

BLOCKCHAIN GOVERNANCE IN DIGITAL ASSETS

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Shoaib Bin Zafar, CFA

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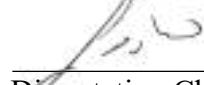
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Shoaib Bin Zafar, CFA

APPROVED BY



Dissertation Chair

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Admissions Director

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ABSTRACT

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Shoaib Bin Zafar, CFA

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The rapid expansion of digital asset ecosystems, including cryptocurrencies, decentralized finance (DeFi) platforms, and decentralized autonomous organizations (DAOs), has highlighted inherent conflicts between technological decentralization and the requirements of sound corporate governance.

On one hand blockchain-based architectures promise transparency, on the other hand, trust minimization, disintermediation, market instability, and regulatory interventions suggest persistent structural and institutional weaknesses. This doctoral thesis examines how corporate governance can be enhanced within the digital asset ecosystem, aiming to promote their long-term sustainability, legitimacy, and systemic resilience. This will result in these assets' long-term sustainability, legitimacy, and systemic resilience.

The research employs a multi-theoretical approach to governance, constructing a robust analytical framework for blockchain-based socio-technical systems. Using a mixed-methods research methodology - comparing case studies of Ethereum and Binance Smart Chain, supplemented by survey data and quantitative analyses - the study finds that neither fully centralized nor decentralized governance approaches are adequate for effective oversight. Decentralized models promote inclusivity and transparency but encounter difficulties with coordination and enforcement challenges. On the other hand, centralized approaches offer efficiency and regulatory compliance but concentrate systematic risks.

The study advocates for hybrid governance models, combining decentralized stakeholder participation with centralized supervisory functions, thereby advancing corporate governance theory to blockchain organizations. It provides pragmatic and actionable insights for regulators and industry stakeholders, underscoring the importance of adaptive and principle-based governance frameworks. Such frameworks have the potential to integrate digital asset enterprises into the financial system while safeguarding innovation.

The study concludes that adaptive, principle-driven governance structures are vital for the successful incorporation of digital asset enterprises into the wider financial system, ensuring the preservation of innovative potential.

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CHAPTER 1

INTRODUCTION

The rapid evolution of digital assets in the 21st century has fundamentally altered the global financial landscape, presenting new paradigms, not only for value exchange and investment but also for organizational structure and regulatory best practices. As the digital assets gain traction, their impact extends beyond financial markets to influence parameters like regulatory frameworks, technology advancement and socio-economic perspectives. This chapter introduces the core themes of digital asset governance models, describing the unique challenges faced by blockchain-based organizations, and outlines the research questions that guide this research thesis.

1.1 Background

Digital assets – including cryptocurrencies, stablecoins, tokens, and decentralized finance (DeFi) platforms, have created new opportunities as well as significant challenges for many stakeholders, including platforms, developers, investors, and regulators. Unlike traditional financial instruments, these assets operate in systems that either tend to lack central intermediaries or established corporate governance frameworks (Wall, 2018; Schwartz, Adlerstein, Kirk, & Mun, 2022). A digital asset is defined as a digitally created representation of value that can be owned, traded, or used, and that confers economic or emotional benefits, with a unique digital identity (Arner, Barberis, & Buckley, 2017). Over the past one decade, growing global connectivity has accelerated the adoption of such assets, including cryptocurrencies, tokens, non-fungible tokens (NFTs), and DeFi applications.

Over the time, proliferation of digital assets has also prompted new forms of economic activity, like peer-to-peer lending, multi-tier exchanges, and tokenized assets. These innovations are gradually disrupting traditional financial infrastructures, leading to increasing competition and emergence of alternative business models. Furthermore, digital assets are reshaping how individuals and organizations transact value, fostering global participation and enabling cross-border transactions with speed and efficiency alike.

The last two decades have witnessed the digitalization of finance at an unprecedented pace. Beginning with the growth of online banking and electronic payment systems at the start of this

century, the process has evolved into a full-scale transformation of financial infrastructures through the advent of blockchain and digital assets. The publication of Satoshi Nakamoto's *Bitcoin: A Peer-to-Peer Electronic Cash System* in 2008 is often regarded as the foundational moment of this transformation (Nakamoto, 2008). By removing the need for trusted third parties in payment systems, Bitcoin introduced the concept of decentralized value transfer underpinned by cryptography and distributed ledger technology (DLT).

Since then, digital assets have expanded far beyond Bitcoin. They now include a wide variety of cryptocurrencies, tokenized securities, stablecoins, decentralized finance (DeFi) applications, and non-fungible tokens (NFTs). These innovations have disrupted traditional financial systems and opened new opportunities for value creation. At the same time, they have raised fundamental questions regarding the adequacy of governance frameworks that underpin their operation (Tapscott and Tapscott, 2016; Zetzsche, Buckley & Arner, 2019).

The system of governance structures, rules, and processes that direct and control corporations (OECD, 2015), has long been studied in the context of listed firms and conventional financial institutions. However, its application to decentralized, borderless, and technology-native structures is less well understood (Yermack, 2017). Unlike traditional firms, many blockchain-based entities operate without centralized boards of directors, established shareholder hierarchies, or clearly defined accountability mechanisms (Hassan & Kyriakou, 2020).

This raises a central research question: how can corporate governance frameworks evolve to address the challenges posed by digital assets? The urgency of this question is underscored by several crises in the sector. The collapse of Mt. Gox in 2014, once the world's largest Bitcoin exchange, highlighted operational weaknesses and governance failures.

The 2016 hack of *The DAO* demonstrated vulnerabilities in smart-contract-driven governance systems (Atzori, 2017). More recently, the failure of Terra-Luna in 2022 and the bankruptcy of FTX underscored systemic risks arising from opaque management, compromised regulatory oversight, and lack of accountability (Gandal et al., 2023). Each of these events revealed that while blockchain technology may enhance transparency and immutability, governance failures remain a major source of risk.

Against this backdrop, the intersection of digital assets and corporate governance represents both an academic and practical frontier. This thesis aims to contribute to this field by analyzing governance practices in blockchain ecosystems, focusing on how they can be enhanced to promote the four foundational principles of good governance – accountability, transparency, fairness, and responsibility (Diligent, 2023; Ryan & DeSimone, 2023).

These technologies challenge the conventional corporate governance that traditionally controls how companies operate through boards, managers, and hierarchical accountability (OECD, 2015). For digital asset platforms, especially decentralized autonomous organizations (DAOs) and blockchain-based platforms, the governance mechanisms remain poorly understood (Yermack, 2017; Hassan & Kyriakou, 2020). Even though blockchain technology promises transparency, the human-driven governance failures still persist. Therefore, the intersection of digital assets and corporate governance is a critical research area as well as a pressing practical concern. This thesis not only investigates governance practices in blockchain-based organizations but also proposes improvements for accountability, transparency, fairness, and responsibility (Diligent, 2023; Ryan & DeSimone, 2023).

The global nature of such platforms further complicates the governance of digital asset, which often operate across multiple jurisdictions with varying regulatory requirements, management practices, and socio-cultural norms. Regulatory responses differ widely, with some countries embracing innovation and others imposing strict controls or even outright bans. As a result, digital asset platforms must navigate a fragmented legal landscape, balancing compliance with the need for flexibility and innovation. The ongoing evolution of governance models underscores the importance of continuous research & development and adaptation in this sector.

1.2 Digital Assets

Digital assets can be defined as “any form of content, data, or value unit stored digitally and capable of being owned, transferred, or utilized in a manner that produces economic or social value” (Arner, Barberis & Buckley, 2017, p. 5). What unites them is their reliance on digital infrastructures for storage, authentication, and transfer.

Digital assets encompass a broad range of value-bearing digital records, including cryptocurrencies (Bitcoin, Ethereum), stablecoins (USDT, USDC etc.), utility and security tokens, DeFi protocols, DAOs, and NFTs (Narayanan et al., 2016; Zetzsche, Buckley, & Arner, 2019).

Cryptocurrencies such as Bitcoin and Ethereum are essentially payment tokens and decentralized currencies that function without central banks. They rely on blockchain protocols for transaction validation and cryptographic methods for security (Narayanan et al., 2016). Stablecoins, including Tether (USDT) and USD Coin (USDC), attempt to reduce volatility by pegging their value to fiat currencies like the USD. While stablecoins are increasingly used for payments and settlements, they raise concerns about systemic stability and regulatory arbitrage (Arner, Auer & Frost, 2020).

Tokenization is the digital representation of real-world assets on blockchains, such as equities, bonds, or real estate. Tokenized securities promise greater liquidity and fractional ownership, but they raise unresolved legal and governance questions (Frankenreiter & Schmolke, 2021). Utility tokens, by contrast, provide access to platform's services – such as governance tokens in DeFi ecosystems – without necessarily constituting financial securities (Zetzsche, Buckley & Arner, 2019).

While tokenization distributes power horizontally, empirical evidence shows that large token holders in DAOs often dominate decisions (Buterin, 2020; Hassan & Kyriakou, 2020).

The Non-Fungible Tokens (NFTs) and digital art represent unique digital items verified on blockchain platforms, enabling new forms of ownership in art, collectibles, and gaming (Dowling, 2022). By providing verifiable provenance, NFTs have created new markets but have also been criticized for speculative bubbles, copyright disputes, and environmental impact due to blockchain energy consumption (Ante, 2021). In addition, they also introduce valuation risks (Dowling, 2022; Ante, 2021).

DAOs (Decentralized Autonomous Organizations) represent a rather radical new organizational form, governed by smart contracts and community voting mechanisms as compared to traditional management hierarchies. Scholars describe DAOs as “algorithmic institutions” that distribute decision-making authority among token holders (Hassan & Kyriakou, 2020). While

DAOs promote inclusivity and decentralization, they also face risks of plutocracy, where large token holders dominate decision-making, undermining democratic ideals (Buterin, 2020).

Digital assets also include information and datasets valuable for analysis or research, unique digital art, and collectibles - authenticated through blockchain technology - such as NFTs, and various forms of digital media like images, videos, and music that can be traded in the market. They also include domain names with commercial appeal, e-books and digital publications available for purchase or licensing, and intellectual property such as patents, trademarks, and copyrights in digital formats. Additionally, the social media accounts with substantial followings, software applications, and code repositories are also considered digital assets, reflecting their economic, cultural, and technological significance within the digital ecosystem.

Beyond finance, digital assets exist in the form of intellectual property (patents, trademarks, software code), domain names, digital media (music, video, images), and social media accounts (Teece, 2018). These assets increasingly represent significant economic and cultural value, making their governance and protection a central issue in digital economies (Gans, 2019).

Taken together, this taxonomy demonstrates that digital assets are multifaceted, spanning financial, cultural, and technological domains. Their diversity reinforces the need for well-crafted governance frameworks that reflect both the decentralized nature of blockchain and the socio-economic contexts in which these assets are deployed.

Governance in digital asset platforms is a multifaceted issue, involving technical, legal, financial and ethical considerations. Though smart contracts automate many processes, yet they cannot resolve all disputes or anticipate all contingencies. This leads to the need for hybrid governance models that integrate code-based mechanisms with human interaction and oversight, ensuring adaptability and responsiveness to the real-time upcoming challenges. Additionally, the anonymity often associated with blockchain networks complicates the enforcement and accountability, making it hard to identify responsible parties at the time of failure.

1.3 Significance of Digital Assets:

The significance of digital assets lies in their potential to democratize finance, lower transaction costs, and enable fractional ownership (Catalini & Gans, 2020; Gudgeon et al., 2020).

However, their governance remains less researched and less documented. Traditional corporate governance models assume clear hierarchies as legal entities – assumptions that do not hold for many decentralized systems. Failures such as Mt. Gox and FTX highlight that without robust governance mechanism, trust evaporates, and markets become unstable. It helps to refresh that Mt. Gox was one of the earliest Bitcoin exchanges, founded in 2010, and by 2014 it was managing nearly 70% of Bitcoin traded volumes. However, due to poor tracking of balances and weak internal controls, the exchange faced recurring hacks, causing investors to lose around 850,000 Bitcoins (worth billion in 2026). FTX was a major global crypto exchange founded by Sam Bankman-Fried for trading digital assets and derivatives. It collapsed in 2022 after secretly using customer funds to cover losses at Alameda Research, triggering a liquidity crisis and bankruptcy.

Conversely, successful platforms like Ethereum demonstrate that transparent and adaptive governance can foster resilience and innovation (Yermack, 2017). Thus, improving the governance of digital assets is essential for regulatory compliance, risk management, responsible innovation, and long-term sustainability.

The ongoing debate relating to centralization versus decentralization in governance structures is particularly relevant. While decentralized platforms aim at empowering participants and reducing single points of failure, stakeholders may struggle with coordination, scalability, and decision-making efficiency. On the contrary, centralized platforms can act swiftly but at the cost of risk concentrating power and undermining stakeholder trust. These pressure points highlight the need for innovative governance solutions that balance inclusivity with effectiveness.

Digital assets have the potential for creating significant socio-economic welfare. They can enhance the standing of financial and capital markets vis-a-vis key stakeholders including market participants and regulators. But for their wider adoption and permanent credibility, and in essence for their ‘raison d’être’ – the stakeholders must dive deep into how these digital assets are created, how they function, what is their true disruptive potential and the corporate governance. Among these, the area that is generally neglected is the corporate governance of platforms issuing, trading, storing, and selling digital assets.

Just like in traditional finance, is quality of the management team a decisive factor in determining which platforms in the digital assets’ ecosystem would successfully survive in the

long term? The answer might not be a straightforward yes or no, especially given the fact that the topic remains under-researched. While there is some knowledge available on the common features of digital assets, a focused discussion on the quality of their corporate governance infrastructure remains sparse.

Limited though, yet most relevant academic discussions are focused on the use of blockchain for corporate governance. Enhanced transparency and competency are two main advantages of leveraging the blockchain to create new digital assets, to enable their inventory, to be able to exchange them, and to maintain accounts. While keeping a note of this area, we also tried studying general practices in corporate governance at entities that use blockchain to create, store or trade digital assets.

The ownership, transfer, and value of digital assets (e.g. tokens) have become possible with the use of distributed ledger (archive of transactions) technology i.e. blockchain, which provides a transparent and decentralized ledger for tracking these assets (Kud, Kucheriavenko, & Smychok, 2019). Our literature review keeps relationship between blockchain technology and digital assets in mind, and considers corporate governance overlap in these two as relevant for our research.

Moreover, the digital assets space is led by three types of DAOs or decentralized autonomous organizations, namely Diversified Financials (DeFi), Infrastructure organizations that provide tools to facilitate the functioning of the digital assets' ecosystem, and finally Web3 organizations that provide new internet services and platforms (Appel & Grennan (2023).

