the dynamic relationship between regulatory institutions, market participants, and technical progress. Academics contend that institutional forces substantially impact the creation and execution of regulatory frameworks that oversee digital currencies (Kakavand et al., 2017). This viewpoint emphasizes the significance of comprehending how institutional dynamics influence regulatory practices and results, thereby assisting policymakers in creating efficient and flexible regulatory responses to new difficulties (Cumming et al., 2019). By analyzing the interplay between institutional pressures, technological advancements, and market dynamics, regulators can pinpoint chances for regulatory reform and bolster the robustness and legitimacy of digital currency ecosystems (Kiff et al., 2020).

## Methodology

A survey research methodology where a predesigned questionnaire were distributed to the identified samples of individuals working financial sectors in the UAE. The sample consists of individuals who is working in the financial sector or whose business operations are centered on fintech or cryptocurrency. The items used in measuring the constructs were adapted from earlier investigations . Six items used in measuring the dependent variable, International Collaboration Effectiveness (ICE), were adapted from the studies of Cunha, Melo, and Sebastião (2021) and Schilirò (2021). Likewise, four items measuring regulatory framework were adapted from Engert and Fung (2017) and Mancini-Griffoli et al. (2018). Regulatory agility is measured by adapting four items from Bossu et al. (2020) and Cumming et al. (2019), and four items used in measuring Technology infrastructure were adapted from Arner et al. (2020) and Fernández-Villaverde and Sanches (2018). Market dynamics was measured using four items adapted from Carapella and Flemming (2020). Also, four items used in measuring international partnership (IP) were adapted from the studies of Chiu et al. (2023), Singer (2017), and Tallberg and Zürn (2019).

## Analysis Presentation

SEM analysis tools were used to analyze the collected data via administered questionnaires. Using this analysis tool, two assessment models were performed: measurement and structural model assessment (Benjamin, Rothweiler & Critchfield, 2006). Under the measurement model, we assess the construct, convergent and discriminant validities for the research model.

Before examining the relationship between the investigated factors using SEM, the construct, convergent and discriminant validity (Sarstedt, Ringle & Hair, 2021) must be assessed. Concerning the



construct validity, parameters such as item loadings, average variance explained (AVE) and composite reliability. As evidenced by the works of (Sarstedt, 2021), (Memon & Rahman, 2014) and (Purwanto, 2021), the AVE value should be greater than 0.5 and CR greater than 0.7. after two items (RA 3 and RA4) were deleted from the model because of lower item loadings.

Figure 2 and Table 1 show that the conditions for AVE and CR were met, with AVE greater than 0.5 and CR greater than 0.7. considering this, we conclude that the construct and convergent validity conditions were met.

Furthermore, we assess the discriminant validity using the Fornel Larcker criterion and Hetrotrait Monotrait correlations. The conditions for the Fornel Larcker Criterion is that the values on the diagonal axis must be greater than the subsequent values to the left on the same row or downwards on the same column. That is the other construct matrix. Insight into Table 2 reveals that this condition is met.

Meanwhile, Henseler, Ringle and Sarstedt (2015) opined that the Fornel Larcker Criterion is not a robust parameter in determining the model discriminant validity, thus suggesting the use of HTMT. The condition is that the correlation values should be less than 0.9 among constructs (Franke & Sarstedt, 2019). Table 3 shows that this condition is met in the sense that the construct correlations are less than 0.9.

Meanwhile, we examine the multicollinearity via VIF. According to Dormann et al. (2013), a model is considered free from collinearity if the VIF value is less than 5. As evidenced in Table 4, the Vif value is less than the proposed value of 5. Hence, it is concluded that the data is free from the multicollinearity issue that could inflate the model variance capable of causing Type I or Type II errors.

