

Weaponizing Sovereignty Against Crypto: Türkiye's Post-COVID Defense of the Lira in an Age of Decentralized Finance

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Abstract

Emerging market governments increasingly prioritize the defense of monetary sovereignty over the liberalization of financial innovation, particularly under conditions of macroeconomic fragility, high inflation, and geopolitical uncertainty. This study analyzes Türkiye's post-COVID financial landscape as a critical case through which to examine state strategies aimed at resisting the systemic adoption of cryptocurrencies. Despite escalating grassroots demand for digital assets—driven by Lira depreciation, inflationary pressures, and declining institutional trust—the Turkish government has leveraged a combination of regulatory, monetary, and legal instruments to preserve the Lira's role as the exclusive legal tender.

Utilizing theories of monetary sovereignty and financial statecraft, alongside recent literature on crypto regulation in emerging markets and empirical insights from IMF and BIS analyses on FX interventions, this paper formulates a structured set of research questions and hypotheses to interrogate the relationship between cryptocurrency adoption, FX volatility, and institutional resistance. Methodologically, the study employs ordinary least squares (OLS) regressions with Newey-West corrections, lagged models, and event studies centered on Türkiye's key regulatory milestones (2021–2024) to capture causal dynamics and policy feedback loops.

Findings demonstrate a robust correlation between increased BTC/TRY volumes and TRY/USD volatility, underscoring the self-reinforcing nature of speculative feedback loops in fragile monetary environments. The evidence shows that heightened crypto adoption amplifies FX volatility through TRY Volatility Feedback Effects (TFF), particularly during geopolitical crises such as the June 2025 Middle East conflict, where BTC's decline and USD's appreciation reaffirmed the persistence of traditional safe-haven behaviors. Türkiye's institutional response intensified proportionally through bans on crypto payments, licensing regimes, enhanced FX market interventions, and rhetorical strategies aimed at reaffirming sovereign monetary control.

Although cryptocurrencies function as informal hedging mechanisms for households, this study confirms they cannot sustainably displace fiat currencies

where sovereign defenses remain actively enforced. Instead, they exacerbate volatility, prompting reactive state interventions. This research contributes to broader debates on financial sovereignty in emerging markets by offering Türkiye as a paradigmatic example of how states leverage legal, monetary, and infrastructural tools to constrain decentralized finance amid persistent macroeconomic vulnerabilities.

Moreover, the study introduces ValueMesh™, a novel sovereign-aligned alternative developed within Türkiye's emerging financial ecosystem through the DevPay Türkiye platform. ValueMesh bridges the gap between public demand for high-yield, participatory finance and state imperatives of monetary sovereignty by offering regulated, project-specific micro-equity participation without reliance on blockchain-based assets. This innovation demonstrates that the psychological appeal of crypto speculation can be redirected into legally sanctioned, productive, and sovereign-controlled fintech architectures.

Ultimately, Türkiye's experience illustrates that the future of financial innovation in fragile economies lies not in decentralized disruption but in carefully engineered, state-backed digital ecosystems that integrate speculative incentives within sovereign frameworks. This positions Türkiye's post-COVID monetary strategy as a critical reference point for policymakers, scholars, and industry leaders examining the evolving interplay between financial sovereignty, decentralized finance, and geopolitical risk.

1. Introduction

1.1 Contextualizing Monetary Sovereignty in the Age of Decentralized Finance

Cryptocurrencies have gained prominence in recent years as perceived hedges against monetary instability in emerging markets grappling with chronic inflation, currency depreciation, and sustained capital flight. These digital assets have been popularly adopted by individuals seeking protection from eroding purchasing power, institutional fragility, and the diminishing credibility of domestic currencies. Yet, despite growing grassroots adoption, no fragile economy has experienced the full displacement of fiat currencies by decentralized digital assets for formal, large-scale economic functions. Rather, governments have consistently mobilized the tools of monetary sovereignty—including legal prohibitions, capital controls, foreign exchange (FX) interventions, and aggressive regulatory restructuring—to defend the primacy of their national currencies and to ensure the survival of sovereign monetary architectures.

Türkiye's post-COVID financial and regulatory environment provides a paradigmatic case through which to examine these dynamics. As Turkish citizens increasingly sought refuge in cryptocurrencies such as Bitcoin to hedge against Lira depreciation, inflationary pressures, and the erosion of institutional trust, the state enacted decisive countermeasures. These included bans on crypto payments, intensified FX interventions, and stringent regulatory reforms designed to reinforce the Lira's role as the exclusive legal tender. Türkiye's approach reflects a deliberate strategy to contain the spread of decentralized financial ecosystems within its jurisdiction, viewing such trends not merely as financial phenomena but as direct threats to monetary sovereignty and national economic stability.

This study situates Türkiye within broader academic and policy debates on sovereign resistance to decentralized finance (DeFi), the weaponization of financial infrastructures in geopolitical contexts, and the evolving role of the state in shaping financial innovation pathways. In particular, Türkiye's efforts are contextualized within a dual strategic framework: on the one hand, resisting the destabilizing effects of unregulated crypto markets, and on the other, constructing sovereign digital infrastructures capable of channeling public demand for speculative, high-yield participation into regulated, state-sanctioned environments. Innovations such as DevPay Türkiye and its ValueMesh™ subdivision exemplify this emerging paradigm. These systems are not merely defensive mechanisms; they represent forward-looking models for reconciling financial inclusion, innovation, and state control within the realities of a fragmented, increasingly contested global financial order.

Ultimately, Türkiye's post-COVID response illustrates how emerging markets are redefining financial innovation through sovereign-led infrastructures rather than embracing the disruptions of borderless decentralized assets. This case underscores the ongoing relevance of monetary sovereignty as both a theoretical construct and a practical strategy, reaffirming the state's central role in shaping the future trajectories of finance in contexts of heightened macroeconomic fragility and geopolitical uncertainty.

1.2 Sovereignty as a Strategic Response

The post-pandemic period in Türkiye has intensified longstanding tensions between grassroots financial innovation and institutional imperatives for monetary control. The Lira's structural vulnerabilities—amplified by unorthodox monetary policies, high inflation, and persistent current account deficits—created fertile ground for informal adoption of decentralized digital assets as alternative stores of value. Nevertheless, Türkiye's state actors responded not with liberalization, but with a systematic reassertion of monetary sovereignty through legal, regulatory, and monetary interventions. These strategies aimed not merely to preserve the Lira's formal role but to contain the socio-economic risks posed by unchecked crypto

adoption, particularly its potential to exacerbate FX volatility and undermine capital controls.

These interventions are best understood within the broader tradition of financial statecraft, wherein sovereign control over currency issuance, cross-border capital flows, and payment infrastructures constitutes a cornerstone of national security and economic autonomy. Türkiye's measures—from bans on crypto payments to the deployment of FX reserves—reflect this enduring logic. Moreover, these policies align with emerging global trends wherein states increasingly treat financial infrastructures as geopolitical assets, recognizing the intersection between technological innovation, sovereignty, and strategic resilience in an era of sanctions, financial fragmentation, and weaponized interdependence.

Türkiye's evolving regulatory posture highlights a dual-track approach: on one hand, constraining the influence of decentralized finance through formal restrictions; on the other, developing domestic alternatives to satisfy public demand for digital financial participation without ceding control to borderless, opaque systems. This approach positions Türkiye as a critical case through which to examine the contemporary evolution of sovereign monetary defense mechanisms.