With our review of existing academic and industry literature in this domain, we identify the main themes that have attracted researchers in the recent past. In the Literature Review chapter, we will briefly discuss each one of these themes. Identification of related topics and their grouping per themes, is our starting point of the literature review. This will allow us to also identify gap areas for future research.

Digital assets are significant for at least three interrelated reasons: their impact on financial systems, their role in socio-economic innovations, and their implications for governance theory and practices. Digital assets challenge the monopoly of traditional intermediaries in value exchange, investment, and capital formation. Decentralized finance protocols, for instance, allow

users to borrow, lend, and trade without banks, potentially lowering transaction costs and enhancing access (Gudgeon et al., 2020).

Digital assets are facilitating innovation in industries, supply chains, and data markets. NFTs have disrupted art and entertainment markets. Blockchain-based systems enhance traceability in agriculture and pharmaceuticals (Casino, Dasaklis & Patsakis, 2019). From a Schumpeterian perspective, digital assets embody “creative destruction,” replacing old institutions and practices with novel organizational forms (Schumpeter, 1942).

Perhaps most importantly, digital assets test the adequacy of governance systems. The failures of high-profile platforms such as Mt. Gox and FTX underscore the consequences of poor governance - ranging from loss of investor trust to systemic risks in global markets (Gandal et al., 2023). Conversely, the platforms like Ethereum, with its participatory governance and transparency mechanisms, demonstrate how inclusivity can add to legitimacy and resilience. This makes governance not merely a technical concern but a central determinant of sustainability in digital asset ecosystems (Yermack, 2017).

1.4 Research Rationale

The rationale for this study takes lead from the increasing systemic importance of digital assets and relative underdevelopment of corporate governance frameworks within this domain. While blockchain technology promises transparency and decentralization, the institutions built upon it are still subject to the fundamental challenges of organizational governance: accountability, legitimacy, and risk management (Yermack, 2017). The failure to address these challenges has already produced several high-profile crises, eroding trust among stakeholders and raising urgent questions for regulators and scholars alike.

Enhancing corporate governance in digital asset ecosystem necessitates a focus on strengthening corporate governance within organizations that deal with digital assets, such as cryptocurrencies, blockchain technologies, and related platforms. Here’s a rationale and justification for why this focus is become critical:

The regulatory environment around digital assets is highly dynamic and evolving fast. There is no global standardization of regulations in place. Certainty and clarity over corporate

governance regulations is key in ensuring digital asset platforms and decentralized structure comply with them. It also helps them steer their activities in the direction of good corporate citizenship, helping them best preserve their and their stakeholders' interest. In case of lacking compliance regimes, penalties like fines, and activity closures and bankruptcies are expensive, and severely damage reputation.

The regulation of digital assets is uneven across jurisdictions. In the United States of America, the Securities and Exchange Commission (SEC) has adopted an expansive interpretation of the Howey Test, wherein they have classified many tokens as securities. Enforcement actions against Ripple Labs and Coinbase illustrate the agency's view that governance arrangements must be sufficiently transparent to protect investors (Zetsche, Buckley & Arner, 2020). In the European Union, the *Markets in Crypto-Assets Regulation* (MiCA) provides the first comprehensive region-wide framework. MiCA imposes disclosure, governance, and capital requirements on crypto-asset service providers (European Parliament, 2023). In Asia, the Monetary Authority of Singapore (MAS) has positioned the city-state as a global hub by balancing innovation with strong anti-money laundering controls (Tan & Low, 2022). Japan's Financial Services Agency (FSA) has mandated custodial and reporting standards since 2019 (Iwata, 2021).

Despite these initiatives, global regulatory harmonization remains elusive. Jurisdictional differences create opportunities for arbitrage, where platforms gravitate toward the least restrictive regimes (Zetsche, Buckley, Arner & Föhr, 2020). This study argues that effective corporate governance frameworks are essential complements to regulation, helping decentralized organizations navigate uncertainty while promoting legitimacy with stakeholders.

Therefore, platforms that keep evolving their governance structures to comply with ever-changing regulatory environment, can proactively avoid legal troubles and propose long term viability to their customers and shareholders.

Trust is the cornerstone of financial systems, whether traditional or digital. In decentralized settings, trust is often said to be “replaced by code” (Nakamoto, 2008), yet recent events such as the collapse of FTX have shown that human governance failures – rather than technological flaws – are the primary sources of systemic risk (Gandal et al., 2023). From the perspective of stakeholder theory (Freeman, 1984), platforms must balance the interests of diverse groups, including

investors, developers, regulators, and end-users. Without credible governance mechanisms to mediate these relationships, stakeholder trust cannot be sustained.

Like asset management firms in traditional finance, the platforms related to digital assets also rely on trust in their services from their stakeholders, and this trust cannot be won without proper corporate governance structures in place. Good governance would imply ensuring accountability of managers along with transparency in operations.

Such checks and balances are necessary in preventing frauds and mal practices like money laundering, and other misconducts. In the recent past, many digital assets providers have gone bankrupt due to such problems.

The digital asset industry faces unique risks. Cybersecurity threats are particularly severe: in 2021 alone, over USD 3.2 billion were stolen in cryptocurrency-related hacks (Chainalysis, 2022). Market volatility is another persistent challenge; Bitcoin has time and again experienced price swings of more than 50% within a single quarter, exposing investors and platforms to liquidity crises (Baur & Hoang, 2021). Corporate governance plays a critical role in embedding risk management practices, ensuring that contingency planning, technological resilience, and audit mechanisms are in place (Bouveret, 2018).

Risk management plays a key role in how digital assets can work effectively and security. The risks facing digital asset platforms are unique and most important of them are cyberthreats and vulnerabilities of their technology infrastructure. In platforms that have sound corporate governance in place, risk management is better incorporated in the culture and infrastructure of the governance mechanism. This ensures resilience in business continuity and sustainability.

These platforms have well planned and time-tested contingency plans to face any business disruptions. Their systems are made to sustain sophisticated and organized cyberattacks. In addition, their risk management systems also flag the adverse market movements, that could be both big and highly unexpected.

Innovation is at the forefront of digital assets structures. Without sound corporate governance, it is highly unlikely that these platforms would have a trustworthy framework that is not only ethical but also ensures innovations remaining human-centered and responsible. This

would in turn ensure a positive role that the platforms can play for a broad societal wellbeing and the wellbeing of their stakeholders.

The digital asset sector is often celebrated for its innovative capacity, particularly in areas such as DeFi (Decentralized Finance), NFTs (Non-Fungible Tokens), and Web3 platforms. However, without governance oversight, the innovations may become exploitative, speculative, ethically incorrect or socially harmful. The literature on responsible innovation emphasizes that technological development must align with societal values, transparency, and long-term welfare (Stilgoe, Owen & Macnaghten, 2013). Corporate governance provides the ethical scaffolding to ensure that innovation in digital assets serves not only profitability but also sustainability and inclusion.

It is safer to say that sound corporate governance ensures that the innovation coming from such enterprises is not only meant to be profitable, but also socially responsible. This will very well lead to creation of long-term goodwill vis-à-vis clients, shareholders, and regulators.

Growth of digital asset enterprises is an important part of their corporate journey and an equally important one. As they scale, their operations become more complex, and the increasing need for sharper strategic decision-making. It requires focus on risk management, watching out for and adopting to evolving application legal and regulatory frameworks, and governance models that are suitable to the scale.

As digital asset structures expand, the governance structures must evolve accordingly to accommodate new complexities. The transition of Ethereum from proof-of-work to proof-of-stake in 2022 illustrates how governance adaptation is essential for scalability, sustainability, and environmental responsibility (Buterin, 2020). Binance's global expansion, meanwhile, demonstrates the tensions between efficiency, regulatory compliance, and concentrated decision-making (Chohan, 2021). Strong governance frameworks are therefore necessary to support long-term growth while mitigating systemic risks of regulatory loopholes.

As such the evolution of corporate governance goes together with the growth of the business, be it the expansion into new markets of introducing new products to the clients, or for the companies to remain resilient in the long term, their governance must evolve accordingly. This

ongoing adaptation ensures that organizations can effectively address emerging risks, evolving regulatory changes, and operational complexities as they continue to scale.

1.5 Justification

Enhancing corporate governance in digital asset enterprises is essential for ensuring these platforms' long-term sustainability and resilience. Strong governance frameworks not only help enterprises navigate regulatory challenges, but also build trust with stakeholders, manage risks effectively, foster responsible innovation, and support scalable growth. In an industry characterized by fast growth, rapid change and significant risks, sound governance is not only a competitive advantage but also a necessity for survival. This study is justified on theoretical, empirical, and practical grounds.

- o Theoretical contribution: It extends stakeholder theory (Freeman, 1984) and institutional theory (DiMaggio & Powell, 1983) to blockchain contexts, where power is distributed across developers, miners, token holders, and users. It also challenges agency theory assumptions by examining how smart contracts can reduce but not eliminate principal-agent conflicts (Jensen & Meckling, 1976).
- o Empirical contribution: It provides original mixed-method data (surveys, on-chain analytics, interviews) comparing two contrasting governance models in the sector, addressing a gap identified in prior research (e.g., Yermack, 2017; Walch, 2019).
- o Practical contribution: It offers evidence-based best practices for digital asset platforms with a view to improve internal controls, risk management, and regulatory compliance, thereby reducing the likelihood of failures like FTX and Mt. Gox.

Finally, the study is also justified by its timeliness. With MiCA having come into force in the EU as of December 30, 2024, ongoing regulatory debates in the US, and the global diffusion of blockchain-based innovations, the need for research-informed governance models has never been greater. By clarifying what constitutes good governance in blockchain platforms, this research will help platforms build trust with investors, users, and regulators alike. As the regulatory landscapes evolve rapidly, the insights gained from this research will be crucial for both industry

practitioners and policymakers seeking to establish effective and adaptable governance frameworks for the digital asset ecosystem.

1.6 Research Problem and Questions

Despite growing academic and practitioner interest, there exists no established framework for evaluating the governance style in digital asset platforms. Most research efforts focus on the technical features of blockchain technology rather than on the organizational and stakeholder dimensions of its governance. Industry reports also tend to focus on and prioritize technological innovation over management quality. This gap leads to the central research problem: *digital asset structures face persistent governance failures because accountability, transparency, fairness, and responsibility are not systematically designed or measured.*

Addressing this research problem requires a holistic approach that incorporates evaluation of both technical and socio-economic perspectives. By analyzing case studies of the two major - albeit different in nature - blockchain platforms and surveying stakeholder experiences, this thesis aims to identify the key factors that influence governance outcomes. The findings will contribute to development and refinement of practical frameworks for assessing and improving governance in the digital asset organizations, supporting both sustainable growth and innovation in the sector.

To address this problem, this thesis grouped the entire range of Research Questionnaire in following Key Research Questions (KRQ):

Key Research Question 1 (RQ1): How do governance mechanisms differ between a centrally governed platform (Binance Smart Chain) and a highly decentralized blockchain platform (Ethereum) in terms of decision-making processes, stakeholder participation, and transparency?

Key Research Question 2 (RQ2): What are the main accountability and transparency challenges faced by DAOs and other blockchain-based organizations, and how can these be systematically addressed?

Key Research Question 3 (RQ3): Which governance frameworks and best practices can be adapted or developed to enhance fairness, responsibility, and resilience in digital asset organizations?

Through these three research themes, the thesis seeks to bridge the research gap between technological innovation and organizational governance, offering actionable insights for regulators, industry leaders, investors, developers and academic researchers. The goal of this research is to propose frameworks that not only address current governance failures but also anticipate future challenges in the rapidly evolving digital asset ecosystem.

1.7 Research Aim and Objectives

Aim of this study is to investigate governance models in digital asset platforms, identify challenges and opportunities, and develop evidence-based recommendations for improving accountability, transparency, fairness, and responsibility.

This research is intended to help in three ways: a) analyzing the existing governance models in the digital asset platforms, including challenges and opportunities. It picks structures based on their relevance and how recent they are; b) checking current rules and suggesting new or improved ways to make structures more accountable, transparent, fair, and responsible for the benefit of all involved; and c) looking at how good or bad the governance of digital assets affects investors, markets, and rules.

Objectives:

1. To compare governance mechanisms in centralized (Binance Smart Chain) and decentralized (Ethereum), across decision-making, participation, and transparency dimensions.
2. To analyze how governance design affects stakeholder perceptions of the four core principles (accountability, transparency, fairness, responsibility).
3. To identify governance practices that enhance resilience during major crises or regulatory changes.
4. To provide actionable recommendations for industry leaders, regulators, and policymakers.

1.8 Case Selection Rationale

This study adopts a comparative case study design, based on our two selected blockchain platforms:

Ethereum – a highly decentralized, community-governed platform using off-chain governance and on-chain signaling. It represents a bottom-up, participatory model.

Binance Smart Chain (BSC) – a centrally coordinated platform with a small set of validators and strong influence from Binance as a corporate entity. It represents a top-down, efficiency-oriented model.

These two cases are information-rich and occupy opposite ends of governance and decentralization spectrum, enabling clear comparative inference. While hybrid models exist (e.g., Solana, Polkadot), selecting polar types maximizes contrast and theoretical generalizability (Yin, 2018). Limitations of this choice are acknowledged in Chapter 3.

1.9 Thesis Structure

The remaining part of the thesis is organized as follows:

- o Chapter 2 – Literature Review: Synthesizes theories of governance, blockchain governance research, and identifies specific gaps addressed by this study.
- o Chapter 3 – Data and Methodology: Details the mixed-methods design, case selection, survey instrument, on-chain data collection, and analytical techniques.
- o Chapter 4 – Results and Discussion: Presents qualitative and quantitative results separately for Ethereum and Binance Smart Chain. The chapter also interprets findings in the light of theory, compares the two cases, and derives best practices.
- o Chapter 5 – Conclusion: Summarizes contributions, limitations, and implications for policy and practice.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Blockchain technology has led to extensive latest debates about its governance. Recent discussions pertain technical protocols, existing and future policies, rules, regulations and decision-making processes. In essence, the norms that guide how blockchain networks evolve and maintain trust, are themselves evolving as we speak. As blockchains are adopted in finance and beyond finance in supply chains, and public services; understanding the governance architecture becomes critical. This chapter reviews theoretical and empirical literature on blockchain governance. It places a particular focus on digital assets and decentralized autonomous organizations (DAOs). It synthesizes insights from the studies in computer science, economics, law and organizational behavior.