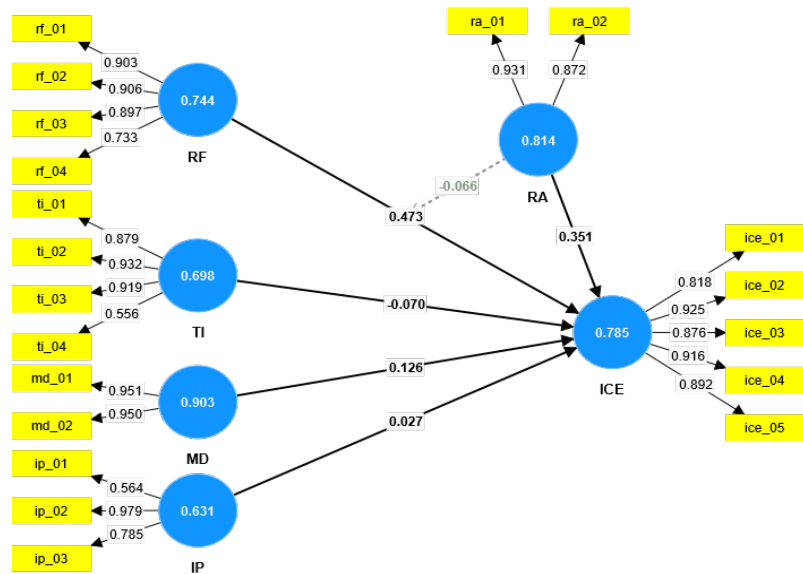


Figure 2. Assessing Measurement Model

Table 1: Measurement Model Assessment

Construct	Items	Item Loadings	CR	AVE	Discriminant Validity
ICE	Ice_01	0.818	0.934	0.785	YES
	Ice_02	0.925			
	Ice_03	0.876			
	Ice_04	0.916			
	Ice_05	0.892			
IP	ip_01	0.564	0.8	0.631	YES
	ip_02	0.979			
	ip_03	0.785			
MD	md_01	0.951	0.893	0.903	YES
	md_02	0.95			
RA	ra_01	0.931	0.824	0.814	YES
	ra_02	0.872			
RF	rf_01	0.903	0.899	0.744	YES
	rf_02	0.906			
	rf_03	0.897			
	rf_04	0.733			
TI	ti_01	0.879	0.892	0.698	YES
	ti_02	0.932			
	ti_03	0.919			
	ti_04	0.556			

Table 3: HTMT Correlations

	ICE	IP	MD	RA	RF	TI
IP	0.674					
MD	0.769	0.517				
RA	0.716	0.258	0.77			
RF	0.691	0.704	0.79	0.715		
TI	0.788	0.873	0.867	0.741	0.786	
RA x RF	0.484	0.193	0.242	0.251	0.488	0.277

Table 2: Fornel Larcker Criterion

	ICE	IP	MD	RA	RF	TI
ICE	0.849					
IP	0.607	0.87				
MD	0.702	0.816	0.868			
RA	0.656	0.853	0.69	0.877		
RF	0.84	0.629	0.711	0.65	0.864	
TI	0.728	0.802	0.801	0.684	0.722	0.922

Also, we examine the variance explained by the use of  $r^2$ . It is observed that international partnership (IP), market dynamics (MD), research agility, technological infrastructure (TI) and research framework (RF) explain 76.3% variance of international collaboration experience (ICE), that is,  $r^2 = 0.763$ . Likewise, based on Cohen's (1988) proposition for effect size, the effect size for RF shows the strongest and largest effect size, having 3.392, while others have a mild effect on ICE.

**Table 4: Variance, Effect Sizes and VIF**

	R-square	R-square adjusted	f <sup>2</sup>	VIF
ICE	0.772	0.763		
IP			0.065	2.933
MD			0.041	1.097
RA			0.08	2.168
RF			0.328	1.073
TI			0.077	3.932
RA x RF			0.048	1.308