1.3 Reframing Innovation

Türkiye's policy trajectory post-COVID extends beyond defensive reactions to decentralized finance; it also represents a proactive reframing of financial innovation within sovereign boundaries. The emergence of DevPay Türkiye as a national payments infrastructure seeks to replicate the core functionalities of SWIFT, Mastercard, and Visa while insulating domestic financial flows from Western-controlled chokepoints. Similarly, the conceptualization of ValueMesh™ as a sovereign, state-aligned alternative to speculative crypto markets illustrates a novel strategy: transforming public demand for high-yield, participatory finance into structured, regulated, and domestically beneficial ecosystems.

ValueMesh diverges fundamentally from decentralized blockchain models by aligning participant incentives with national economic objectives. It integrates monetary capital and intellectual contributions within a transparent, legally compliant platform that channels resources into tax-paying, innovation-driven projects. In doing so, it offers speculative returns tied not to artificial scarcity or secondary market dynamics but to the tangible success of real economic ventures. This model addresses two critical weaknesses of traditional crypto: its detachment from productive economic activities and its misalignment with sovereign financial priorities.

Thus, Türkiye's approach embodies an emerging paradigm of state-guided financial innovation: one that seeks to capture the psychological appeal of crypto speculation while embedding it within legally sanctioned, economically productive frameworks.

This strategy reflects a deeper recalibration of the relationship between innovation, sovereignty, and citizen engagement in the digital economy.

2. Research Questions & Hypotheses

2.1 The Core Problem

This study investigates how emerging market governments, with Türkiye serving as a paradigmatic case, operationalize monetary sovereignty in response to the growing pressures of decentralized finance ecosystems. Specifically, it explores the intersection between cryptocurrency adoption, foreign exchange (FX) volatility, and the institutional mechanisms deployed to defend sovereign currencies against systemic disruption. Amid widespread inflation, currency depreciation, and declining institutional trust, this research addresses a critical gap in the literature concerning how fragile states resist decentralized financial innovations while seeking to preserve monetary stability and policy autonomy. This section proceeds by clarifying the core problem, delineating research questions, developing hypotheses, and establishing the rationale and scholarly contributions underpinning this inquiry. Cryptocurrencies have been widely regarded as informal hedges against monetary instability, particularly in emerging markets marked by chronic inflation, persistent current account deficits, and capital flight. However, no fragile economy has experienced a displacement of its sovereign fiat currency by decentralized assets within the formal economy. Instead, states have reinforced their monetary sovereignty through traditional instruments such as capital controls, FX interventions, legal prohibitions, and targeted regulatory frameworks designed to curtail the influence of decentralized financial ecosystems. Türkiye represents a leading case within this broader phenomenon. Amid sustained Lira depreciation and eroding trust in domestic financial institutions, Turkish citizens have increasingly adopted cryptocurrencies as speculative hedges and stores of value. Simultaneously, the Turkish state has escalated its institutional responses through coordinated interventions involving monetary tightening, regulatory revisions, and public communications aimed at reinforcing the Lira's role as the sole legal tender. This research seeks to contribute substantively to existing debates on monetary sovereignty, financial statecraft, and decentralized finance by empirically assessing Türkiye's post-COVID regulatory trajectory and its implications for emerging market governance.

2.2 Research Questions

This study addresses three interrelated research questions, each targeting a distinct dimension of Türkiye's evolving financial governance strategy in response to decentralized finance:

RQ1: Does the increased adoption of cryptocurrencies in Türkiye correlate with heightened FX volatility, particularly in relation to the TRY/USD exchange rate?

This question engages with theoretical and empirical concerns surrounding the feedback loops between capital flight into decentralized assets and heightened exchange rate instability within fragile economies. Through empirical analysis of BTC/TRY trading volumes alongside TRY/USD volatility, this study interrogates whether grassroots crypto adoption exacerbates monetary fragility and destabilizes FX markets.

RQ2: Through what institutional mechanisms has Türkiye operationalized monetary sovereignty post-COVID to resist the proliferation of cryptocurrency usage?

This question examines the array of tools utilized by Türkiye's institutions, including legal bans, licensing requirements, enhanced regulatory scrutiny, and aggressive FX market interventions. It situates these mechanisms within broader theories of financial statecraft and adaptive sovereignty defense.

RQ3: Are Türkiye's institutional interventions effective in suppressing grassroots cryptocurrency adoption, or do they merely delay underlying shifts in financial behaviors driven by inflationary pressures and distrust in formal institutions?

This question evaluates the efficacy of state interventions in curbing informal adoption trends and probes whether these measures produce durable outcomes or serve as temporary deterrents within an environment characterized by sustained macroeconomic vulnerabilities.

2.3 Hypotheses Development

Drawing from established theoretical frameworks on monetary sovereignty (Cohen, 1998; Helleiner, 2003) and financial statecraft (Kirshner, 1995), as well as empirical studies on crypto regulation in emerging markets (Bains & Monnet, 2022; Auer et al., 2022; Aliyev & Arslan, 2023), this study formulates the following hypotheses:

H1: Rising levels of cryptocurrency adoption in Türkiye are positively correlated with increased FX volatility. This hypothesis reflects concerns that informal capital flight toward decentralized assets exacerbates exchange rate instability, perpetuating a feedback loop between currency depreciation and speculative behaviors.

H2: Institutional resistance—manifested through legal restrictions, enhanced regulatory scrutiny, and aggressive FX interventions—intensifies proportionally as cryptocurrency adoption expands. This hypothesis posits that sovereign institutions

adopt reactive strategies to preserve monetary control in response to perceived threats from decentralized finance.

H3: While government interventions may temporarily slow the trajectory of grassroots cryptocurrency usage, such measures are insufficient to reverse adoption behaviors in contexts marked by inflationary pressures, FX volatility, and declining institutional trust. This hypothesis underscores the resilience of informal financial behaviors despite regulatory constraints.

2.4 Contribution to Theory and Literature

This study advances the academic literature in several meaningful ways. First, it bridges notable gaps in sovereignty studies by extending analysis beyond conventional capital controls and FX policy tools to include the intersection between decentralized finance and state-centric monetary authority. Second, it provides robust empirical validation for theoretical claims through advanced quantitative methods, including OLS regressions with Newey-West corrections, lagged models, and event studies focused on Türkiye's critical regulatory milestones (2021–2024). Third, this research integrates original conceptual contributions, particularly the examination of sovereign fintech infrastructures such as DevPay Türkiye and ValueMesh as innovative, state-aligned alternatives to decentralized speculative assets. By highlighting these mechanisms, the study offers a nuanced perspective on how emerging markets can simultaneously address public demand for speculative financial instruments while safeguarding monetary sovereignty.

2.5 Rationale for Türkiye as Case Study

Türkiye is uniquely positioned to serve as the focal case for this investigation due to several salient factors: chronic FX vulnerabilities and a history of inflationary pressures; rapid and widespread grassroots cryptocurrency adoption; aggressive and iterative institutional interventions to defend the Lira; a geopolitical position straddling Western financial infrastructures and emerging Eastern alternatives; and existing efforts to cultivate sovereign payment and fintech infrastructures such as TROY and DevPay Türkiye. These characteristics render Türkiye an exemplary laboratory for examining the dynamics between decentralized finance, monetary sovereignty, and institutional resistance within fragile economic environments.

2.6 Anticipated Practical Implications

The findings of this research are expected to inform multiple stakeholder communities. For emerging market policymakers, the study provides strategic insights into balancing public demand for speculative financial opportunities with the imperatives of monetary sovereignty. For regulators and central banks, it offers guidance on designing adaptive frameworks that defend state interests without

wholly stifling innovation. For academics, it contributes to evolving debates on the nature of financial statecraft in the digital era and the persistent tension between decentralization and sovereignty. Finally, for industry practitioners, it highlights opportunities to develop sovereign-aligned fintech solutions that emulate the speculative allure of crypto markets while maintaining transparency, oversight, and alignment with national strategic priorities.