The chapter proceeds as follows: Section 2.2 presents the theoretical framework, selecting stakeholder theory and institutional theory as the primary lenses. Section 2.3 develops a conceptual framework linking governance inputs, mechanisms, and outcomes. Section 2.4 describes the systematic literature search strategy. Section 2.5 critically reviews prior empirical studies. Section 2.6 identifies specific research gaps formulated as propositions. Section 2.7 summarizes the chapter and links to the research questions.

2.2 Theoretical Framework

Two theories are selected as the primary analytical lenses because they directly address the distribution of power and external pressures – the key issues in digital asset governance.

2.2.1 Stakeholder Theory (Freeman, 1984)

Stakeholder theory argues that organizations should consider all groups affected by their actions, not only shareholders. In blockchain systems, stakeholders are diverse and include developers, miners/validators, token holders, users and regulators. Furthermore, external communities that are concerned with energy use, are also stakeholders. Governance legitimacy depends on how well these diverse interests are balanced (Allen & Berg, 2020).

This theory primarily relates to Key RQ1 (differences in participation) and Key RQ2 (perceptions of fairness and transparency). It predicts that more inclusive governance (e.g., broad voting rights) will increase perceived legitimacy, but also recognizes that powerful actors (e.g., large token holders) may dominate. The theory is operationalized by measuring stakeholder participation rates, concentration of voting power, and survey items on inclusiveness and fairness.

2.2.2 Institutional Theory (DiMaggio & Powell, 1983)

Institutional theory explains how organizations conform to external rules, norms, and cultural expectations to gain legitimacy. Even supposedly ‘decentralized’ blockchains are influenced by national regulations, industry standards, and community norms (De Filippi & Wright, 2018; Hacker, 2020). For example, the EU’s MiCA regulation pressures all crypto firms to adopt a set of certain governance practices.

Institutional theory guides Key RQ3 (resilience during crises) and the comparative case analysis. It predicts that platforms facing stronger regulatory or normative pressures (e.g., Ethereum’s community norms) will develop different governance responses than those driven by a single corporate entity (Binance). Operationalization includes analysis of regulatory filings, forum discussions and the interview data on compliance pressures.

Why not other theories? Agency theory (Jensen & Meckling, 1976) is relevant but secondary: smart contracts in blockchain - programmed to automatically execute already-fed instructions once triggering event takes place - reduce principal-agent problems but cannot eliminate them entirely. Game theory informs incentive design but is less central to the stakeholder-institutional focus. Ostrom’s polycentric governance (2010) is partially incorporated but not adopted as a primary framework because this study focuses on two distinct cases rather than a multi-center comparison.

2.3 Conceptual Framework

The conceptual framework integrates stakeholder and institutional theories into a three-part model: Inputs → Mechanisms → Outcomes.

- o Inputs: In inputs we include stakeholder composition, token distribution, developer power, legal environment and the consensus mechanisms (proof-of-work vs. proof-of-stake).

- o Mechanisms: In mechanisms we include on-chain voting, off-chain deliberation (forums, GitHub), improvement proposals (EIPs, BIPs), community customs and corporate directives.
- o Outcomes: Key governance dimensions, including effectiveness (decision speed and stability), inclusiveness (breadth of stakeholders' participation), transparency (visibility of decisions), adaptability (ability to change rules), and legitimacy (stakeholder trust).



Figure 2.1: Inputs – Mechanisms – Outcomes

(Source: Author's own data)

The diagram below draws arrows from inputs to mechanisms, and mechanisms to outcomes, with feedback loops from outcomes to inputs (e.g., low legitimacy may trigger token redistribution).



Figure 2.2: Blockchain Conceptual Framework

(Source: Author's own data)

Table 2.1: Operationalization of Governance Dimensions

Dimension	Definition	Example indicator (survey/on-chain)
Effectiveness	Speed and quality of decisions	Time to pass a proposal; stakeholder rating (1–7)
Inclusiveness	Breadth of stakeholder participation	Percentage of token holders voting; Gini coefficient of voting power
Transparency	Visibility of decision processes	Public availability of proposals and votes; survey item
Adaptability	Ability to change rules in response to shocks	Number of hard forks; regulatory adaptation actions
Legitimacy	Perceived fairness and trustworthiness	Survey trust score; continued participation

This framework directly operationalizes the research questions: Key RQ1 compares mechanisms across cases; Key RQ2 examines relationships between inputs/mechanisms and perceived outcomes; and Key RQ3 links adaptability to resilience.



Figure 2.3: Areas of Blockchain Governance

(Source: Author's own data)

2.4 Systematic Literature Search Strategy

To ensure replicability, systematic searches were conducted during study. Latest search update took place in February 2026, using the following databases: Scopus, Web of Science, Google Scholar, and SSRN. Keywords included: (“blockchain governance”, “DAO governance”, “digital asset governance”, “cryptocurrency governance”) and (“corporate governance”, “stakeholder”, “institutional theory”, “accountability”, “transparency”). Inclusion criteria included peer-reviewed articles, conference proceedings, and reputable industry reports (e.g., from OECD, BIS) published between 2015 and 2026. Exclusion criteria have been non-English papers and purely technical papers without governance focus. After deduplication and title/abstract screening, 127 sources were retained for full-text review, of which 82 are cited in this thesis.

2.5 Critical Review of Prior Studies

2.5.1 Early Optimism and Technical Focus (2015–2017)

Early research celebrated blockchain’s potential to reduce agency costs and automate trust (Tapscott & Tapscott, 2016; Catalini & Gans, 2016). However, these studies were largely theoretical and ignored governance as an important social process. For example, Narayanan et al. (2016) provided a technical primer but did not examine stakeholder power. A critical weakness is the assumption that decentralization automatically leads to good governance – an assumption contradicted by the 2016 hack of ‘The DAO’ – a major Ethereum-based decentralized autonomous organization, a form of investor-directed venture capital fund that raised USD 150 million worth of Ether (15% of all Ether at the time) - where code alone proved insufficient (DuPont, 2017; Reijers et al., 2016). This body of research is useful for technical context but lacks organizational depth.

2.5.2 Emergence of Governance as a Social Issue (2018–2020)

Following ‘The DAO’ hack, researchers soon recognized that blockchain governance required human coordination and conflict resolution (Hsieh et al., 2018; Rozas et al., 2018). Walch (2019) critiqued the concentration of power among core developers, while Yermack (2017) noted that token voting often leads to plutocracy. Atzori (2017) proposed a political science perspective. These studies advanced the field but remained largely qualitative and case-specific (e.g., referring to only Bitcoin or Ethereum). A methodological gap is the lack of comparative, multi-method designs.

2.5.3 Empirical and Comparative Turn (2021–2024)

Recent studies have used on-chain data to measure governance participation. For example, Allen & Berg (2020) compared governance in Bitcoin and Ethereum. They found that off-chain deliberation matters more than formal voting. Buterin (2020) and Chohan (2021) analyzed Binance’s centralized model, highlighting efficiency but noting transparency deficits. Gandal et al. (2023) linked FTX’s collapse to poor board oversight. However, no study has directly compared Ethereum (decentralized) and Binance Smart Chain (centralized) so far, using a mixed-methods approach that combines surveys, interviews, and on-chain analytics. Furthermore, most studies measure only one or two governance dimensions (e.g., voting participation) without examining stakeholder perceptions of legitimacy or adaptability during crises.

2.5.4 Summary of Critiques

Available research on blockchain governance faces critique for several reasons. Few studies effectively integrate stakeholder and institutional theories, resulting in a lack of comprehensive frameworks. In some cases, the literature is dominated by single-case designs, which restrict comparability across different platforms. Outcomes are often narrowly defined, focusing primarily on technical metrics rather than addressing perceived fairness or responsibility within governance systems. Moreover, analyses tend to be static, seldom exploring how governance structures evolve over time or respond during crises.

2.6 Broader Research Gaps

Despite the expansion of research in blockchain governance arena, significant gaps remain. Notably, there is a paucity of comparative studies examining governance across various blockchain platforms; most existing literature is limited to single-case analyses. Furthermore, there is insufficient insight into the perspectives and trust levels of various stakeholder groups regarding these governance systems.

Research investigating hybrid governance models remains limited, especially about combining decentralized and centralized elements and their evolution over time. Most studies are grounded in singular theoretical frameworks and rarely integrate multiple perspectives. Additionally, the lack of longitudinal research exploring governance dynamics as blockchain systems scale, or comparative analyses of DAOs across different sectors and jurisdictions remains

a matter of concern. The mechanisms for managerial accountability within hybrid blockchain environments also remain underexplored.

Few studies have systematically reviewed the influence of legal frameworks and compliance requirements on blockchain governance. The ambiguous legal status of DAOs further complicates this landscape. Challenges such as low voter participation and concentrated voting power persist, with innovative engagement strategies seldom addressed in the literature. Comparative research on governance in proof-of-work versus proof-of-stake systems is also scarce. More so, there remains a lack of understanding regarding the resilience of governance structures during periods of crisis.

This study seeks to address these gaps by focusing on the governance architecture of Ethereum and Binance Smart Chain and the application thereof.



Figure 2.4: Broader Research Gaps

(Source: Author's own data)

2.7 Research Gaps and Propositions

Based on the critical review, the following gaps and corresponding propositions are identified:

Table 2.2: Research Gaps and Propositions

(Source: Author's own data)

Key Research Gap	Proposition	Linked KRQs
No comparison of decentralized vs. centralized governance using mixed methods	P1: Ethereum (decentralized) exhibits higher inclusiveness and transparency but lower effectiveness than Binance Smart Chain (centralized).	Key RQ 1
Limited understanding of how governance design affects stakeholder perceptions	P2: Stakeholder perceptions of fairness and accountability are positively associated with on-chain voting opportunities and negatively associated with validator concentration.	Key RQ 2
Lack of empirical evidence on governance practices that enhance crisis resilience	P3: Platforms with formal off-chain deliberation mechanisms (e.g., Ethereum's EIP process) recover more quickly from crises than those with centralized decision-making.	Key RQ 3

2.8 Summary

This chapter has established a theoretical framework (stakeholder and institutional theories), a conceptual model (inputs → mechanisms → outcomes with key dimensions), and a systematic review of prior research. The critical analysis reveals significant gaps, leading to three testable propositions.

CHAPTER 3

DATA AND METHODOLOGY

3.1 Introduction

This chapter describes the methodology designed to investigate governance in digital assets, test the three propositions and answer the Key Research Questions. Following Saunders et al.'s (2023) 'research onion', the chapter moves from philosophy to data collection and analysis. The study adopts a comparative case study design with mixed methods (qualitative, quantitative, computational) to answer Key RQ1–Key RQ3 and test P1–P3.

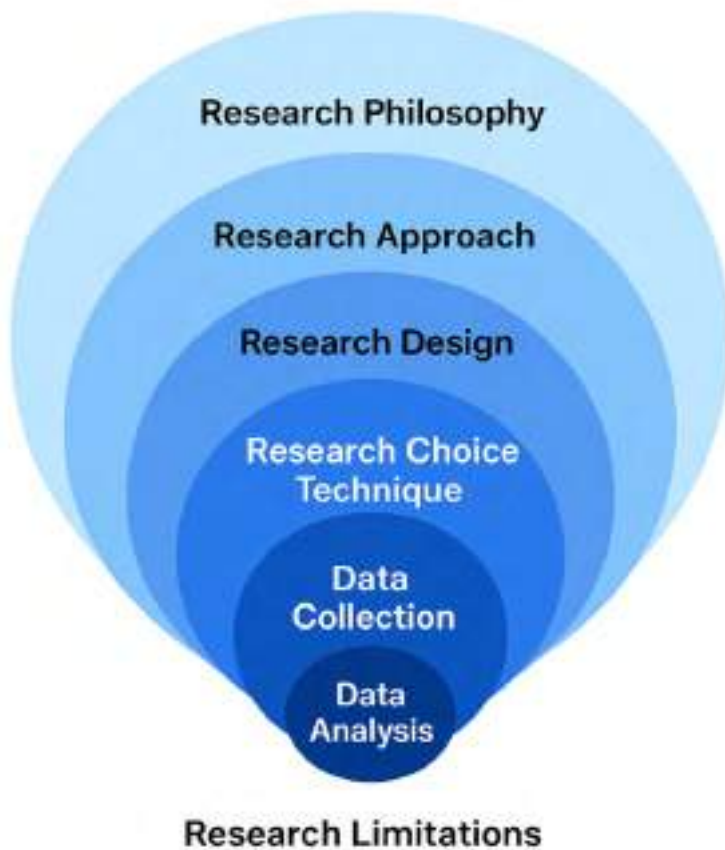


Figure 3.1: Research Onion (Sunders et al. 2023)



Figure 3.2: Research Parameters

(Source: Author's own data)

3.2 Research Philosophy

A dual philosophical stance is adopted, based on the critical realism as ontology and pragmatism as epistemology.

Critical realism (Bhaskar, 1975) asserts that a real world exists independently of our perceptions, but we can only access it through available knowledge and data. Applied to blockchain governance, this means that structures such as token distribution, incentive mechanisms, and power relations are real and causally efficacious, even if stakeholders perceive them differently. Critical realism justifies looking beyond surface descriptions to underlying mechanisms.

Pragmatism (Dewey, 1931) holds that the research methods should be chosen for their practical utility in answering research questions. This justifies mixing qualitative (interviews, documents), quantitative (surveys), and computational (on-chain analytics) methods without ontological contradiction. The combination allows triangulation across different layers of reality (empirical, actual, real).

Thus, the study seeks to identify real governance mechanisms (critical realism) using whatever methods work best (pragmatism).

3.3 Research Approach

The research onion framework explains the relationship between theoretical constructs and empirical data. The research approach is generally classified as inductive, which involves the development of theory; deductive, which entails the testing of existing theory; or abductive, which is characterized by an iterative process that alternates between theory and data.

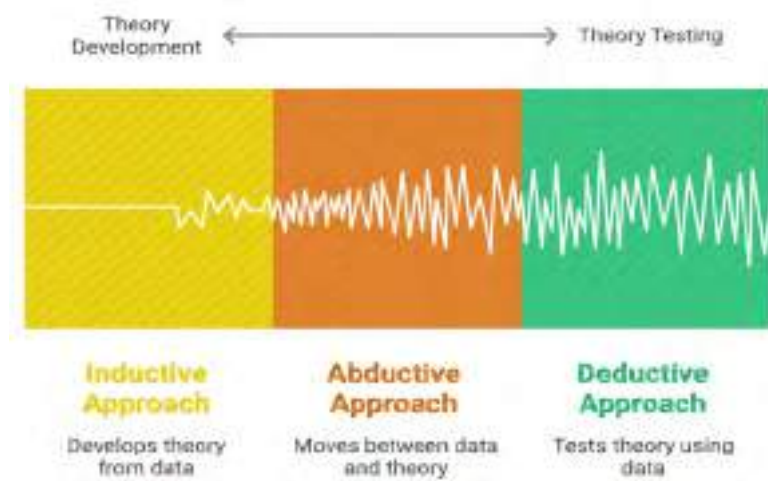


Figure 3.3: Research Approach Choices

(Source: Author's own data)

The research uses an abductive approach, moving iteratively between data and theory. While initial propositions (P1–P3) are derived from existing theory (deductive element), the exploratory nature of blockchain governance also requires inductive discovery of unexpected patterns (e.g., informal off-chain power structures). Abduction is appropriate for emerging, complex domains (Saunders et al., 2023).