## Analysis Findings

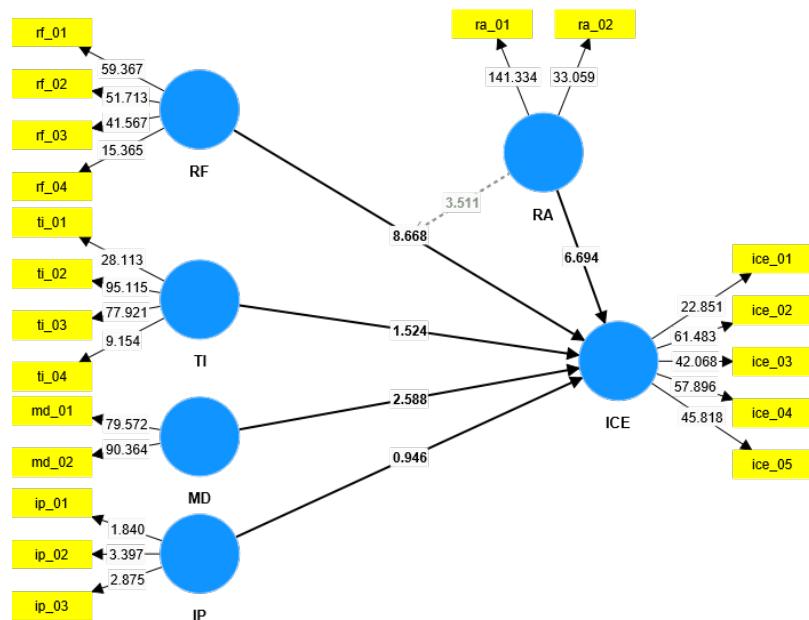
The result in Figure 3 and Table 5 presents a significant relationship between regulatory frameworks (RF), market dynamics (MD), and regulatory framework (RA) on international collaboration effectiveness (ICE) having (RF) ( $\beta = 0.473$ ,  $T = 8.668$ ),  $p < 0.05$ ; (MD) ( $\beta = 0.126$ ,  $T = 2.588$ ),  $p < 0.05$ ; (RA) having ( $\beta = 0.351$ ,  $T = 3.511$ ),  $p < 0.05$ . Given this,  $H_1$ ,  $H_3$  and  $H_5$  were accepted.

Contrarily, the findings failed to establish a significant relationship in the second ( $H_2$ ) and fourth ( $H_4$ ) hypotheses, that is, the relationship between technology infrastructure (TI) and ICE having ( $\beta = -0.07$ ,  $T = 0.127$ ),  $p > 0.05$  and ( $\beta = 0.027$ ,  $T = 0.344$ ),  $p > 0.05$ ; therefore, we failed to accept  $H_2$  and  $H_4$ .

## Discussion

Confirming hypotheses  $H_1$ ,  $H_3$ , and  $H_5$  highlights the crucial importance of regulatory frameworks in promoting successful international cooperation. These findings support previous research emphasizing the significance of evident and favorable regulatory frameworks in fostering international collaboration (Adrian & Mancini-Griffoli, 2021; Arner et al., 2020). The large positive coefficients ( $\beta$ ) and statistically significant T-values linked to RF, MD, and RA indicate that regulatory solid frameworks, adaptable market dynamics, and clearly stated regulations influence ICE. Policymakers and practitioners should focus on creating and enforcing rules and regulations that enhance openness, stability, and predictability in international collaborative efforts.

However,  $H_2$  and  $H_4$  rejection leads to intriguing inquiries about the influence of technological infrastructure (TI) on ICE. Although technological advancements are crucial in global interactions, this study found no significant relationships, indicating that having technological infrastructure alone may not improve collaboration effectiveness. Additional study is needed to investigate how technology impacts international collaboration dynamics, considering aspects like digital literacy, cybersecurity, and interoperability (Gabor & Brooks, 2020; Kakavand et al., 2017).



**Figure 3: Structural Model Assessment**

**Table 5: Hypothesis Testing**

Hypothesis	Relationship	$\beta$	STD	T stat	P values
$H_1$	RF $\rightarrow$ ICE	0.473	0.055	8.668	0
$H_2$	TI $\rightarrow$ ICE	-0.07	0.046	1.524	0.127
$H_3$	MD $\rightarrow$ ICE	0.126	0.049	2.588	0.01
$H_4$	IP $\rightarrow$ ICE	0.027	0.029	0.946	0.344
$H_5$	RA $\rightarrow$ ICE	0.351	0.052	6.694	0
$H_6$	RA x RF $\rightarrow$ ICE	-0.066	0.019	3.511	0



## Theoretical Implications

The research results on the connections among regulatory frameworks, market dynamics, and international collaboration effectiveness (ICE) can be analyzed using institutional theory, offering a thorough framework for comprehending digital currency regulation in more comprehensive institutional settings. Institutional forces such as government regulations, industry standards, and social expectations influence regulatory frameworks, allowing regulators to navigate intricate situations, promote innovation, and maintain stability. Regulators can develop effective and flexible responses to new challenges in digital currency ecosystems by understanding the relationship between regulatory institutions, market participants, and technological advancements, as discussed by Kakavand et al. (2017) and Kiff et al. (2020). Incorporating institutional theory into conversations about regulating digital currency provides theoretical knowledge that can guide practical approaches for effective regulatory oversight in the changing realm of financial technology.