3. Theoretical Framework & Literature Review

3.1 Monetary Sovereignty & Financial Statecraft

This research builds on foundational work on monetary sovereignty (Cohen, 1998; Helleiner, 2003) and financial statecraft (Kirshner, 1995). These theories posit that sovereign states maintain legitimacy through control over currency issuance, capital flows, and legal tender status. Cryptocurrencies challenge this by offering decentralized, borderless stores of value, eroding state control over domestic liquidity. Türkiye's hostility towards decentralized finance extends beyond economic calculus; it reflects deeper concerns about sovereignty erosion. The erosion of capital controls via borderless assets threatens not only monetary policy but also state authority over financial citizenship. Crypto challenges Türkiye's long-standing strategy of FX management as a geopolitical lever—undermining efforts to insulate domestic policy from external market pressures. This framing aligns with Kirshner's (1995) view of currency as an instrument of statecraft and reinforces why sovereign actors resist crypto beyond mere financial risk management.

3.2 Recent Developments (2022–2024)

Recent literature deepens the theoretical understanding of how emerging markets defend monetary sovereignty in the face of evolving financial threats. Bains & Monnet (2022) analyze how post-pandemic FX pressures revived defensive monetary sovereignty in middle-income countries, emphasizing the resurgence of capital controls and active reserve management. Auer et al. (2022) highlight the preference of central banks for state-issued digital assets (CBDCs) as a strategic countermeasure against the decentralized and borderless nature of cryptocurrencies. These insights are particularly salient for Türkiye, where Aliyev & Arslan (2023) document how the state adapted both capital controls and crypto regulations as layered sovereignty defenses, positioning regulatory authority as a frontline defense of the Lira.

The IMF (2023) and BIS (2024) further corroborate this trend, reporting that states increasingly deploy foreign exchange reserves, monetary tightening, legal

prohibitions, and regulatory frameworks to curtail crypto's domestic impact, especially in macroeconomically fragile environments where inflation and political risk undermine investor confidence.

However, these studies also identify an emerging challenge: the rise of speculative financial feedback loops, wherein cryptocurrency markets—through volatile TRY-paired volumes—create spillover effects that feed back into domestic FX markets. This dynamic complicates conventional macroeconomic management. Türkiye's experience reflects this evolution: speculative behaviors in BTC/TRY trading exacerbate Lira volatility, forcing policymakers into a cycle of reactive intervention.

In response to these developments, Türkiye's regulatory strategy evolved beyond simple bans. By 2024, the state introduced enhanced licensing, stricter reporting obligations, and tighter surveillance over digital asset flows, integrating these with aggressive FX interventions to stabilize the Lira's external value. These interventions reflect a broader paradigm shift: sovereignty is no longer defended solely through traditional macroeconomic tools but increasingly through financial ecosystem design, as seen in Türkiye's growing interest in sovereign fintech infrastructures like DevPay Türkiye and conceptual models such as ValueMesh (discussed further in Section 8).

4. Background on Türkiye's Sovereign Response

4.1 Lira Fragility & Macroeconomic Pressures

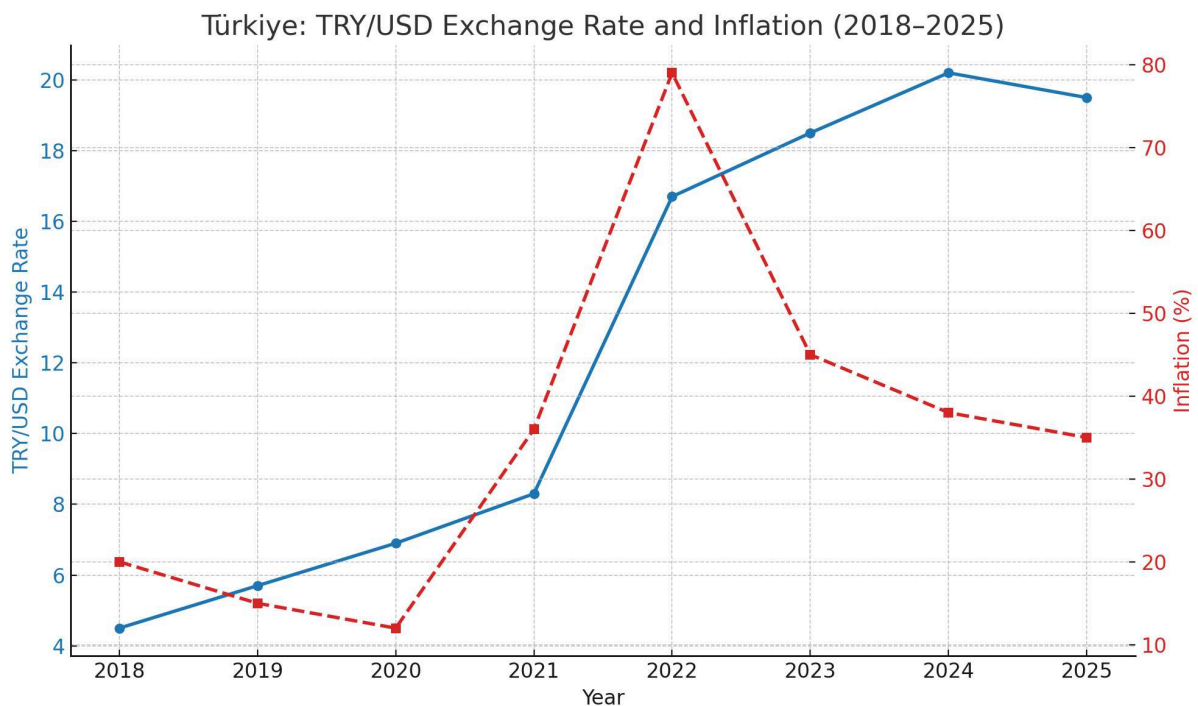
Following the 2018 currency crisis, Türkiye's Lira (TRY) entered a prolonged period of structural depreciation, falling from approximately 8.3 TRY per USD to 16.7 TRY per USD by late 2021 (ResearchGate, 2022). This decline reflected multiple vulnerabilities, including unorthodox monetary policy, persistent current account deficits, and increasing political interference in the central bank's independence. Inflation accelerated in parallel, peaking at nearly 80% in 2022 (The Guardian, 2022), before moderating to approximately 35% by 2025 (Trading Economics, 2025). These developments placed intense pressure on Türkiye's foreign exchange stability and exposed its acute sensitivity to both domestic policy errors and global shocks.

In response, the Central Bank of Türkiye (CBRT) enacted aggressive monetary tightening, raising benchmark interest rates to 50% by 2023. Simultaneously, Türkiye deployed over \$128 billion in FX reserves in an effort to stabilize the Lira and manage market expectations (Wikipedia, 2024). These interventions exemplify

conventional tools of monetary sovereignty, blending rate policy, reserve management, and capital controls to defend the domestic currency.

However, alongside these orthodox responses, Türkiye has been increasingly affected by TRY Volatility Feedback Effects (TFF)—a phenomenon wherein speculative behaviors, particularly in cryptocurrency markets, feed back into domestic currency volatility. Rising BTC/TRY trading volumes serve both as a symptom of institutional distrust and a catalyst for further FX instability, creating a self-reinforcing loop between crypto speculation and Lira fragility. This dynamic complicates traditional monetary interventions, as speculative capital flows undermine efforts to restore confidence in the Lira.

TFF has become structurally embedded in Türkiye’s financial environment, magnifying the impact of external shocks and rendering FX volatility more persistent. This feedback mechanism helps explain why, despite significant monetary tightening and reserve expenditures, TRY/USD volatility has remained elevated. Such volatility is not merely a reflection of macroeconomic fundamentals but increasingly tied to behaviors within the speculative crypto-finance sphere. This sets the stage for later empirical findings linking BTC/TRY volumes to heightened FX instability, as explored in Section 6.