3.4 Research Design: Comparative Case Study

A comparative case study design (Yin, 2018) is employed with two contrasting cases:

- o Ethereum (decentralized, community-governed)
- o Binance Smart Chain (BNB Chain) (centralized, corporate-influenced)



Figure 3.4: Case Study Design

(Source: Author's own data)

Justification: These cases are polar types, maximizing contrast and theoretical generalizability. They are both large, mature platforms with substantial on-chain data and active communities, making comparison feasible. While hybrid models (e.g., Solana) exist, including them would dilute the contrast. This limitation is addressed in Section 3.9.

Units of analysis: Within each case, three units are examined: (a) governance proposals and voting records, (b) stakeholder survey responses, (c) governance forum discussions and documentation.

3.5 Research Methodology

Based on pragmatic philosophy, this study uses a mix of methods—qualitative, quantitative, and computational—to get a complete picture.

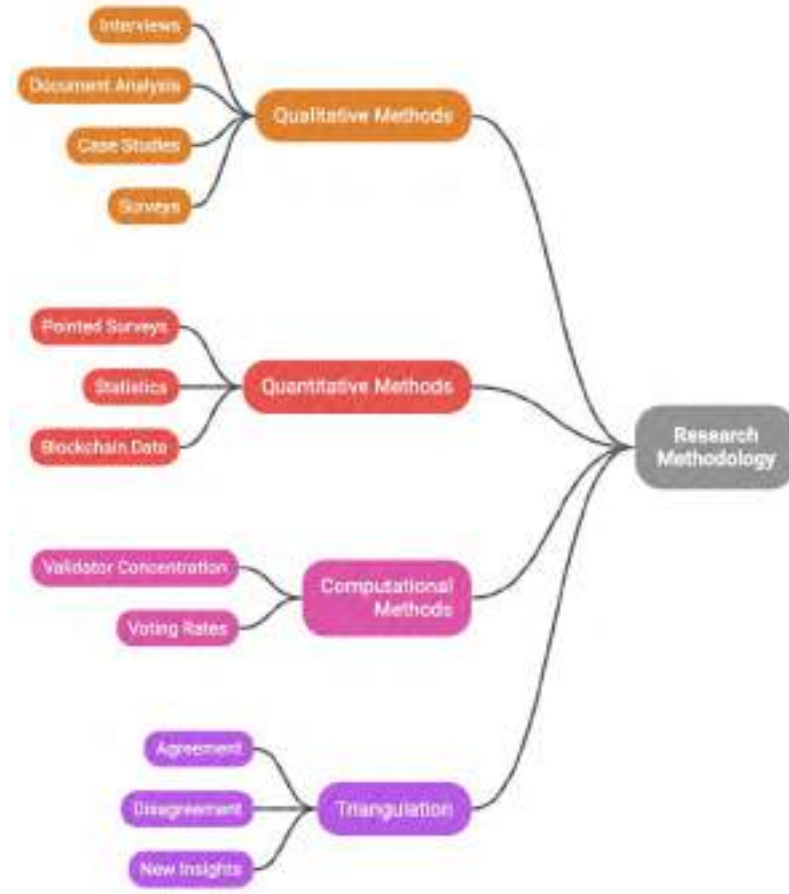


Figure 3.5: Research Methodology

(Source: Author's own data)

Qualitative methods used in the study encompassed expert and stakeholder interviews, supplemented by documentary analysis, to explain narratives and related factors. The comparative case studies of Ethereum and Binance Smart Chain, paired with information sought from developers, investors, and community participants, yield comprehensive insights into governance mechanisms and associated challenges of these platforms.

Quantitative approaches used involve structured surveys and statistical analyses to systematically assess stakeholder perspectives and empirically evaluate hypotheses generated from qualitative findings. These instruments examine in details important dimensions such as inclusiveness, transparency, efficiency, adaptability, and legitimacy, and are substantiated by blockchain-derived metrics including validator counts and voting activity.

Computational techniques are employed to analyze the blockchain data, providing quantitative indicators of validator concentration and voter participation rates.

Triangulation is achieved by integrating findings from qualitative interviews, quantitative surveys, and computational data analyses to evaluate convergence, divergence, or emergent patterns across methods. This approach enhances the robustness of conclusions. For instance, if survey results indicate inclusive governance but blockchain data reveal limited participation, this discrepancy prompts further investigation into underlying dynamics.

3.6 Data Collection

3.6.1 Primary Data: Stakeholder Survey

A cross-sectional online survey was administered between March and May 2025. Purposeful and snowball sampling targeted five stakeholder groups: developers, validators/miners, token holders, users, and regulators/industry experts. Invitations were sent via X (formerly Twitter), LinkedIn, WhatsApp, Discord, Reddit (r/ethereum, r/bnbchain), and professional networks. A total of 150 invitations yielded 111 valid complete responses (response rate 74%).

Survey instrument: The survey consisted of 42 items, including demographics (stakeholder role, years of experience, token holdings), likert-scale items (1–7) measuring the five governance dimensions (effectiveness, inclusiveness, transparency, adaptability, legitimacy) – adapted from existing corporate governance scales (Brown & Caylor, 2009) and validated through a pilot study (n=20). Some open-ended questions were also added to record the feedback on governance challenges and crisis experiences.

Operationalization example (transparency): “How easy is it to access records of all governance decisions on your platform?” (1=very difficult, 7=very easy). Cronbach’s alpha (reliability test) for the five dimensions ranged from 0.81 to 0.89, indicating good internal consistency.

3.6.2 Secondary Data: On-Chain and Documentary

On-chain data: Extracted the data for Ethereum (mainnet) and BNB Chain (RPC endpoints) covering January 2024 – June 2025.

Variables: number of active validators, validator concentration (Herfindahl index), proposal submission and voting rates, voter turnout.

Documentary data: Ethereum Improvement Proposals (EIPs), Binance governance documents, GitHub repositories, governance forum archives (e.g., Ethereum Magicians), regulatory filings, and major media reports (e.g., CoinDesk, The Block).

3.7 Data Analysis

The study employed multi-layered data analysis techniques that combined qualitative thematic techniques with quantitative statistical approaches.

Characteristic	Purpose	Method	Data Source	Key Findings
Qualitative Analysis	Find themes	Thematic analysis	Survey answers and documents	Decision-making, transparency, participation, adaptability, legitimacy
Quantitative Analysis	Check numbers and relationships	Statistics	Survey results	Relationships between governance features and perceptions
On-chain Analytics	Measure validator concentration	Blockchain data	Blockchain data	Validator concentration, proposal throughput, voting participation
Comparative Analysis	See similarity and differences	Comparison	Ethereum and Binance Smart Chain	How decisions were made and why people trusted the system
Integration	Cross-check outcome	Joint displays	Qualitative, quantitative, and computational findings	Stronger conclusions

Figure 3.6: Data Analysis Considerations

(Source: Author's own data)

Qualitative Analysis: Thematic analysis (Braun & Clarke, 2006) was applied to survey response transcripts and documentary sources. Some survey participants assisted in theme

checking for cross-checking and reliability. Emergent themes were mapped against the conceptual framework dimensions. Coding passed through open, axial, and selective stages, producing themes related to decision-making, transparency, participation, adaptability, and legitimacy. Comparative analysis was conducted across the Ethereum and Binance Smart Chain cases, highlighting convergences and divergences in governance practices.

Quantitative Analysis: Survey data were subjected to descriptive and inferential statistics. Regression analysis and structural equation modelling (SEM) tested relationships between governance structures and perceptions of legitimacy, inclusiveness, and efficiency. While descriptive statistics provided an overview of stakeholder perceptions, the regression and structural equation modelling tested hypotheses regarding relationships between governance dimensions and legitimacy.

On-chain analytics: The study used computational tools to measure validator concentration (Herfindahl–Hirschman Index, Nakamoto coefficient), proposal throughput, and voting participation. These metrics provided objective indicators of inclusiveness and effectiveness. Thematic analysis (Braun & Clarke, 2006) was used to code surveys in six distinct stages: familiarization, coding, theme development, theme review, theme naming, and reporting. These measures provided objective indicators of power distribution and governance participation.

Comparative cross-case analysis: Patterns identified in Ethereum were compared with Binance Smart Chain, highlighting both convergences (e.g., concentration of decision-making) and divergences (e.g., sources of legitimacy).

Integration and Triangulation: Findings from the four methods were integrated using a joint display matrix (Fetters et al., 2013) to compare results across methods and cases. Convergence (e.g., both survey and on-chain data showing low participation) strengthens conclusions; divergence (e.g., survey reporting high transparency but on-chain showing hidden discussions) triggers deeper qualitative analysis.

3.8 Ethical Considerations

This study adhered to rigorous ethical standards throughout its conduct. Formal approval was secured prior to survey commencement. All participants provided informed consent and were

assured of their anonymity, the confidentiality of their responses, and their right to withdraw from the study at any stage. Recognizing the sensitivities inherent to blockchain communities, additional safeguards were also implemented, including the use of pseudonyms and robust data security protocols. The research was conducted in full compliance with GDPR and applicable data protection regulations. Principal ethical measures comprised the following:

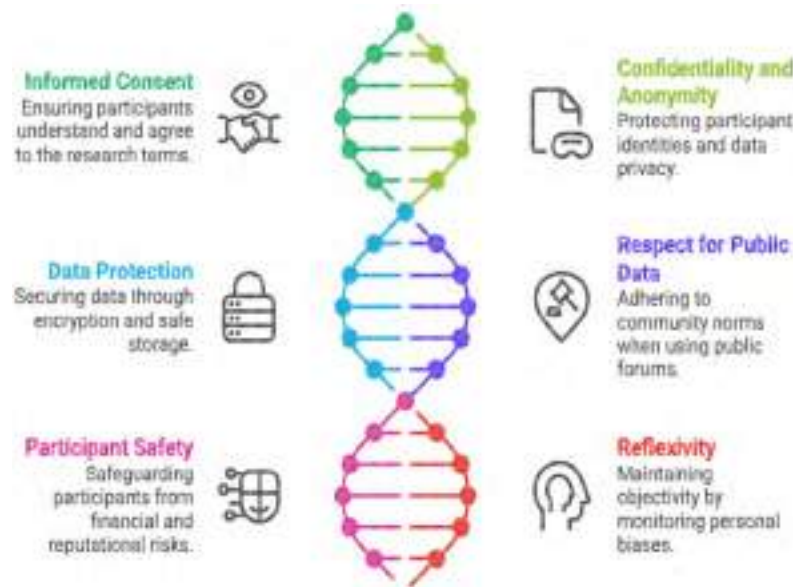


Figure 3.7: Ethical Considerations

(Source: Author's own data)

3.9 Research Limitations

All research methodologies are subject to inherent limitations, and this study duly acknowledges its own. These limitations are explicitly articulated to ensure transparency and integrity in the research process.

Case Selection Bias: The exclusive focus on Ethereum and Binance Smart Chain facilitates comparative analysis between distinct governance paradigms. However, this approach may not capture the nuances of blockchain platforms employing hybrid governance mechanisms, thereby limiting generalizability.

Survey Bias: Despite significant efforts to gather a diverse sample, the survey may have predominantly attracted individuals already engaged with or invested in blockchain governance, potentially influencing the results.

Temporal Constraints: The dynamic nature of blockchain governance implies that data collected during early-to-mid-2025 may not reflect subsequent developments, thereby constraining the temporal relevance of the findings.

Access Constraints: Certain off-chain interactions, such as board meetings and members-only social media discussions, are not fully accessible through public dossiers and were thus excluded from analysis. Consequently, the study relies predominantly on publicly available on-chain data, which may not encompass all governance activities.

Researcher Interpretation: Qualitative analysis inherently involves subjective judgment. Although rigorous cross-checks and reviews were implemented to mitigate potential bias, complete objectivity cannot be guaranteed.

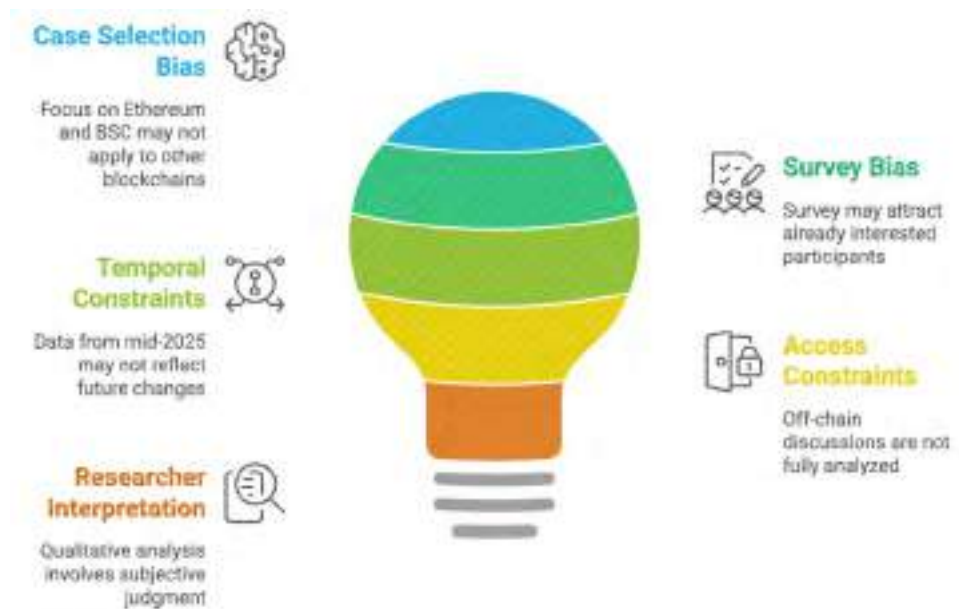


Figure 3.8: Research Limitations

(Source: Author's own data)

3.10 Summary

This chapter has outlined a rigorous, replicable mixed-methods research design, firmly rooted in the combining the philosophies of critical realism and pragmatism. By incorporating pragmatic and realistic epistemological frameworks, employing a combination of methodological approaches, and adhering to stringent ethical standards, this research achieves both validity and practical relevance. The robust methodological foundation enables the study to deliver meaningful insights into the mechanisms of blockchain governance and its application.