## Practical Implications

The research emphasizes the importance of regulators adjusting their strategies for regulating digital currencies by considering the intricate relationship between regulatory frameworks, market dynamics, and international collaboration effectiveness (ICE) (Hinings et al., 2018). To effectively manage regulatory environments and foster innovation while preserving stability, a detailed understanding of institutional pressures such as government laws, industry standards, and social expectations is required (Van Zanten & Van Tulder, 2018). Regulators must actively interact with market actors and stay informed about technological changes to develop flexible and responsive regulatory measures (Kakavand et al., 2017). Incorporating institutional theory into regulatory methods helps regulators recognize chances for improvement and enhance the robustness and legitimacy of digital currency ecosystems (Kiff et al., 2020). This enables the creation of a flexible and robust regulatory structure appropriate for the changing environment of financial technology.

## Study's Limitations

The study's drawback is its narrow focus on certain variables like legislative frameworks, market dynamics, and technological infrastructure, which may lead to neglecting other aspects that could impact international collaboration effectiveness (ICE). Additional research should examine cultural characteristics, geopolitical dynamics, and organizational skills to grasp the intricacies at play better. The study's use of quantitative approaches may have restricted its capacity to acquire detailed qualitative insights about the regulatory environment. Future studies could utilize mixed-method approaches to cross-validate findings and provide deeper insights into the intricacies of digital currency governance. Longitudinal studies could monitor the development of regulatory frameworks over time and evaluate their influence on the effectiveness of international collaboration. Research efforts in this area would enhance our comprehension of the complex aspects of regulating digital currency and its impact on international collaboration.

## Conclusions

This study illuminates the intricacies of regulating digital currency and its influence on the efficacy of multinational collaboration. The text emphasizes the crucial functions of regulatory frameworks and market dynamics while recognizing certain constraints. Future studies should investigate more variables, utilize mixed-method approaches, and conduct longitudinal studies to gain a more profound understanding. By addressing these gaps, policymakers can create better policies to adapt to the changing financial technology landscape and support sustainable global growth.