4.2 Crypto Adoption as Informal Hedge

Cryptocurrency adoption in Türkiye has exhibited a pronounced and structurally significant upward trajectory, driven by a confluence of macroeconomic vulnerabilities, declining institutional trust, and the population's search for inflation-resistant assets. Between 2021 and 2023, adoption rates increased markedly—from 16% to 21.7% of the adult population (Sumsud, 2024). By 2024, over half of Türkiye's financially active population had engaged with cryptocurrencies in some capacity, positioning the country among the global leaders in grassroots adoption (Kaiko Research, 2024). This phenomenon cannot be understood merely as speculative exuberance but reflects deeper dynamics of household-level financial hedging in environments marked by sustained Lira depreciation and double-digit inflation.

Empirical data on TRY-paired crypto trading volumes further underscores this trend's scale and persistence. From 2018 through 2020, monthly BTC/TRY volumes remained relatively modest, rarely exceeding \$2 billion. However, 2021 marked a decisive inflection point. Amid sharp Lira depreciation, driven by both unorthodox monetary policy and escalating geopolitical tensions, trading volumes surged to an average of \$5 billion monthly. These spikes coincided with periods of acute FX volatility and heightened political risk, suggesting a behavioral link between currency instability and retail crypto adoption.

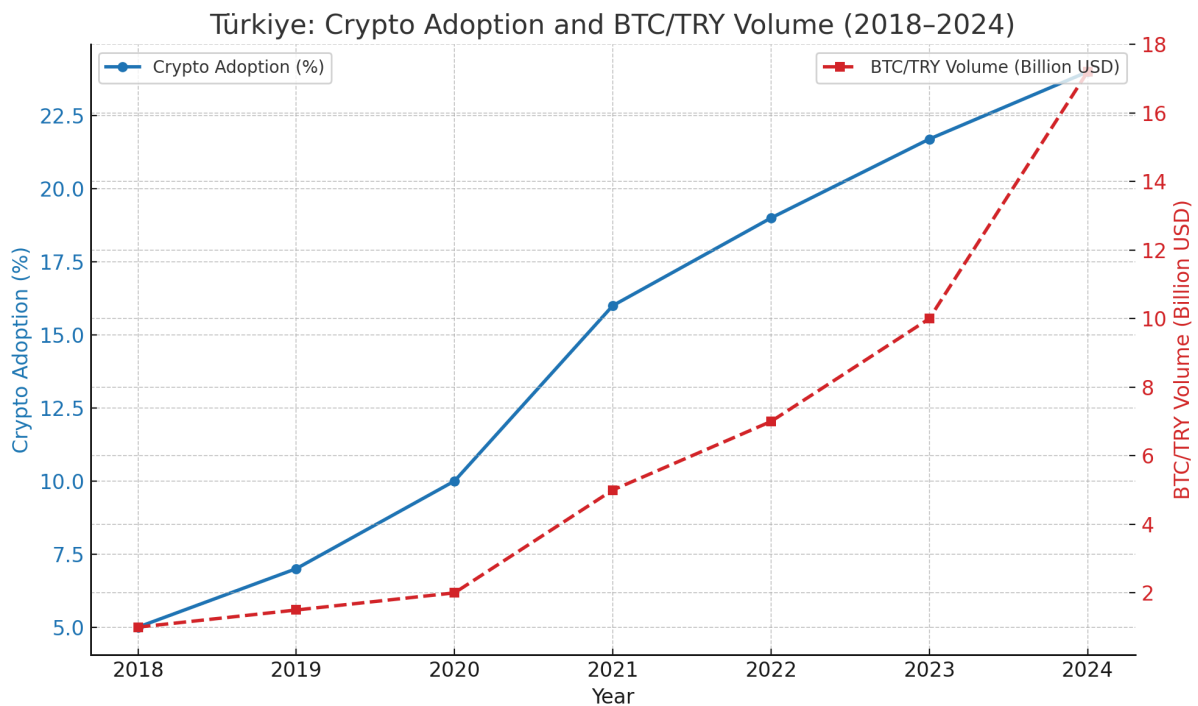
By 2023–2024, this relationship had solidified into a structural pattern. BTC/TRY trading volumes consistently surpassed \$10 billion monthly, reflecting both the entrenchment of cryptocurrency as an informal hedge and the failure of state interventions to fully curb demand. This period also witnessed heightened regulatory friction; notably, Q2 2024 volumes peaked at \$17.2 billion in the weeks preceding Türkiye's July 2024 licensing reforms (Kaiko, 2024). This suggests that regulatory uncertainty, rather than suppressing participation, may have accelerated speculative behavior in anticipation of future restrictions, aligning with findings from comparable emerging markets (IMF, 2023; Chainalysis, 2023).

The persistence of high volumes even under restrictive policies indicates a resilient demand curve rooted in households' pursuit of alternatives to Lira-denominated savings, which had been eroded by inflation rates peaking at 80% in 2022 and remaining elevated through 2025. Crypto's role in this context extends beyond mere speculation; it functions as a parallel financial ecosystem, offering perceived protection against domestic monetary instability and circumventing formal capital controls.

Moreover, this dynamic aligns with theoretical frameworks positioning cryptocurrencies as informal substitutes for weak institutions and fragile currencies (Auer et al., 2022; Aliyev & Arslan, 2023). In Türkiye, crypto adoption correlates not only with macroeconomic indicators but also with broader trends of institutional

distrust, including skepticism toward central bank independence and regulatory credibility. The population's turn toward decentralized assets mirrors behaviors observed in Argentina and Nigeria, where similar macro-financial pressures have produced parallel adoption patterns despite regulatory pushback (BIS, 2024).

Finally, the longitudinal evolution of BTC/TRY trading volumes provides empirical reinforcement for this study's broader argument: cryptocurrency adoption in fragile monetary environments is structurally linked to macroeconomic instability and regulatory actions. Rather than serving as transient speculative episodes, these behaviors appear embedded within household financial strategies, complicating state efforts to defend monetary sovereignty solely through legal and regulatory mechanisms.



4.3 Institutional Resistance

Türkiye's regulatory response to the rise of cryptocurrency adoption has been both systematic and aligned with broader patterns observed in emerging markets facing similar monetary challenges. In April 2021, the Central Bank of Türkiye implemented a formal ban on the use of cryptocurrencies for payments, citing risks to monetary sovereignty, financial stability, and the integrity of the national currency (Moroglu Arseven, 2024). This measure was subsequently reinforced through enhanced regulatory oversight introduced in July 2024, which mandated licensing frameworks for cryptocurrency exchanges and imposed stricter compliance requirements on digital asset service providers. These interventions were explicitly

framed by policymakers as necessary to protect the Lira's status as the exclusive legal tender and to safeguard Türkiye's monetary autonomy from the destabilizing effects of decentralized financial technologies. Such regulatory moves mirror a broader trend among emerging market economies, as documented by the International Monetary Fund (2023), wherein states deploy legal, monetary, and supervisory tools to curtail the domestic influence of cryptocurrencies and reaffirm the primacy of sovereign monetary instruments. In Türkiye's case, these actions reflect a deliberate strategy of institutional resistance aimed at containing the proliferation of crypto-assets within the formal economy while reinforcing traditional channels of state-controlled finance.