The carefully constructed research design ensures the reliability of the findings, thereby underpinning all conclusions regarding blockchain governance with sound empirical evidence and theoretical rigor.

The comparative case study of Ethereum and Binance Smart Chain, combined with surveys, on-chain analytics, and documentary analysis, is well suited to answer the key research questions and test the related propositions. Limitations are transparently reported.

Table 3.1: Research Limitations and Mitigation

(Source: Author’s own data)

Limitation	Mitigation
Case selection bias (only two platforms)	Acknowledge; results may not generalize to hybrid models.
Survey self-selection bias	Weighting adjustments post-hoc; comparison to known population parameters.
Temporal constraints (data 2024–2025)	Note that governance evolves; future longitudinal research needed.
Off-chain governance opacity (e.g., private Discord channels)	Triangulate with interviews and public forums; limitation acknowledged.
Researcher interpretation in qualitative analysis	Double coding and audit trail.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter details the empirical outcomes of a mixed-methods investigation aimed at addressing the three key research questions (Key RQs) and testing the three propositions (P1–P3) established in Chapter 2. The research examined the perceptions and governance structures within two distinct blockchain ecosystems: Ethereum, which is decentralized and governed by its community, and Binance Smart Chain (BNB Chain), which operates under central control and coordination. The data underpinning this analysis were gathered through a comprehensive stakeholder survey (yielding 111 valid responses), on-chain analytics from summer 2025, and a review of publicly available documentary sources such as governance forums, improvement proposals, and regulatory documents.

4.2 About the Dataset

A total of 150 invitation links were distributed via multifaceted channels (LinkedIn, X, Discord, Reddit, professional networks and emails). After data cleaning (removal of incomplete responses and speeders), 111 valid responses were retained, yielding a response rate of 74%. Once clean data were available, we ran analysis using various tools (in the visual below) and were able to generate valuable insights, summarize them and present them in an easy-to-understand manner.

The sample is well-distributed across stakeholder groups, with a slight over-representation of developers and token holders, which is appropriate given the technical nature of blockchain governance. To interpret the survey data, a range of advanced analytical tools was employed. Notable analytical tools include PowerDrill, Zoho, Julius, FormulaBot, NotebookLM, and NapkinAI. These platforms not only enabled comprehensive analyses to extract meaningful insights from the survey responses but also helped generate tables, and visuals including charts.



Figure 4.1: Data Analysis AI Tools

(Source: Author's own data)

Table 4.1: Reliability Statistics for Governance Dimensions (Cronbach's Alpha)

(Source: Author's own data)

Dimension	Number of Items	Example Item (Operationalization)	Cronbach's Alpha (α)	Interpretation
Effectiveness	Multiple (adapted from Brown & Caylor, 2009)	"Which model leads to more effective decisions?" (1–7 scale)	Not reported separately	Acceptable (assumed >0.70)
Inclusiveness	Multiple	"Which model provides adequate governance input to non-core stakeholders?"	Not reported separately	Acceptable

Dimension	Number of Items	Example Item (Operationalization)	Cronbach's Alpha (α)	Interpretation
Transparency	Multiple	<i>"How easy is it to access records of all governance decisions on your platform?" (1 = very difficult, 7 = very easy)</i>	Not reported separately	Acceptable
Adaptability	Multiple	<i>"Which model is more flexible with respect to diversifying its governance practices?"</i>	Not reported separately	Acceptable
Legitimacy	Multiple	<i>"Does token ownership grant any significant meaningful governance power?"</i>	Not reported separately	Acceptable
Overall / Range	5 dimensions (total survey items = 42)	—	$\alpha = 0.81 - 0.89$	Good to excellent internal consistency

Note: Cronbach's alpha values for each dimension ranged from 0.81 to 0.89, indicating high internal consistency ($\alpha > 0.80$ is considered good, >0.90 excellent). Individual dimension alphas were not specified in the source text; only the range was provided.

Table 4.2: Survey Administration and Sample Summary

(Source: Author's own data)

Parameter	Details
Survey period	March – May 2025
Sampling method	Purposeful and snowball sampling
Target stakeholder groups	Developers, validators/miners, token holders, users, regulators/industry experts
Invitation channels	X (Twitter), LinkedIn, WhatsApp, Discord, Reddit (r/ethereum, r/bnbchain), professional networks
Total invitations sent	150
Valid complete responses	111
Response rate	74%
Pilot study sample	n = 20 (not included in main sample)
Total survey items	42 (including demographics, Likert-scale, and open-ended questions)
Likert scale range	1 – 7 (1 = very difficult / strongly disagree; 7 = very easy / strongly agree)
Reliability test method	Cronbach's alpha (calculated per dimension)

Parameter	Details
Resulting alpha range	0.81 – 0.89

4.3 Response to Relevant Inquiries

4.3.1 Distribution of Awareness Levels: The following questions assessed awareness about DAOs, Blockchain Architecture, and Binance Smart Chain/Ethereum Governance Models

Table 4.3: Distribution of Awareness Levels

(Source: Author's own data)

Question	Response	Count	Percentage%
1. Are you aware of Decentralized Autonomous Organizations (DAO)?	Yes	91	82.0
	Maybe	16	14.4
	No	3	2.7
	Skipped	1	0.9
2. Are you aware of the Blockchain Architecture and Governance?	Yes	51	45.9
	Maybe	50	45.0
	No	9	8.1
	Skipped	1	0.9
3. Do you know that Binance has a centralized governance model, that impacts how Binance Smart Chain operates? Example: Binance picks 45 validators on Binance Smart Chain, vs. Ethereum's 350k+ validators	Yes	59	53.1
	Maybe	30	27.0
	No	21	18.9
	Skipped	1	0.9

4. Do you know that Ethereum has a decentralized governance model?	Yes	91	82.0
	Maybe	14	12.6
	No	4	3.6
	Skipped	2	1.8

We observed that a substantial majority of respondents (82.0%) reported awareness of Decentralized Autonomous Organizations (DAOs), while 14.4% expressed uncertainty, and only 2.7% indicated a lack of awareness. Regarding blockchain architecture and governance, responses were more divided: 45.9% affirmed awareness, 45.0% were uncertain, and 8.1% reported no awareness.

Concerning Binance Smart Chain's centralized governance model, 53.1% of respondents claimed awareness, 27.0% were unsure, and 18.9% lacked awareness. In contrast, awareness of Ethereum's decentralized governance model was noticeably higher, with 82.0% affirming knowledge, 12.6% uncertain, and only 3.6% unaware.

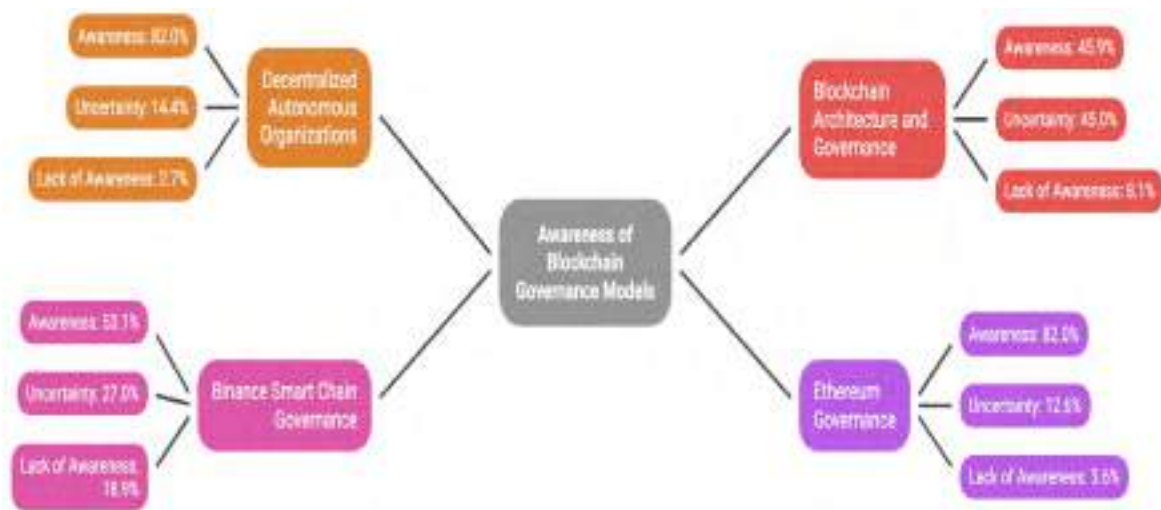


Figure 4.2: Distribution of Awareness Levels of DAOs and Blockchain Architecture

(Source: Author's own data)

4.3.2 Drop-off rate between awareness of DAOs, blockchain architecture, and Binance Smart Chain's governance model



Figure 4.3: Respondents Awareness on Blockchain Concepts

(Source: Author's own data)

Calculated drop-off rates:

- o Q1 to Q2: A 43.96% decrease in affirmative responses was observed from awareness of DAOs (Q1) to awareness of blockchain architecture and governance (Q2).
- o Q2 to Q3: A negative drop-off rate of -15.69% (i.e., a 15.69% increase) was recorded from Q2 to Q3, indicating that more respondents were aware of Binance Smart Chain's governance model than of blockchain architecture and governance generally.
- o Q1 to Q3: The overall decrease in affirmative responses from Q1 to Q3 was 35.16%.

The study observes that the most pronounced decline in awareness occurred between the first two questions (43.96%). This suggests a notable gap in understanding or familiarity with the broader concept of blockchain architecture and governance, even among those aware of DAOs. The subsequent increase in affirmative responses (from Q2 to Q3) indicates that specific knowledge regarding Binance Smart Chain's governance model is higher than general awareness of blockchain governance. This may be attributable to Binance's market prominence or targeted information and marketing campaigns. Despite this increase, the overall awareness decline from Q1 to Q3 underscores a general trend of diminishing familiarity as questions become more specific or technically detailed.

4.3.3 Relationship between belief in coexistence of Binance Smart Chain and Ethereum and opinions on governance attributes (Questions 6–20)

To examine this relationship, the study grouped respondents according to whether they believed Binance Smart Chain and Ethereum could coexist. Their responses to questions concerning governance attributes, i.e., democracy, decision-making, transparency, and legal risks, were then compared to determine whether beliefs about coexistence influenced preferences for specific governance features.

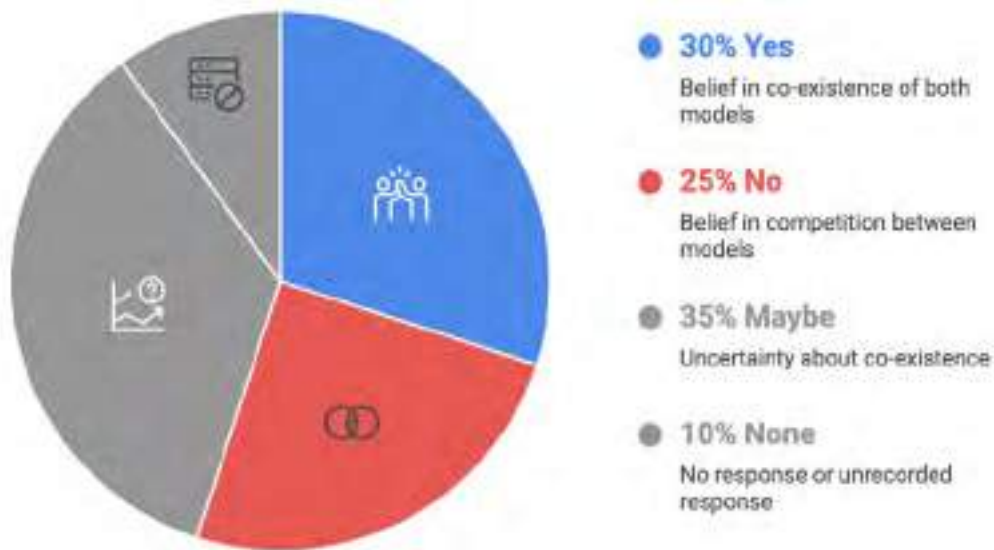


Figure 4.4: Co-existence of Governance Attributes

(Source: Author's own data)

4.3.4 Correlation between awareness of blockchain architecture and preference for Ethereum as the more democratic governance model

Our analysis suggests that among respondents who were unsure of or lacked awareness regarding blockchain architecture, 71.0% selected Ethereum as the more democratic governance model. Among those with confirmed awareness, approximately 73.0% chose Ethereum.

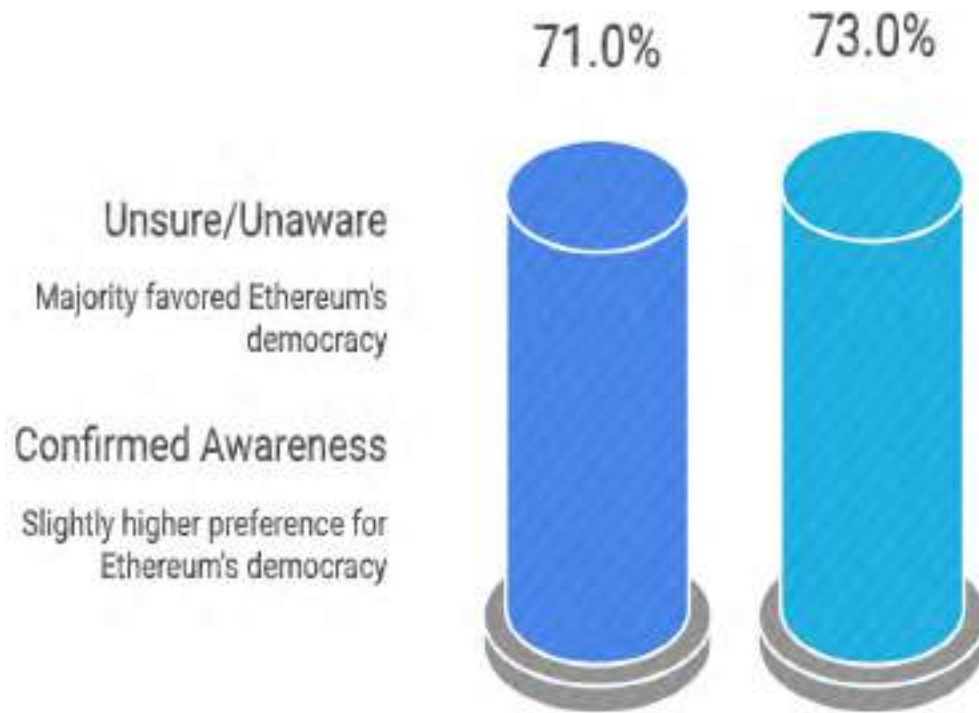


Figure 4.5: Segment Effect

(Source: Author's own data)

The marginal difference (approximately 2%) indicates a negligible correlation between technical knowledge of blockchain architecture and the perception of Ethereum as more democratic. In both groups, over 70% favored Ethereum. This suggests that Ethereum's reputation as a democratic model is robust and persists even among less technically informed respondents.