## References

- Adrian, T., & Mancini-Griffoli, T. (2021). The rise of digital money. *Annual Review of Financial Economics*, 13, 57-77.
- Al Suwaidi, M. E. Y. M., Sidek, S. B., & Al-Shami, S. A. (2022). A conceptual framework of fintech laws and regulations on the risk management of financial institutions in UAE. *Mathematical Statistician and Engineering Applications*, 71 (3), 01-07.
- Arner, D. W., Buckley, R. P., Zetzsche, D. A., & Veidt, R. (2020). Sustainability, FinTech and financial inclusion. *European Business Organization Law Review*, 21, 7-35.
- Auer, R., Cornelli, G., & Frost, J. (2020). *Rise of the central bank digital currencies: drivers, approaches and technologies*. BIS Working Papers No. 880, Bank for International Settlements.
- Benjamin, L. S., Rothweiler, J. C., & Critchfield, K. L. (2006). The use of structural analysis of social behavior (SASB) as an assessment tool. *Annu. Rev. Clin. Psychol.*, 2, 83-109.
- Bossu, W., Itatani, M., Margulis, C., Rossi, A., Weenink, H., & Yoshinaga, A. (2020). *Legal aspects of central bank digital currency: Central bank and monetary law considerations*. IMF Working Papers.
- Chiu, J., Davoodalhosseini, S. M., Jiang, J., & Zhu, Y. (2023). Bank market power and central bank digital currency: Theory and quantitative assessment. *Journal of Political Economy*, 131 (5), 1213-1248.
- Cong, L. W., & Mayer, S. (2022). *The coming battle of digital currencies*. The SC Johnson College of Business Applied Economics and Policy Working Paper Series, (2022-04).
- Cumming, D., Meoli, M., & Vismara, S. (2019). Investors' choices between cash and voting rights: Evidence from dual-class equity crowdfunding. *Research Policy*, 48 (8), 103740.
- Cunha, P. R., Melo, P., & Sebastião, H. (2021). From bitcoin to central bank digital currencies: Making sense of the digital money revolution. *Future Internet*, 13 (7), 165.
- Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G. & Lautenbach, S. (2013). Collinearity: a review of methods to deal with it and a simulation study evaluating their performance. *Ecography*, 36 (1), 27-46.
- Dow, S. (2019). Monetary reform, central banks, and digital currencies. *International Journal of Political Economy*, 48 (2), 153-173.
- Engert, W., & Fung, B. S. C. (2017). *Central bank digital currency: Motivations and implications* (No. 2017-16). Bank of Canada Staff Discussion Paper.
- Fernández-Villaverde, J., & Sanches, D. R. (2018). *On the economics of digital currencies*. Federal Reserve Bank of Philadelphia, Working Paper Research Department (18-07), February.
- Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: A comparison of four procedures. *Internet Research*, 29 (3), 430-447.
- Gabor, D., & Brooks, S. (2020). The digital revolution in financial inclusion: international development in the fintech era. In: *Material Cultures of Financialisation* (pp. 69-82). Routledge.
- Hair Jr, J. F. (2020). Next-generation prediction metrics for composite-based PLS-SEM. *Industrial Management & Data Systems*, 121 (1), 5-11.
- He et al. (2017)
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43, 115-135.

- Ilham, R. N., Erlina, K. A. F., Silalahi, A. S., Saputra, J., & Albra, W. (2019). Investigation of the bitcoin effects on the country revenues via virtual tax transactions for purchasing management. *Int. J Sup. Chain. Mgt*, Vol, 8 (6), 737.
- Janssen, M., Brous, P., Estevez, E., Barbosa, L. S., & Janowski, T. (2020). Data governance: Organizing data for trustworthy Artificial Intelligence. *Government Information Quarterly*, 37 (3), 101493.
- Kakavand, H., Kost De Sevres, N., & Chilton, B. (2017). *The blockchain revolution: An analysis of regulation and technology related to distributed ledger technologies*. Available at SSRN 2849251.
- Kostoglou, D., Protopappas, I., & Giaouris, E. (2020). Common plant-derived terpenoids present increased anti-biofilm potential against Staphylococcus bacteria compared to a quaternary ammonium biocide. *Foods*, 9 (6), 697.
- Krimmer, R., Duenas-Cid, D., & Krivonosova, I. (2021). Debate: safeguarding democracy during pandemics. Social distancing, postal, or internet voting- the good, the bad or the ugly?. *Public Money & Management*, 41 (1), 8-10.
- Mancini-Griffoli, T., Peria, M. S. M., Agur, I., Ari, A., Kiff, J., Popescu, A., & Rochon, C. (2018). Casting light on central bank digital currency. *IMF Staff Discussion Note*, 8 (18), 1-39.
- Memon, A. H., & Rahman, I. A. (2014). SEM-PLS analysis of inhibiting factors of cost performance for large construction projects in Malaysia: perspective of clients and consultants. *The Scientific World Journal*, 2014.
- Purwanto, A. (2021). Partial least squares structural equation modeling (PLS-SEM) analysis for social and management research: A literature review. *Journal of Industrial Engineering & Management Research*. Vol. 2, No. 4, August
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In: *Handbook of Market Research*, (pp. 587-632). Cham: Springer International Publishing.
- Schilirò, D. (2021). Digital transformation, COVID-19, and the future of work. [MPRA Paper 108817](#), University Library of Munich, Germany.
- Singer, P. (2017). Famine, affluence, and morality. In: *Applied Ethics*, (pp. 132-142). Routledge.
- Sovbetov, Y. (2018). Factors influencing cryptocurrency prices: Evidence from bitcoin, ethereum, dash, bitcoin, and monero. *Journal of Economics and Financial Analysis*, 2 (2), 1-27.
- Tallberg, J., & Zürn, M. (2019). The legitimacy and legitimation of international organizations: Introduction and framework. *The Review of International Organizations*, 14, 581-606.
- Truby, J. (2018). Decarbonizing Bitcoin: Law and policy choices for reducing the energy consumption of Blockchain technologies and digital currencies. *Energy research & social science*, 44, 399-410.
- Viñuela, A., Varshney, A., van de Bunt, M., Prasad, R. B., Asplund, O., Bennett, A., & McCarthy, M. I. (2020). Genetic variant effects on gene expression in human pancreatic islets and their implications for T2D. *Nature communications*, 11 (1), 4912.
- Zarrouk, H., El Ghak, T., & Bakhouche, A. (2021). Exploring economic and technological determinants of FinTech startups' success and growth in the United Arab Emirates. *Journal of Open Innovation: Technology, Market, and Complexity*, 7 (1), 50.