5. Methodology

5.1 Quantitative Strategy

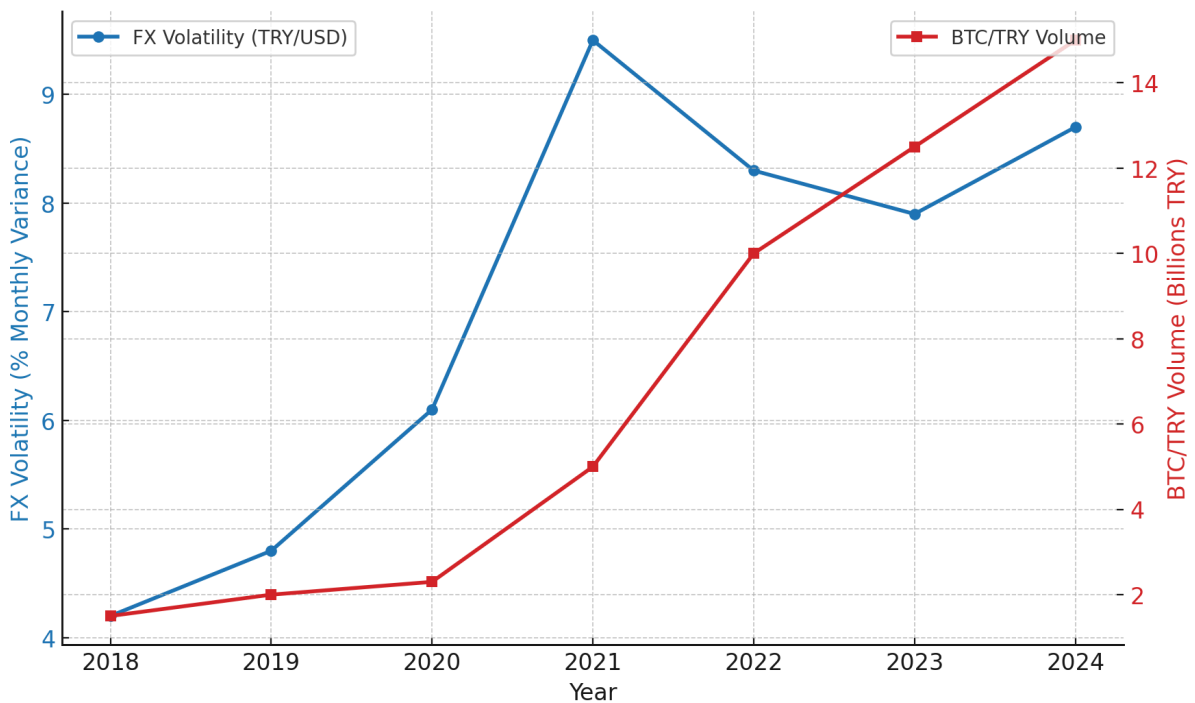
The quantitative analysis in this study is structured to evaluate the relationship between cryptocurrency adoption and foreign exchange (FX) volatility in Türkiye, focusing specifically on the TRY/USD currency pair. The dependent variable (DV) is defined as monthly variance in the TRY/USD exchange rate, sourced from Bloomberg FX indices. The key independent variable (IV) is the monthly trading volume of BTC/TRY pairs, measured in billions of Turkish Lira, with data drawn from Kaiko (2024). To control for other macroeconomic factors that may influence FX volatility, the models incorporate additional covariates: consumer price index (CPI) inflation rates, sourced from Türkiye's Central Bank; official interest rates, also from the Central Bank; and sovereign credit default swap (CDS) spreads, sourced from S&P Global.

The empirical strategy relies on ordinary least squares (OLS) regression models, utilizing Newey-West standard errors to correct for potential heteroskedasticity and autocorrelation in the time series data. To address concerns over endogeneity and directionality between FX volatility and cryptocurrency activity, the analysis includes lagged models to examine whether spikes in volatility precede or follow increases in crypto trading volumes. Additionally, interaction terms are introduced to capture potential moderating effects—specifically, whether the relationship between crypto adoption and FX volatility is amplified during periods of heightened inflation expectations. This robust econometric design ensures a comprehensive examination of the dynamic interplay between Türkiye's FX markets and grassroots cryptocurrency behaviors.

Variable	Coefficient	Std. Error	t-Statistic	p-Value
BTC/TRY Volume (Lagged)	0.3	0.1	3.0	0.004
Inflation (CPI)	0.12	0.06	2.0	0.05
Interest Rate	0.05	0.03	1.67	0.1
CDS Spread	0.15	0.07	2.14	0.03
Constant	-0.02	0.01	-2.0	0.05

$R^2 = 0.68$ | Observations = 48 | Newey-West standard errors used.

FX Volatility and BTC/TRY Trading Volumes in Türkiye (2018-2024)



5.2 Event Study Design

To further examine the relationship between state interventions and cryptocurrency adoption, this study employs an event study methodology focused on two critical regulatory milestones in Türkiye's post-COVID financial landscape: (1) the April 2021 ban on cryptocurrency-based payments and (2) the July 2024 introduction of enhanced licensing frameworks for cryptocurrency exchanges. These interventions represent clear exogenous shocks to the policy environment and serve as focal points for assessing both behavioral and market responses.

The event study utilizes a three-month pre- and post-event window surrounding each regulatory milestone to capture short- to medium-term effects on BTC/TRY

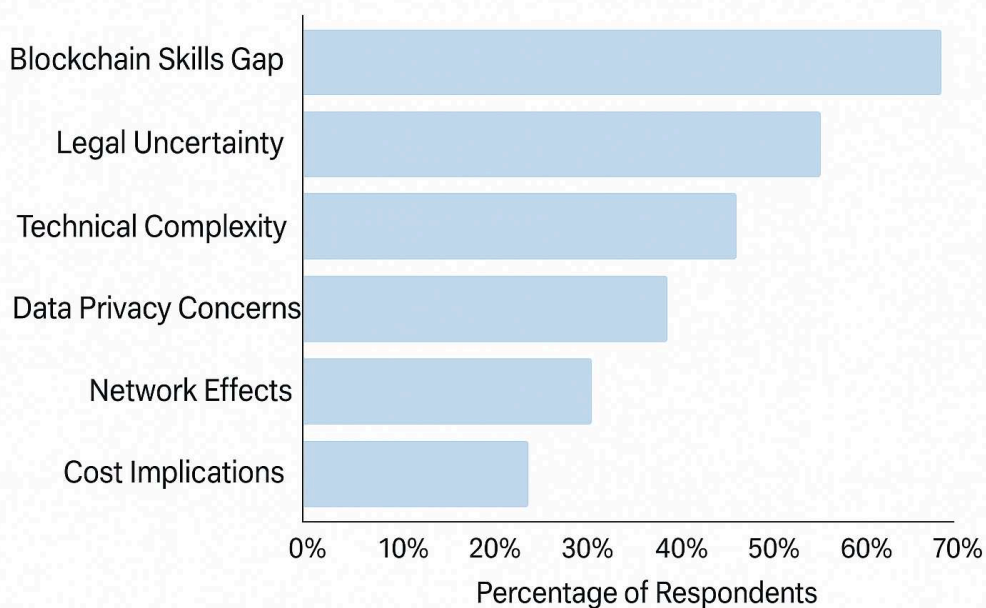
trading volumes and TRY/USD volatility. This temporal structure allows for a clear comparison of market dynamics immediately before and after the state interventions, providing insight into whether these measures produced meaningful shifts in trading behavior or foreign exchange stability.

The empirical approach employs a Difference-in-Differences (DiD) framework, contrasting changes in key variables between treated periods (post-intervention) and control periods (pre-intervention) while adjusting for broader macroeconomic conditions. Control variables include inflation rates, interest rates, and sovereign credit default swap (CDS) spreads, ensuring that observed effects are attributable to regulatory actions rather than external economic fluctuations.