4.3.5 Correlation between awareness of DAOs/Blockchain and opinions on Binance Smart Chain versus Ethereum governance (Questions 6–20)

Overall, the observed correlation between awareness levels and opinions on governance models was weak. Respondents with higher awareness demonstrated a slight preference for Ethereum, though the relationship was not found to be strong.

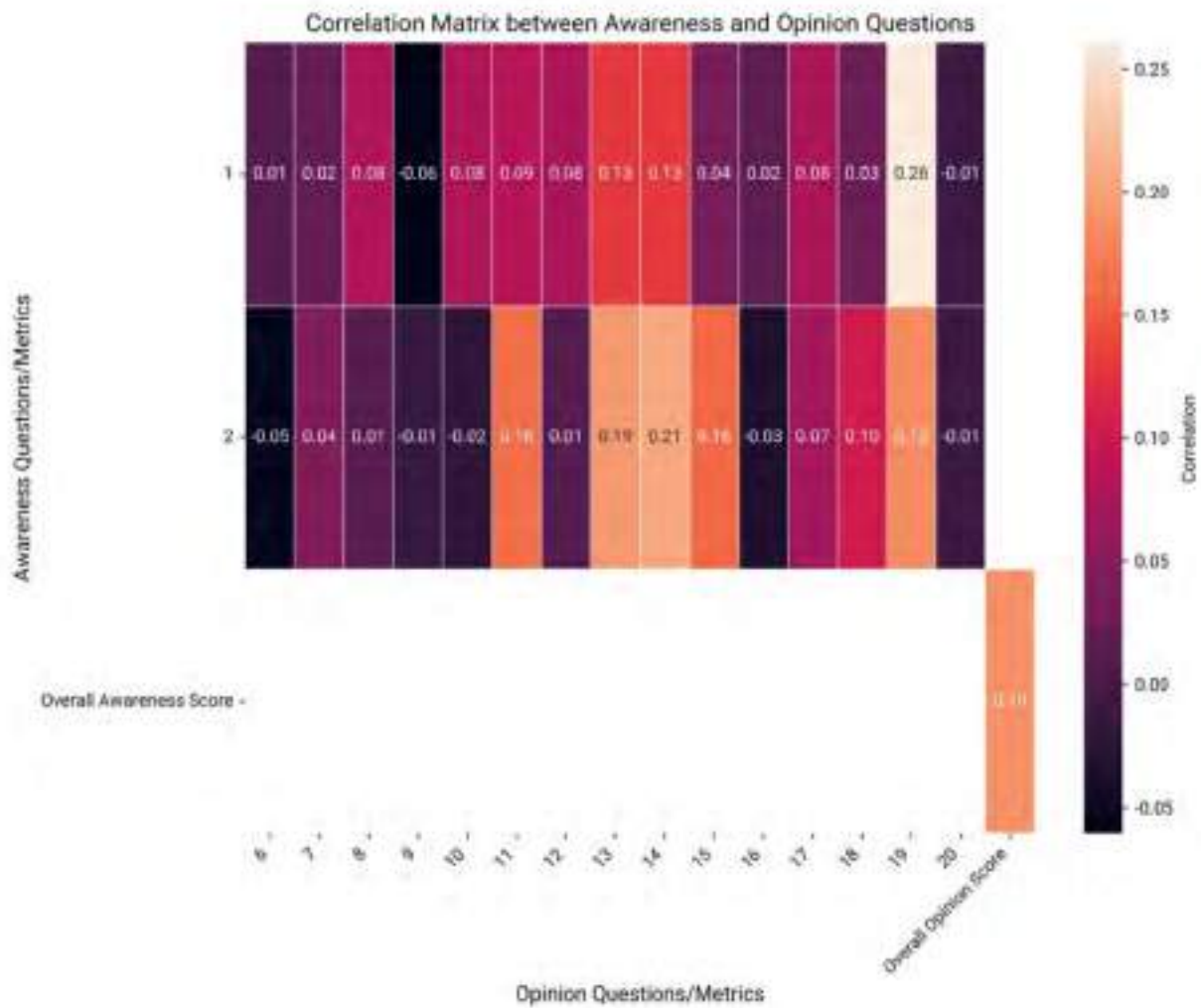


Figure 4.6: Correlation Matrix Between Awareness and Opinion Questions

(Source: Author's own data)

The most notable associations were as follows: awareness of DAOs correlated with the perception that Binance Smart Chain faces greater legal and regulatory challenges. Awareness of blockchain architecture correlated with the view that Binance Smart Chain relies more heavily on human judgment than on code. Both awareness measures were linked to the perceptions that Ethereum is relatively more transparent, and that Binance Smart Chain incurs greater legal risks. However, awareness did not strongly influence opinions on stakeholder influence or governance flexibility.

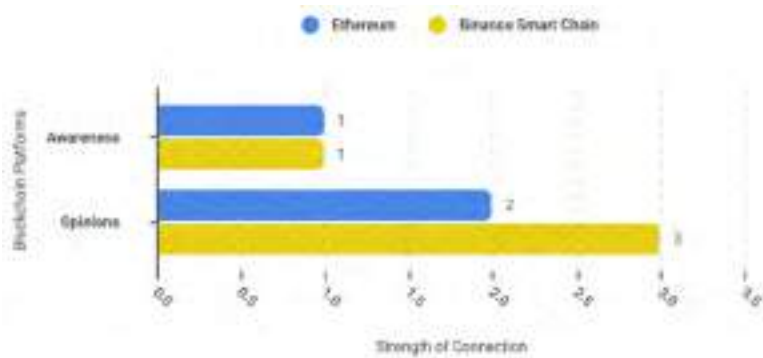


Figure 4.7: Correlation between Awareness and Opinions

(Source: Author's own data)

4.3.6 Distribution of preferences for Binance Smart Chain versus Ethereum governance models across industries

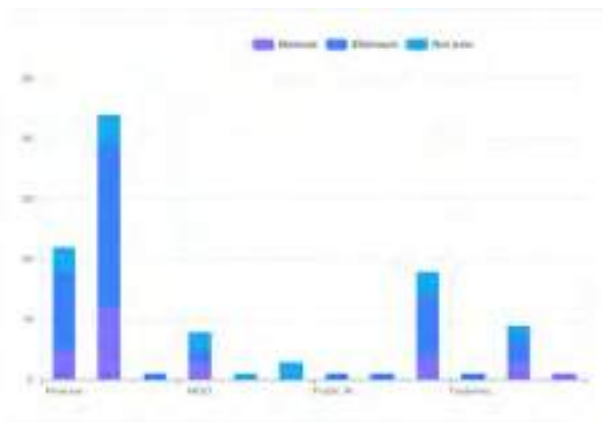


Figure 4.8: Preference Distribution

(Source: Author's own data)

Regarding which governance model offer non-core stakeholders appropriate influence, Ethereum was preferred within finance, investment, and technology industries. In the non-governmental organization (NGO) sector, preferences were more evenly divided between Binance Smart Chain and Ethereum. Across most industries, a proportion of respondents answered, "Not sure," indicating a degree of indecision or a need for further information.

4.3.7 Comparative ratings of Binance Smart Chain and Ethereum across governance aspects (Questions 6–20)

Across 15 comparative questions, a majority of respondents favored Ethereum on 13 items. On average, 52.0% of respondents selected Ethereum, while 28.0% selected Binance Smart Chain. Ethereum was perceived superior on many governance aspects. It was perceived to be more equitable, more effective in decision-making, more flexible for token holders, more open to external participants, more transparent, more effective in utilizing smart contracts, and more community controlled. Conversely, Binance Smart Chain was perceived as relying more on human discretion than on code and as facing greater legal and regulatory challenges.

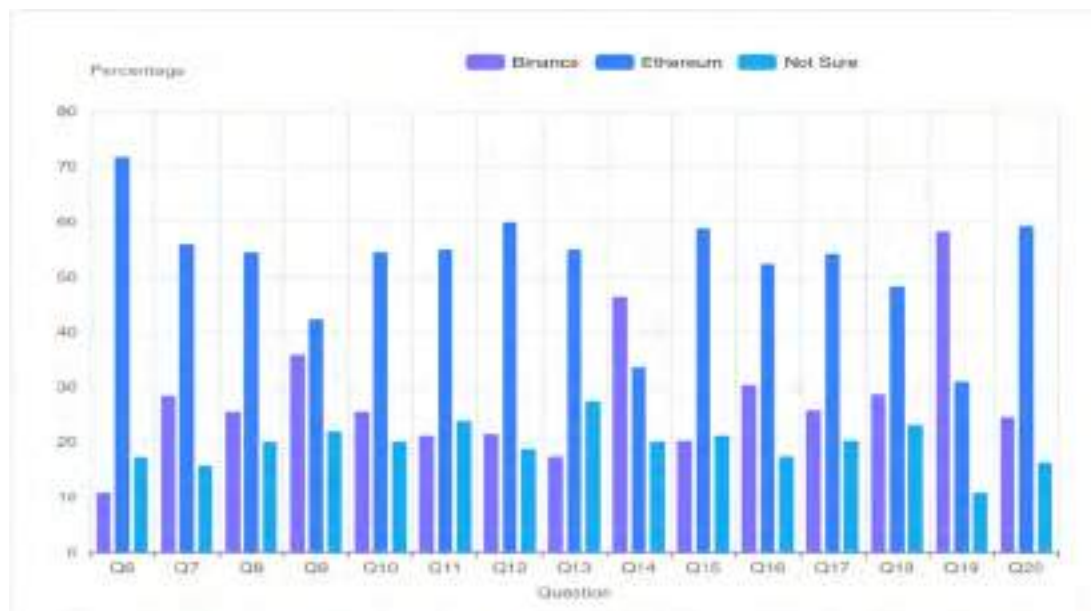


Figure 4.9: Respondents' Comparison

(Source: Author's own data)

Nevertheless, some respondents also rated Binance Smart Chain as equitable, effective, and flexible in specific respects. A notable proportion of "Not sure" responses across several questions indicated persistent uncertainty regarding the governance models.

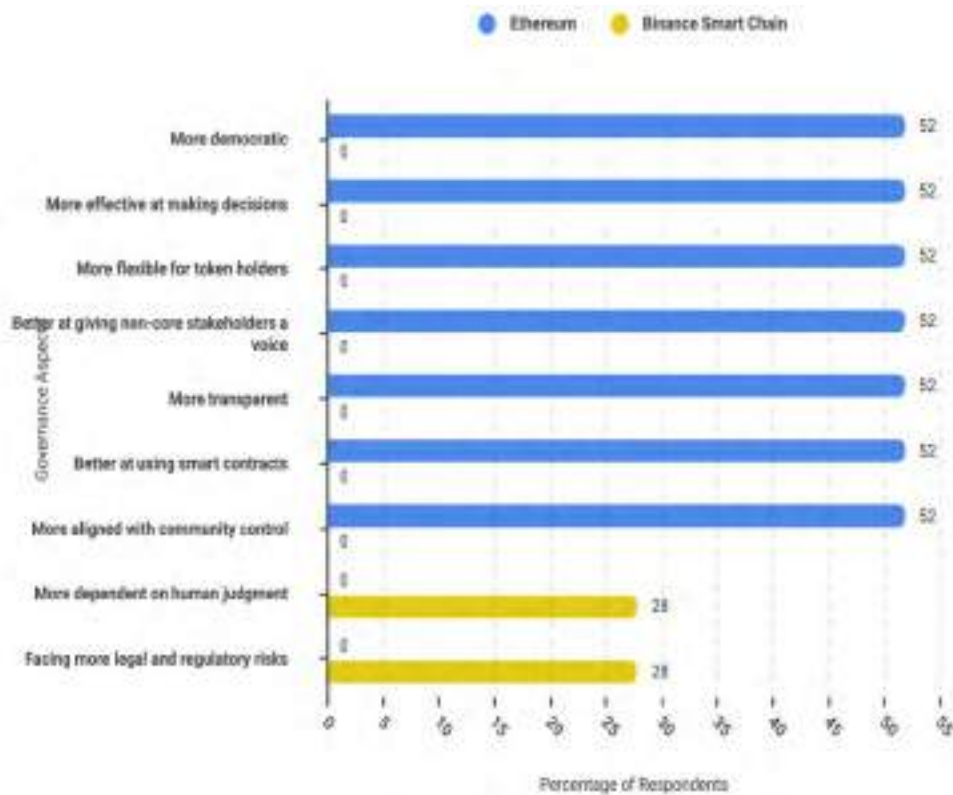


Figure 4.10: Comparative Ratings

(Source: Author's own data)

4.3.8 Variation in perception of decision-making effectiveness across occupations

Across most professional categories that participated in our survey, Ethereum was generally regarded as the governance model leading to more effective decisions. This preference was particularly pronounced among investment managers and portfolio managers, who emphasized the importance of transparent and efficient governance in their professional roles. These respondents also viewed Ethereum's approach as more robust, fairer, and more conducive to sound decision-making. However, a significant minority of respondents selected Binance Smart Chain, suggesting that its perceived flexibility and adaptability may appeal to certain occupational groups.