- Al Najdawi, M. H., Shwede, F., Mokhtar Abdelmoghies, M., Kitana, A., & Ali, A. (2024). Applying artificial intelligence in predicting educational excellence in higher education institutions: A case study in Jordanian universities. *Edelweiss Applied Science and Technology*, 8 (6), 7273–7289. <https://doi.org/10.55214/25768484.v8i6.3579>
- Alzoubi, H. M., Tan, C. L., El Khatib, M., Alshurideh, M. T., Shwede, F., Yanamandra, R., & Lee, K. L. (2025). Smart Government Initiatives: Transforming Global Supply Chains through Digital Change. *International Review of Management and Marketing*, 15 (3), 209–217. <https://doi.org/https://doi.org/10.32479/irmm.18962>
- Kurdi, B. Al, Alzoubi, H. M., Tan, C. L., El Khatib, M., Yanamandra, R., Ozturk, I., & Shwede, F. (2025). Internet of Things-Driven Information Sharing: A Strategic Approach to Mitigating Supply Chain Risks. *International Review of Management and Marketing*, 15 (3), 325-332. <https://doi.org/https://doi.org/10.32479/irmm.19474>
- Shwede, F. (2024a). Designing Delight: Exploring the Nexus of Interactive Design, User Experience, and Psychological Theory in Banking Chatbot. *Nanotechnology Perceptions*, 20 (S4), 378-398. <https://doi.org/https://doi.org/10.62441/nano-ntp.vi.650>
- Shwede, F. (2024b). The Integration of Artificial Intelligence (AI) Into Decision Support Systems Within Higher Education Institutions. *Nanotechnology Perceptions*, 20 (S5), 331-357. <https://doi.org/https://doi.org/10.62441/nano-ntp.v20iS5.26>
- Shwede, F., Nour, M. A., & Akour, I. (2024). Optimizing augmented reality adaption in higher education: A comprehensive analysis of factors impacting data management efficiency. *Journal of Infrastructure, Policy and Development*, 8 (9), 6232. <https://doi.org/https://doi.org/10.24294/jipd.v8i9.6232>
- Shwede, F., Yas, N., Abdijabar, Z., Flayyih, N., Fadli, A., Yas, H., & Allouzi, A. S. (2024). The impact of intellectual property rights and the level of information sensitivity on information security in the United Arab Emirates. *Journal of Infrastructure, Policy and Development*, 8 (8), 6303. <https://doi.org/https://doi.org/10.24294/jipd.v8i8.6303>
- Yas, H., Dafri, W., Sarhan, M. I., Albayati, Y., & Shwede, F. (2024). Universities faculty's perception of e-learning tools: Filling the gaps for enhanced effectiveness. In: *Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom* (pp. 573-588). [https://link.springer.com/chapter/10.1007/978-3-031-52280-2\\_36](https://link.springer.com/chapter/10.1007/978-3-031-52280-2_36)
- Yas, N., Dafri, W., Yas, H., & Shwede, F. (2024). Effect of e-Learning on servicing education in Dubai. In: *Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom*, (pp.623-639). [https://link.springer.com/chapter/10.1007/978-3-031-52280-2\\_40](https://link.springer.com/chapter/10.1007/978-3-031-52280-2_40)