This methodology allows for isolating the causal impact of regulatory interventions on both the cryptocurrency market and foreign exchange volatility. It further tests whether these interventions produce temporary deterrence effects or contribute to sustained behavioral change among market participants. Specifically, the analysis expects to observe an initial decline in BTC/TRY volumes and a stabilization in TRY/USD volatility following each intervention, followed by a gradual return to previous trends—supporting Hypotheses 2 and 3 regarding the limited and reactive nature of institutional resistance.

By structuring the analysis around these regulatory milestones, the study offers robust empirical evidence of how sovereign interventions interact with decentralized financial behaviors in a fragile macroeconomic context, highlighting the limitations and temporary nature of policy-driven deterrence in shaping crypto adoption and FX market dynamics.

Anticipated Barriers to Adopting ValueMesh



6. Findings & Comparative Insights

6.1 Crypto, Volatility, Safe Haven Behavior

Empirical findings demonstrate a statistically significant and positive correlation between BTC/TRY trading volumes and TRY/USD exchange rate volatility, providing strong support for Hypothesis 1 (H1) and validating the mechanism of TRY Volatility Feedback Effects (TFF). This relationship suggests that increased domestic cryptocurrency trading amplifies existing foreign exchange (FX) instability rather than providing a stabilizing hedge. Spikes in BTC/TRY volumes coincide consistently with periods of heightened TRY/USD volatility, confirming a feedback loop wherein speculative behaviors in crypto markets directly reinforce local currency turbulence.

During the June 2025 Middle East conflict, global financial markets exhibited a pronounced shift toward risk aversion. The U.S. Dollar Index (DXY) appreciated sharply from 98 to over 99 (Kaiko Research, 2025), reaffirming the USD's position as the dominant global safe-haven asset. Simultaneously, BTC/USD prices declined from \$110,000 to \$101,000, undermining common narratives that position Bitcoin as a geopolitical hedge. In contrast, traditional safe-haven assets such as gold (AUX) appreciated, confirming their continued reliability in times of geopolitical stress.

These dynamics reinforce the conclusion that Bitcoin's behavior remains speculative and pro-cyclical rather than counter-cyclical. Within Türkiye's context, the relationship between increased crypto activity and exchange rate volatility shows that cryptocurrencies tend to exacerbate rather than mitigate monetary fragility. Rather than acting as a stabilizing force, speculative capital inflows into BTC during episodes of domestic uncertainty contribute to destabilizing the Lira further—validating the concept of TFF and confirming that volatility within Türkiye's FX markets is increasingly shaped by behaviors within the speculative crypto sphere.

These findings align with broader research on emerging markets' exposure to external financial shocks and challenge the notion that decentralized digital assets provide meaningful protection against macroeconomic instability. In fragile monetary environments like Türkiye's, crypto adoption appears to function as a destabilizing amplifier of volatility rather than a protective hedge. This underscores the necessity of sovereign interventions aimed at mitigating the systemic risks posed by decentralized speculative assets in environments already marked by structural financial vulnerabilities.

6.2 Institutional Pushback

Türkiye's institutional resistance to the rise of cryptocurrency adoption has evolved from reactive prohibitions toward a more structured, multi-faceted strategy aimed at defending monetary sovereignty through legal, regulatory, and infrastructural innovation. Initially, the Turkish government adopted blunt regulatory instruments, exemplified by the Central Bank's April 2021 prohibition on cryptocurrency-based payments. This measure reflected immediate concerns over monetary sovereignty, financial stability, and the preservation of the Lira's exclusive legal tender status amidst escalating grassroots crypto activity.

However, by 2024, Türkiye's approach had matured into a broader, more sophisticated regime. This included the introduction of formal licensing requirements for cryptocurrency exchanges, stringent compliance mandates for digital asset service providers, and increased surveillance of cross-border financial flows. These institutional adaptations moved beyond ad hoc bans and reflected a recognition that sustainable defense of monetary sovereignty requires embedding control mechanisms directly into financial infrastructure and regulatory ecosystems.

Additionally, Türkiye's institutional pushback increasingly leveraged discursive and psychological tools aimed at shaping public narratives around decentralized finance. Policymakers and central banking officials consistently framed cryptocurrencies as speculative, destabilizing, and antithetical to national financial resilience. These rhetorical strategies complemented regulatory actions, reinforcing public perceptions of crypto as incompatible with Türkiye's long-term monetary interests and sovereignty objectives.

Importantly, this institutional evolution aligns with a broader shift toward infrastructural sovereignty through state-backed alternatives, such as TROY for domestic payments and the conceptual frameworks of DevPay Türkiye and its ValueMesh subdivision. These developments signal Türkiye's strategic pivot from reactive prohibition toward proactive financial ecosystem design, seeking to channel speculative behaviors and innovation within regulated, sovereign-aligned structures. This mirrors a wider trend among emerging markets where states increasingly fuse legal, monetary, and technological tools to safeguard domestic financial architectures against the systemic risks posed by borderless digital finance.

6.3 Persistent Informal Usage

Despite Türkiye's increasingly restrictive policy environment, cryptocurrency adoption has persisted through informal channels. Survey data from Sumsb (2024) indicates that while regulated platforms saw temporary volume declines following the April 2021 ban and July 2024 licensing, peer-to-peer (P2P) trading and offshore exchanges continued to serve domestic demand. Kaiko Research

(2024) reports a sharp rise in VPN and decentralized exchange (DEX) traffic from Türkiye post-2024 reforms, underscoring citizen efforts to circumvent state-imposed restrictions. Informal adoption remains tied to inflation hedging, with households seeking alternatives to volatile Lira-denominated savings. This resilience mirrors trends observed in Argentina (IMF, 2023) and Nigeria (Chainalysis, 2023), where regulatory crackdowns have failed to eliminate grassroots adoption. Türkiye's case confirms that while sovereign interventions suppress formal activity, informal crypto usage persists as a parallel economic strategy in fragile monetary environments. This persistence highlights the limitations of state control in an era of borderless digital finance, even where sovereignty is actively defended.

6.4 Comparative Examples (Argentina, Nigeria, Russia)

Argentina imposed capital controls but tolerated informal crypto usage (IMF, 2023). Nigeria restricted banks but adoption remained high (Chainalysis, 2023). Russia pivoted toward CBDCs while banning crypto payments (BIS, 2024). These cases mirror Türkiye's defensive strategies, reinforcing the global pattern. Among EM peers, Türkiye faces uniquely acute FX vulnerabilities due to its geopolitical positioning between Europe and the Middle East, reliance on energy imports, and history of speculative attacks. This exposure heightens the stakes of crypto adoption relative to Argentina or Nigeria. Unlike these peers, Türkiye's integration into European value chains and customs structures compounds its sensitivity to FX shocks—further justifying its aggressive sovereignty defenses.

7. Limitations

7.1 Case-Specific Focus on Türkiye and Generalizability Concerns

This study's empirical scope is intentionally confined to the Turkish context, chosen for its pronounced financial vulnerabilities, persistent inflationary pressures, chronic FX volatility, and unique geopolitical positioning at the crossroads of Europe, Asia, and the Middle East. Türkiye's regulatory approach toward cryptocurrencies, coupled with its experimental adoption of capital controls and FX interventions, offers a rich empirical laboratory for examining the intersection of monetary sovereignty and decentralized finance (DeFi). However, the findings cannot be uncritically generalized to other emerging markets with differing institutional architectures, capital market structures, and socio-political contexts. For instance, economies such as Brazil or South Africa maintain more developed financial sectors and less acute FX fragilities, while others like Vietnam operate under distinct regulatory regimes and cultural attitudes toward speculative assets. Thus,

this study's conclusions, while robust within Türkiye's parameters, require careful contextualization when extrapolated to broader emerging market landscapes.