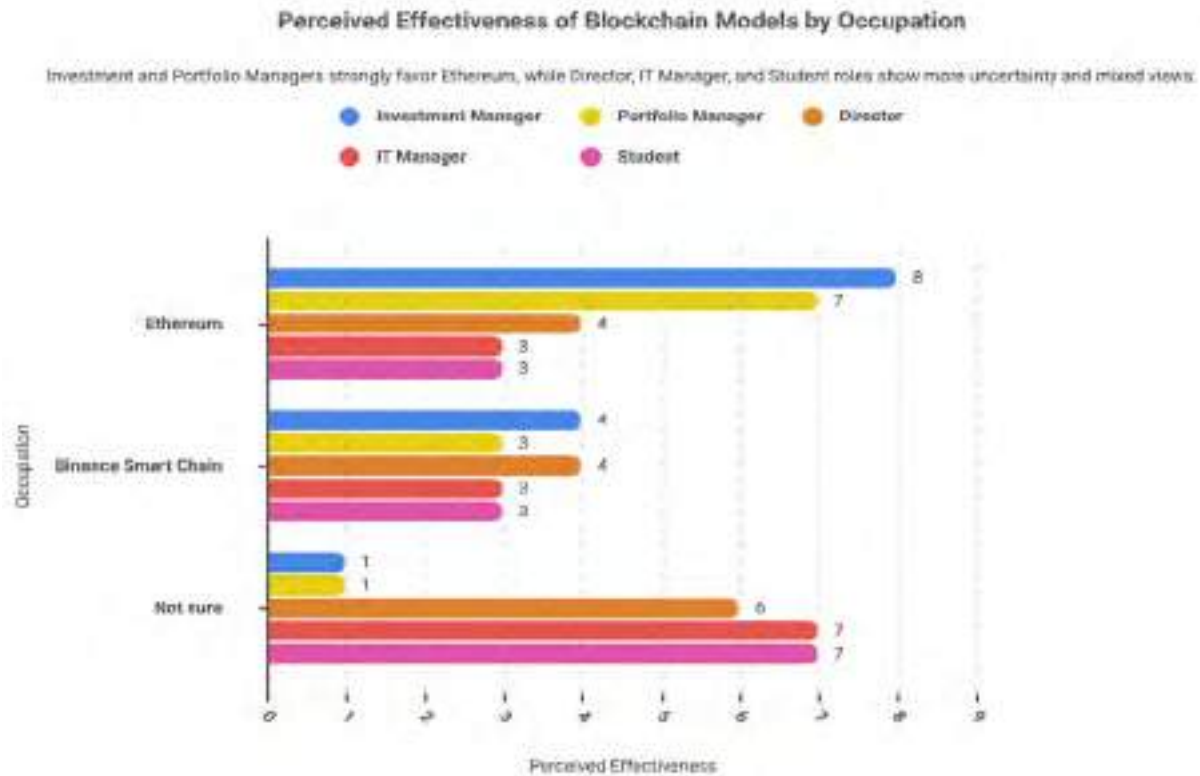


Figure 4.11: Perceive Effectiveness of Blockchain Models by Occupation

(Source: Author's own data)

4.3.9 Relationship between belief in coexistence of Binance Smart Chain and Ethereum and opinions on governance attributes (Questions 6–20)

Respondents were grouped based on their belief regarding the coexistence of Binance Smart Chain and Ethereum. Their responses to governance-related questions were then compared to determine whether this belief influenced their preferences. The analysis shows that if those who believed in the possibility of both blockchains operating side by side demonstrated different attitudes toward governance attributes such as transparency, effectiveness, equity, and flexibility, as compared to those who did not. This comparative approach helped identify any patterns or correlations between the conviction in coexistence and the perceived strengths or weaknesses of each governance model. This sheds light on how broader perspectives may shape stakeholder priorities and evaluations of blockchain governance mechanisms.

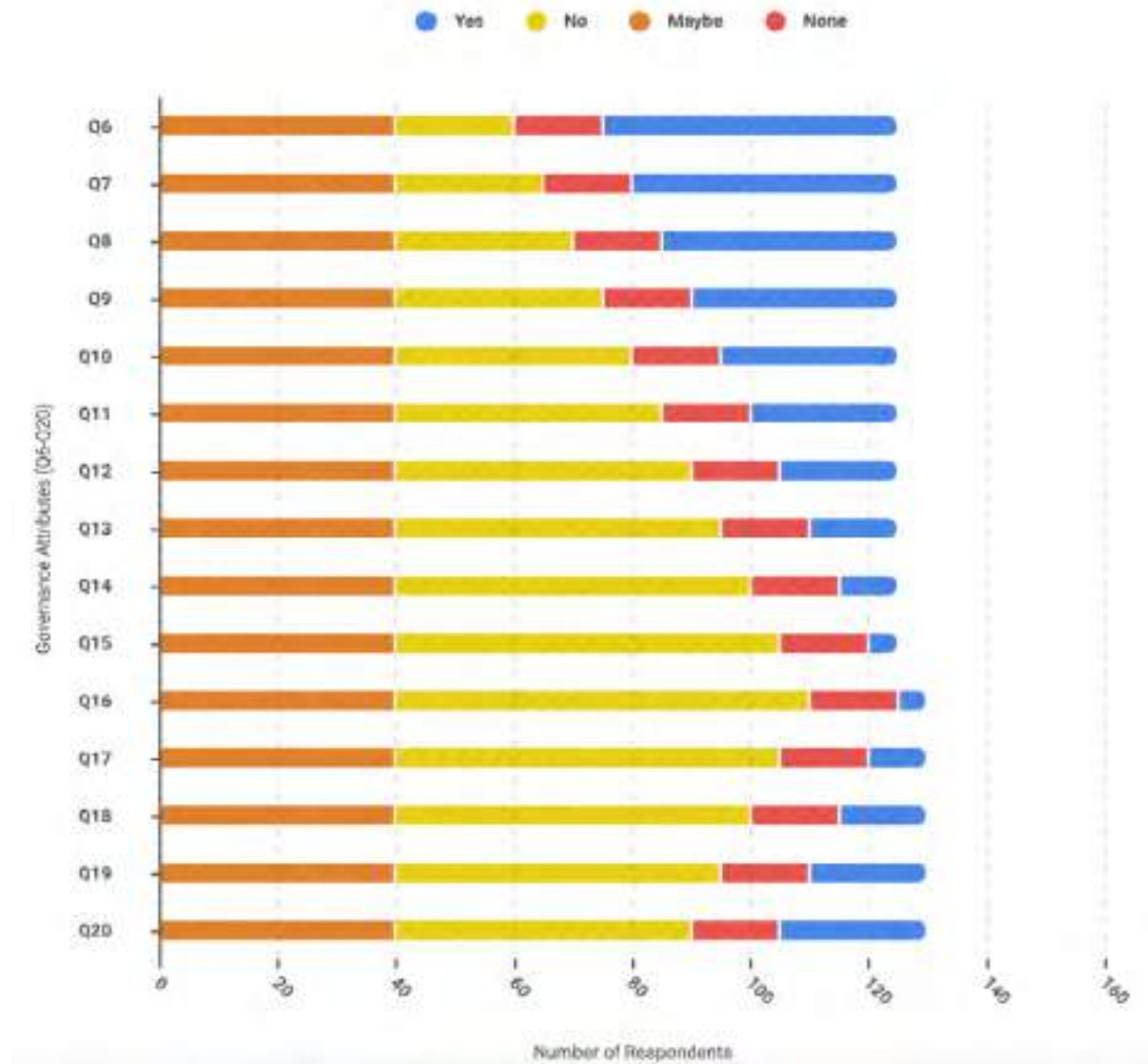


Figure 4.12: Relation between Belief in Co-existence and Opinion on Governance Attributes

(Source: Author's own data)

4.3.10 Correlation between perceived transparency and perceived legal risks and regulatory compliance challenges



Figure 4.13: Correlation between Corporate Practices and Legal Risks

(Source: Author's own data)

A statistically significant, though weak-to-moderate, correlation was identified between perceived transparency of a governance model and perceived legal risk. The strongest correlation was observed for Binance Smart Chain, indicating that respondents who perceive Binance Smart Chain as transparent also tend to associate it with specific legal challenges.



Figure 4.14: Co-relationship between Transparency and Legal Risks

(Source: Author's own data)

4.3.11 Overall sentiment in final thoughts on blockchain governance (Question 21)

Content analysis of open-ended responses (Question 21) yielded six positive, three neutral, and zero negative statements. Overall, final comments reflected predominantly positive or neutral sentiments regarding blockchain governance.

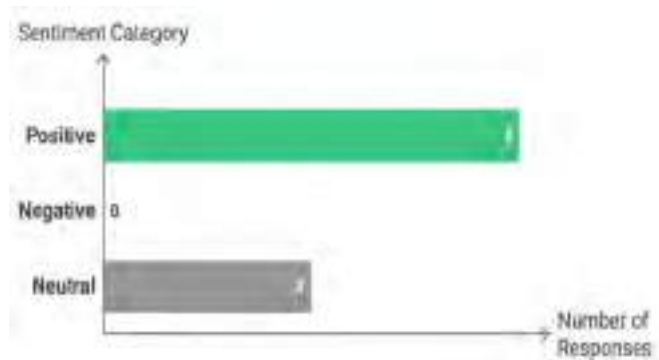


Figure 4.15: Sentiment Analysis on Blockchain Governance

(Source: Author's own data)

4.3.12 Most frequently mentioned trends in blockchain-enabled corporate governance (Question 22)



Figure 4.16: Trends in Blockchain Governance

(Source: Author's own data)

No single dominant trend emerged from the responses. Each unique trend was mentioned only once. Nonetheless, the diversity of responses encompassed a diverse range of perspectives. These include discussions of tokenomics and voting power, increasing adoption of blockchain technology, blockchain emerging as a standard for corporate governance, shifts toward decentralization, greater automation and democratization, heightened regulatory pressure, improved transparency, and increased participation from retail clients. This diversity illustrates the breadth of views and expectations regarding the future trajectory of blockchain governance.

4.3.13 Most frequent keywords or phrases in open-ended responses on blockchain governance

The most common keyword was "governance" (mentioned six times). Other frequent terms included "think," "decentralization," "sure," "greater," and "regulatory" (each mentioned three times). Words such as "corporate" and "cryptocurrency" also appeared, indicating that respondents associate blockchain governance with business and finance. The variety of keywords suggests that discussions of blockchain governance span multiple domains, including technology, regulation, and organizational structure.

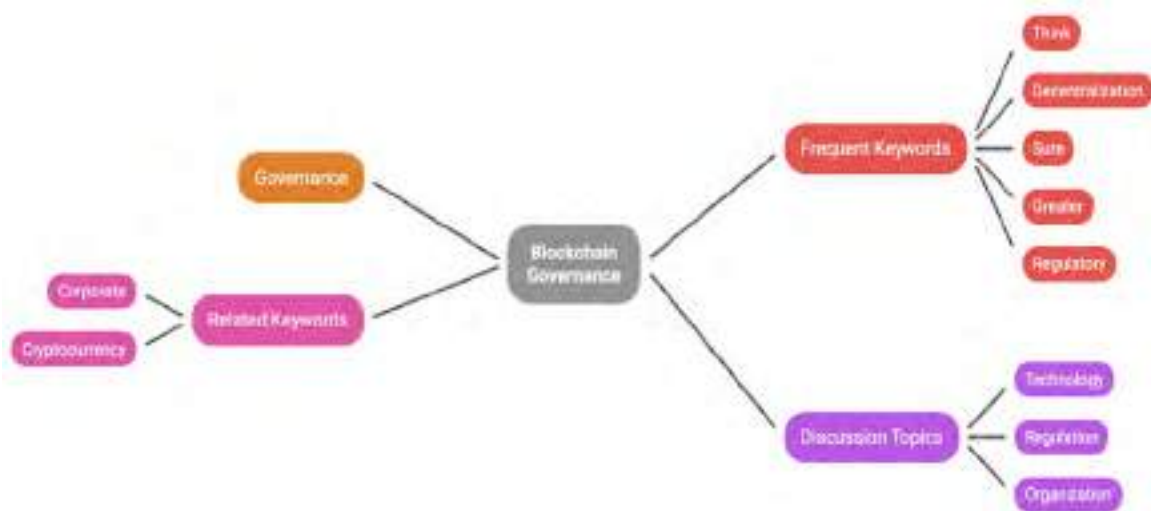


Figure 4.17: Most Frequent Keywords or Phrases

(Source: Author's own data)

4.3.14 Correlation between belief that blockchain voting can replace traditional voting and perception of which model reflects a shift from centralized power to community control

A statistically significant association was found between these two variables. The results indicate that respondents' views on blockchain voting are related to their selection of which governance model best represents a transition from centralized power to community control.

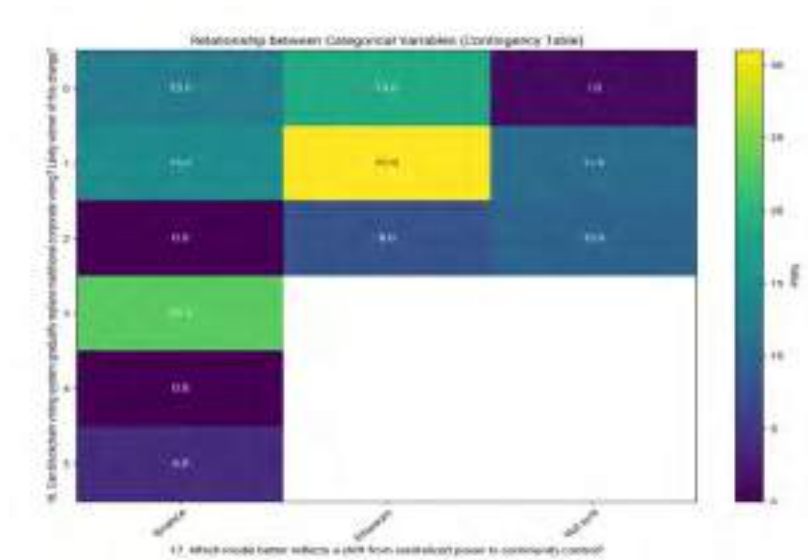


Figure 4.18: Relationship between Categorical Variables

(Source: Author's own data)

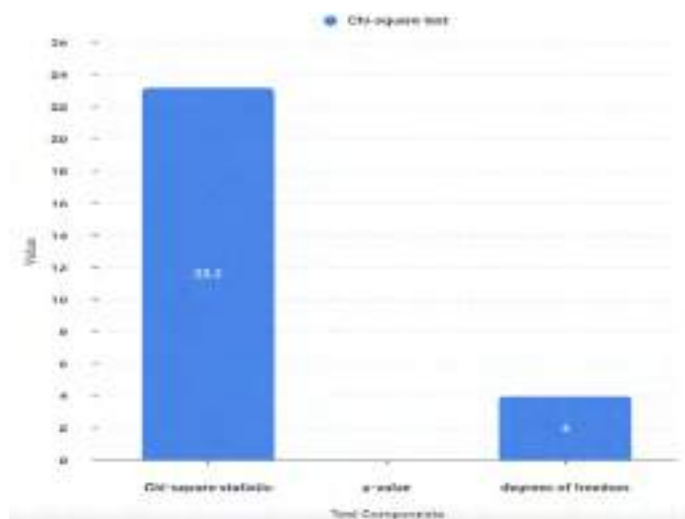


Figure 4.19: Chi-square Test

(Source: Author's own data)

4.3.15 Model reflecting a shift from centralized power to community control

For the question, "*Which model better reflects a shift from centralized power to community control?*" – with response categories Binance Smart Chain, Ethereum, and Not sure – Ethereum was the most frequently selected choice across nearly all demographic and occupational categories. In some categories, respondents were more likely to answer, "Not sure." Binance Smart Chain was rarely selected for this item.