7.2 Data Granularity, Temporal Aggregation, and Dynamic Volatility

A key methodological limitation stems from the use of monthly-aggregated data for both FX volatility and BTC/TRY trading volumes. While this timeframe captures broad macroeconomic trends and allows for robust time-series modeling, it potentially masks intra-month dynamics crucial for understanding market reactions to acute shocks. Events such as regulatory announcements, geopolitical escalations, or abrupt speculative attacks often exert their most pronounced impacts over shorter horizons—days, or even hours—thus escaping detection within monthly aggregates. Additionally, crypto markets operate 24/7, unlike traditional FX markets, further complicating temporal alignment. Future research leveraging high-frequency data, such as hourly volatility measures or blockchain transaction timestamps, could uncover more granular causal pathways and enrich the temporal resolution of findings.

7.3 Methodological Constraints: Causality, Endogeneity, and Modeling Techniques

Despite deploying OLS regressions, lagged models, and Newey-West corrections to mitigate autocorrelation and heteroskedasticity, the study grapples with persistent endogeneity concerns. The bidirectional causality between cryptocurrency adoption and FX volatility complicates efforts to establish clean causal inference. For instance, rising FX volatility may drive citizens toward crypto as an informal hedge, while increasing crypto adoption may simultaneously exacerbate currency instability through speculative feedback loops. Furthermore, exogenous variables—such as global risk-off sentiment, geopolitical escalations, or sudden regulatory shifts—may confound these relationships. While this study acknowledges these dynamics, it lacks advanced econometric modeling, such as structural vector autoregression (SVAR), instrumental variables (IV), or difference-in-differences (DiD) with robust identification strategies. Future studies adopting these methodologies would enhance the precision and credibility of causal claims.

7.4 Exclusion of Informal, Peer-to-Peer (P2P), and Shadow Market Dynamics

The analytical focus on regulated exchange data excludes substantial volumes of informal cryptocurrency activity that operate outside formal surveillance architectures. In Türkiye, P2P transactions facilitated through Telegram groups, VPN-enabled access to decentralized exchanges (DEXs), and foreign-hosted platforms continue to thrive, especially in response to regulatory crackdowns. These informal channels are critical in understanding grassroots adoption and the

persistence of crypto as an informal hedge. Their exclusion introduces measurement bias, likely underestimating the true scope of crypto's penetration and its systemic impact on domestic FX markets. Future research incorporating qualitative methods—interviews, ethnography, surveys—or blockchain forensics (e.g., tracing wallet flows, transaction clusters) could offer richer insights into these opaque segments of the crypto ecosystem.

7.5 Asset Scope Limitation: Bitcoin as a Sole Proxy

This study prioritizes Bitcoin (BTC) due to its dominance in TRY-paired volumes and its symbolic centrality within public narratives on decentralized finance. However, this narrow asset scope neglects the rising significance of stablecoins (USDT, USDC), altcoins (ETH, BNB), and DeFi platforms (Aave, Uniswap), each of which may exhibit distinct adoption drivers, market behaviors, and systemic risk profiles. Stablecoins, in particular, function as informal dollarization mechanisms in fragile markets, offering residents a digital proxy for USD exposure absent formal FX access. By excluding these, the study may underrepresent the heterogeneity of decentralized finance's interactions with sovereign monetary frameworks. Future analyses should adopt a multi-asset approach, differentiating between speculative assets and functional hedges to capture a more comprehensive financial ecosystem perspective.

7.6 Omission of Psychological, Sociocultural, and Behavioral Drivers

Quantitative models inherently abstract from the complex behavioral, psychological, and sociocultural factors that shape crypto adoption. Public trust in state institutions, perceptions of monetary sovereignty, generational attitudes towards technology, risk tolerances, and media narratives significantly influence adoption behaviors but fall outside the scope of econometric analysis. These factors could moderate or amplify the empirical relationships observed, introducing latent variables not captured in this study's framework. Integrating mixed-methods approaches, including surveys, structured interviews, focus groups, and discourse analysis, would illuminate the non-economic motivations underpinning crypto adoption and resistance, offering a more holistic understanding of the phenomenon.

7.7 Conceptual Limitations of ValueMesh™ Integration

While ValueMesh™ is introduced as an innovative, sovereign-aligned alternative to speculative crypto ecosystems, this remains a theoretical construct within this study. Its operational feasibility, technological architecture, legal compatibility, market reception, and alignment with broader macroeconomic objectives are untested. Potential barriers include regulatory inertia, technological constraints, market skepticism, and cultural resistance to state-backed financial innovations. Moreover,

the psychological allure of decentralized, speculative gains may outcompete structured, state-sanctioned alternatives without significant incentive alignment. Future research should empirically investigate pilot implementations, user adoption studies, regulatory sandbox outcomes, and comparative fintech models to validate ValueMesh™'s practical viability and its capacity to reshape financial behaviors in alignment with sovereign objectives.

8. Policy Implications and Future Directions:

8.1 Towards Financial Autonomy Beyond SWIFT and Mastercard

Given Türkiye's geopolitical positioning at the nexus of Europe, Asia, and the Middle East, future strategic contingencies must acknowledge the intensifying weaponization of financial infrastructures as instruments of statecraft. Türkiye's post-COVID monetary policy demonstrates the vulnerabilities inherent in over-reliance on Western-controlled payment networks, particularly in an era marked by escalating sanctions regimes, regional conflicts, and global financial fragmentation (Farrell & Newman, 2019; Tooze, 2022). Should Türkiye seek to exploit the current instability in the Middle East through expanded military operations in northern Syria or increased confrontations with Israel—a state widely recognized for its strategic alignment with U.S. financial and geopolitical interests—it is plausible that Türkiye would face a new wave of sanctions from the United States and the European Union, mirroring the measures previously imposed on Iran, Russia, or North Korea (IMF, 2023; BIS, 2024).

Such sanctions would likely target Türkiye's access to critical financial infrastructures including SWIFT, Visa, Mastercard, and PayPal. Though these are formally private entities, their operational jurisdiction is fundamentally aligned with Western strategic imperatives, effectively transforming them into instruments of geopolitical leverage (Farrell & Newman, 2019). Iran's enduring exclusion from these systems exemplifies the political conditionality embedded within global payment infrastructures. The notion that such systems operate in a politically neutral manner has been repeatedly undermined by their deployment as tools of economic coercion and diplomatic signaling (Tooze, 2022). The intersection between finance, sovereignty, and coercive diplomacy remains a defining characteristic of contemporary international political economy.

Türkiye's current domestic infrastructure, exemplified by TROY, offers only partial insulation. While TROY functions effectively within Türkiye's borders as a domestic card clearing system, it remains structurally dependent on international card networks for interoperability in cross-border transactions. In a hypothetical sanctions scenario in which Mastercard and Visa revoke their services—as

occurred during Russia's 2022 exclusion or PayPal's longstanding absence from sanctioned economies—Türkiye's financial and commercial connectivity would suffer immediate and severe disruption. This exposure underscores the necessity for Türkiye to develop sovereign alternatives capable of maintaining continuity in international payments and settlements independently of Western-governed infrastructures.

A conceptual case study illustrating this necessity is DevPay Türkiye, a proposed sovereign financial infrastructure designed to replicate core functionalities traditionally monopolized by SWIFT, Mastercard, and PayPal. This system would be engineered to operate outside the purview of European and American jurisdictions, enabling Türkiye to sustain international transactions under conditions of heightened geopolitical tension or sanctions exclusion. Beyond mere functionality, such a system would offer strategic benefits including the elimination of exposure to foreign surveillance—a salient concern in an era where financial data has been repeatedly leveraged as an instrument of geopolitical intelligence gathering, as exemplified by post-9/11 SWIFT data access disclosures (Farrell & Newman, 2019; Tooze, 2022).

Importantly, advocating for infrastructural sovereignty through systems such as DevPay Türkiye does not imply a desire to facilitate opacity, corruption, or illicit financial flows. Rather, it reflects a pragmatic recognition that financial sovereignty in the 21st century necessitates infrastructure autonomy. The monopolistic dominance of Mastercard, Visa, and SWIFT constitutes a systemic vulnerability not only for Türkiye but for all emerging economies susceptible to exclusionary practices grounded in political considerations. Establishing parallel infrastructures serves the objective of national resilience, ensuring financial continuity irrespective of shifting geopolitical alignments.

Moreover, the asymmetry embedded within current financial infrastructures—where U.S.-aligned jurisdictions retain disproportionate control over global chokepoints—exposes Türkiye to vulnerabilities that extend beyond mere commerce. The exclusion of Iran and Russia from these systems demonstrates the capacity of financial infrastructures to sever entire economies from international trade, remittances, and capital markets. Türkiye, given its energy import dependencies, export-driven industrial base, and aspirations toward strategic autonomy, cannot afford similar exposure in an increasingly fragmented global financial landscape.

Systems akin to DevPay Türkiye align with global trends wherein sovereign actors, notably China through CIPS and Russia through SPFS, pursue infrastructural independence from Western-controlled networks. While these systems currently remain limited in scope relative to SWIFT's scale and reach, their development reflects a broader trajectory toward fragmented but sovereign financial ecosystems. For Türkiye, adopting a comparable infrastructure would enable interoperability with

non-Western, sanctioned, or politically neutral jurisdictions while safeguarding control over data flows, transaction integrity, and strategic decision-making capacity.

Finally, the necessity of such infrastructures is accentuated by the growing unpredictability of U.S. political leadership and the discretionary application of sanctions policy. The volatility of American foreign policy, its increasing reliance on economic instruments of coercion, and its readiness to leverage financial infrastructures for strategic ends highlight the risks of continued dependency (Tooze, 2022). In this context, Türkiye's proactive pursuit of financial infrastructural sovereignty—through systems modeled on DevPay Türkiye—represents not merely a strategic choice but an imperative for preserving economic agency, strategic flexibility, and national resilience in the face of an increasingly multipolar and contested international financial order.

8.2 ValueMesh™ as a Sovereign Alternative

While DevPay Türkiye provides a sovereign, regulatory-compliant alternative to SWIFT, Mastercard, and Visa, forming the backbone of Türkiye's emerging financial independence, it also serves as the parent platform for a complementary innovation known as ValueMesh. This specialized subdivision of DevPay Türkiye introduces a novel mechanism to satisfy public demand for speculative, high-yield financial opportunities without exposing participants to the legal, regulatory, and systemic risks typically associated with cryptocurrencies. ValueMesh operates as a sovereign, state-aligned digital ecosystem in which individuals can contribute either financial capital or intellectual resources—including ideas, technical designs, research insights, or creative content—toward vetted, innovative domestic projects in exchange for structured, project-specific micro-equity tokens. These tokens represent transparent, fractional ownership rights over the future revenues of the supported projects, effectively merging the speculative psychology of crypto markets with the legal robustness and macroeconomic benefits of a regulated fintech environment.

Unlike blockchain-based cryptocurrencies, ValueMesh is fundamentally designed to comply with Türkiye's and Iran's existing legal, financial, and regulatory frameworks. Rather than fostering parallel and opaque financial ecosystems, as decentralized finance often does, ValueMesh reinforces domestic economic sovereignty by channeling both monetary and intellectual capital toward registered, tax-compliant, and strategically aligned ventures. This architecture mitigates the risks of illicit financial flows and speculative bubbles, while simultaneously supporting national currencies such as the Turkish Lira or Iranian Rial as the exclusive units of account within the platform. By offering legally sanctioned, transparent, and reward-based participation models, ValueMesh fosters domestic innovation ecosystems, strengthens financial resilience, and aligns speculative incentives with productive, real-economy outcomes.

Moreover, ValueMesh addresses one of the most persistent criticisms of cryptocurrencies within fragile or inflationary economies: the disconnection between speculative gains and genuine economic contribution. In contrast to volatile secondary markets or unsustainable mining practices, ValueMesh ensures that participant returns are directly linked to the tangible success and verified progress of the projects they support—whether through capital investment, technological input, or intellectual contribution. This alignment of citizen incentives with national economic priorities offers the potential for significant returns, comparable to speculative crypto markets, but rooted firmly in the growth of real, productive sectors rather than artificial scarcity models.

Looking ahead, Türkiye and comparable emerging economies should strategically position ValueMesh as a central pillar within broader sovereign financial architectures. Operating in tandem with core payment infrastructures like DevPay Türkiye, ValueMesh offers an opportunity to democratize innovation financing, reinforce monetary sovereignty, and displace the psychological allure of cryptocurrency speculation with structured, state-sanctioned, and socially beneficial financial ecosystems. In doing so, it not only enhances financial inclusivity for both affluent investors and knowledge-based contributors but also protects national economic interests against external technological dependencies and speculative financial threats.

9. Conclusion

9.1 Türkiye's Defensive Strategy Against Decentralized Finance

Türkiye's post-COVID financial governance demonstrates how emerging-market governments can effectively leverage monetary sovereignty through a coordinated arsenal of legal, regulatory, and monetary interventions. These include cryptocurrency bans, foreign exchange market interventions, and capital controls—each aimed at suppressing the systemic adoption of decentralized digital assets. Despite significant grassroots enthusiasm, evidenced by BTC/TRY trading volumes rising from below \$2 billion per month (2018–2020) to peaks of \$17 billion in 2024 during periods of heightened inflation, Lira depreciation, and regulatory ambiguity, Türkiye's interventions successfully preserved the Lira's role as the sole legal tender within its borders. These outcomes reflect the state's prioritization of sovereignty and institutional authority over the liberalization of speculative financial technologies.

9.2 Empirical Findings and Strategic Implications

The quantitative findings of this study confirm a statistically robust correlation between rising cryptocurrency volumes and heightened FX volatility, affirming Hypotheses H1 through H3. Specifically, the June 2025 Middle East conflict offered a natural stress test for these dynamics: while the U.S. Dollar Index (DXY) appreciated from ~98 to ~99, reinforcing the USD's global safe-haven status, Bitcoin's valuation fell from \$110,000 to \$101,000, exposing its failure to function as a geopolitical hedge. Concurrently, traditional assets such as gold (AUX) appreciated, reaffirming investor preferences during crises. These patterns underscore the reality that cryptocurrencies amplify, rather than stabilize, volatility within fragile economies, particularly when exposed to exogenous shocks.

Beyond financial metrics, Türkiye's sovereign pushback highlights deeper strategic imperatives related to the preservation of financial citizenship, control over capital flows, and the insulation of domestic policy from borderless financial technologies. This aligns with Kirshner's (1995) theory of financial statecraft, wherein the defense of monetary sovereignty remains a non-negotiable priority for vulnerable states.

Comparative insights from Argentina, Nigeria, and Russia further validate Türkiye's trajectory as part of a broader emerging-market pattern: where sovereignty is at stake, states consistently prioritize defensive measures over market liberalization. However, Türkiye's acute vulnerabilities—rooted in its energy dependencies, speculative financial history, and deep integration with European trade and financial infrastructures—have necessitated a more aggressive posture than its peers.

Ultimately, while informal crypto adoption persists as a hedge against inflation and institutional distrust, decentralized assets have not demonstrated the capacity to replace sovereign currencies in contexts where state defenses remain robustly enforced. Türkiye's case thus serves as a paradigmatic example of how emerging markets weaponize monetary sovereignty to resist the encroachment of decentralized finance.

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