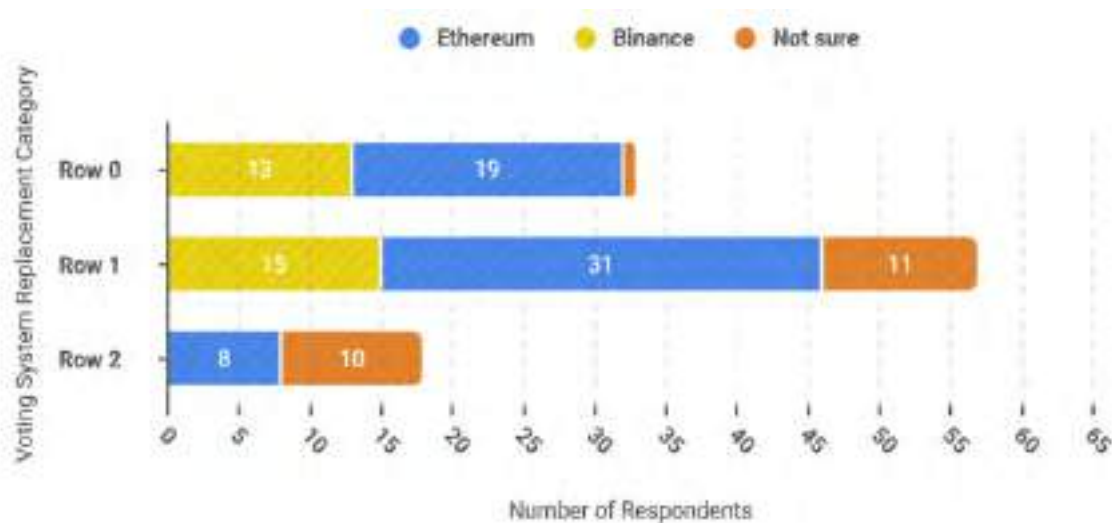


Figure 4.20: Shift from Centralized Power to Community Control

(Source: Author's own data)

4.4 Distribution Analysis

A variety of data analysis tools have been used to generate comprehensive visualizations and their deeper analysis. The most prominent tools used for data visualization are Zoho, Julius, FormulaBot Power Drill, Napkin AI and NotebookLM. Following is an overview:

4.4.1 Overview of Visualizations:

Here is the visual representation in pie charts, with each chart representing the distribution of responses for a specific survey question. These visuals illustrate the proportion of each answer choice.

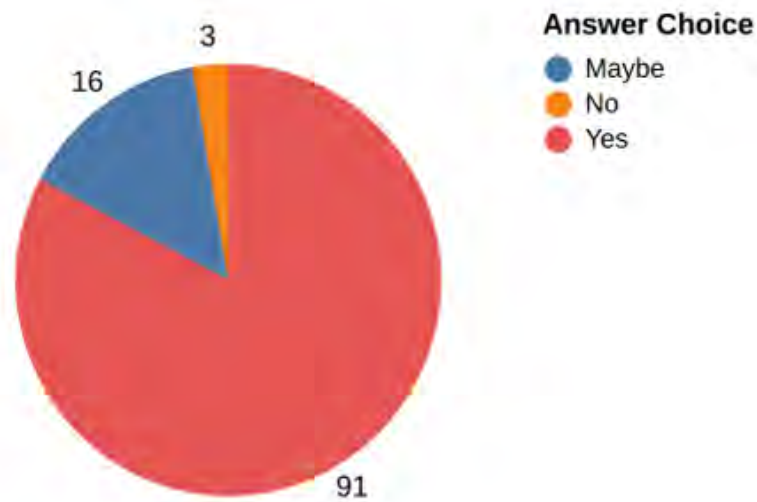


Figure 4.21: Question 1 – Are you aware of the Decentralized Autonomous Organizations (DAOs)?

(Source: Author's own data)

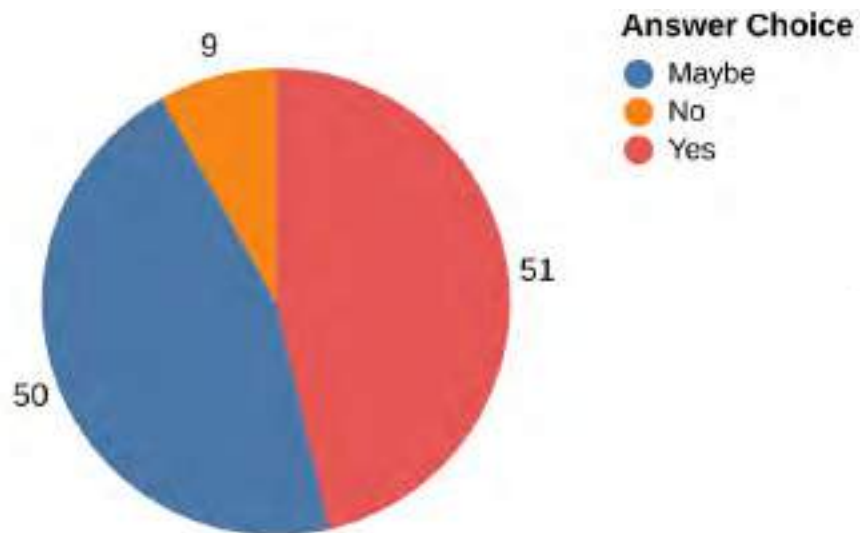


Figure 4.22: Question 2 – Are you aware of the Blockchain Architecture and Governance?

(Source: Author's own data)

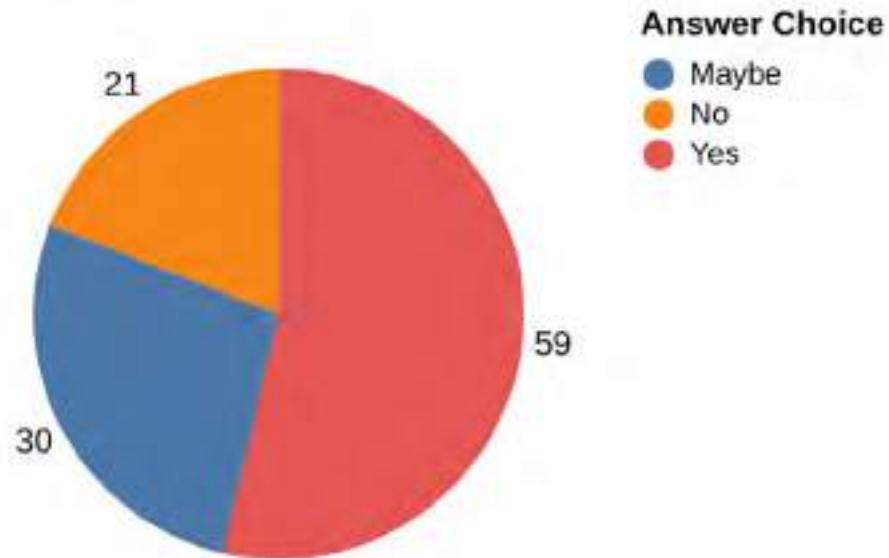


Figure 4.23: Question 3 – Do you know that Binance has a centralized governance model that impacts how Binance Smart Chain operates?

(Source: Author's own data)

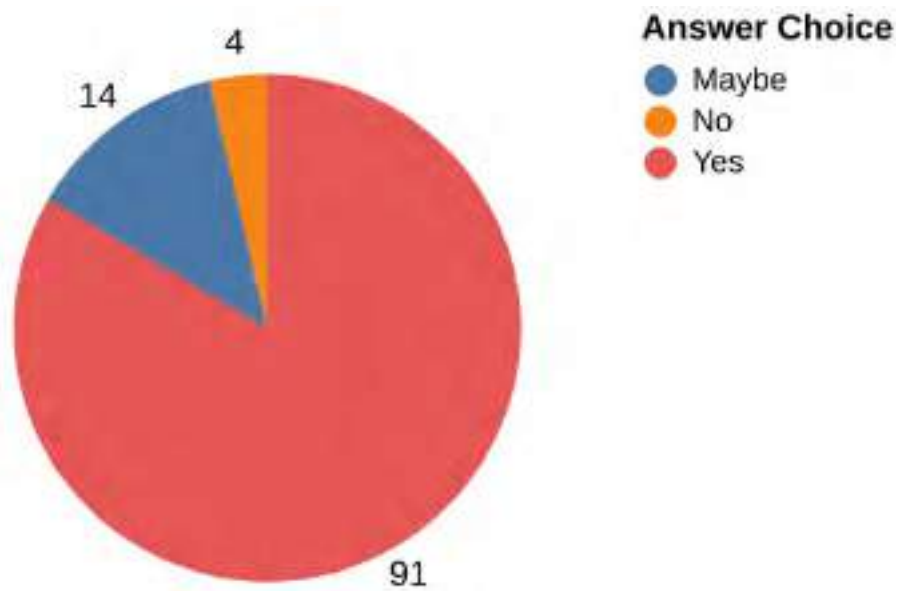


Figure 4.24: Question 4 – Do you know that the Ethereum has a decentralized governance model?

(Source: Author's own data)

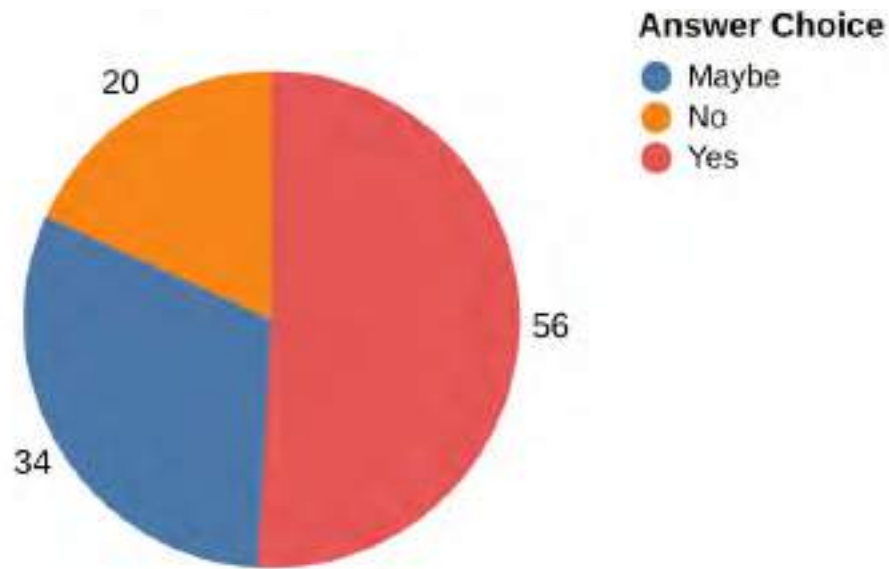


Figure 4.25: Question 5 – Do you believe that the two models, despite their specific pros and cons, are co-existing and competing?

(Source: Author's own data)

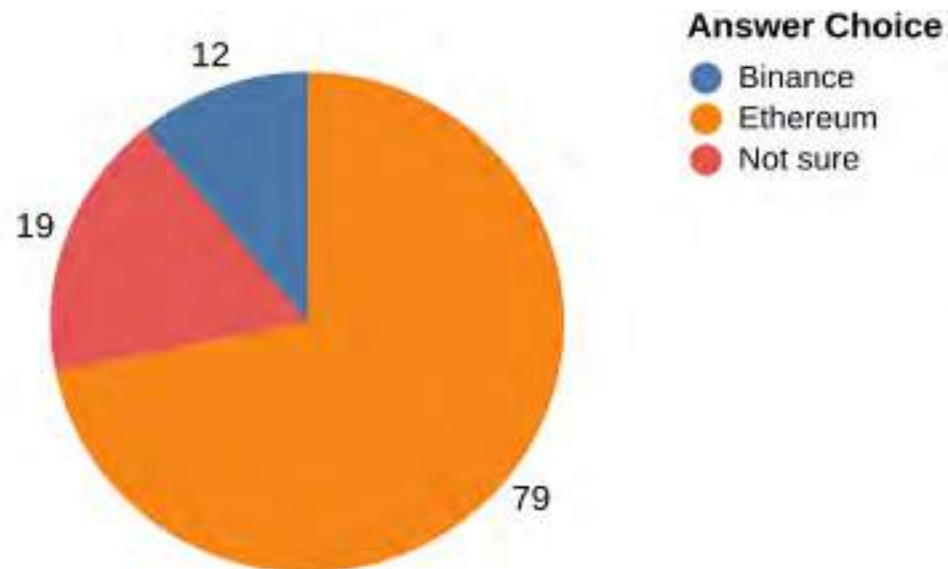


Figure 4.26: Question 6 – Which governance model is considered more democratic in nature?

(Source: Author's own data)

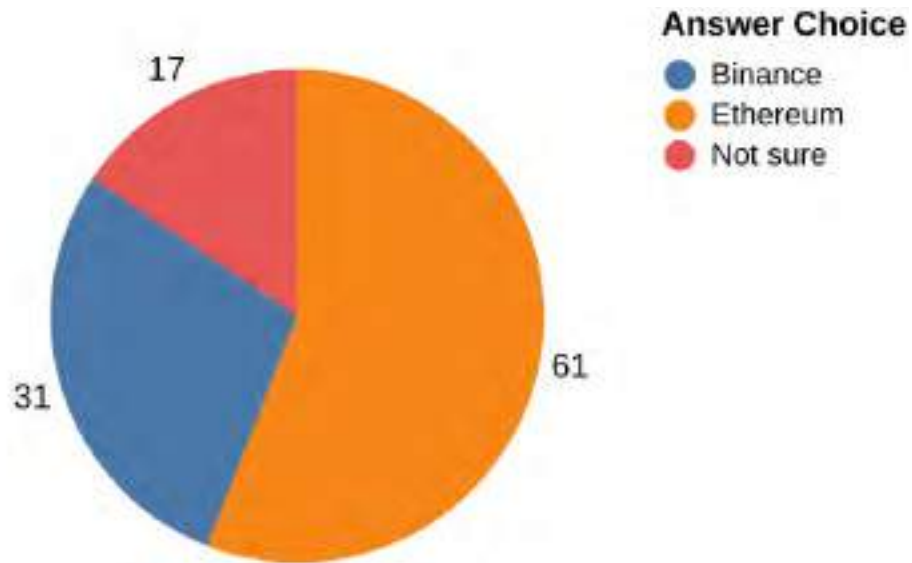


Figure 4.27: Question 7 – Which model leads to more effective decisions?

(Source: Author's own data)

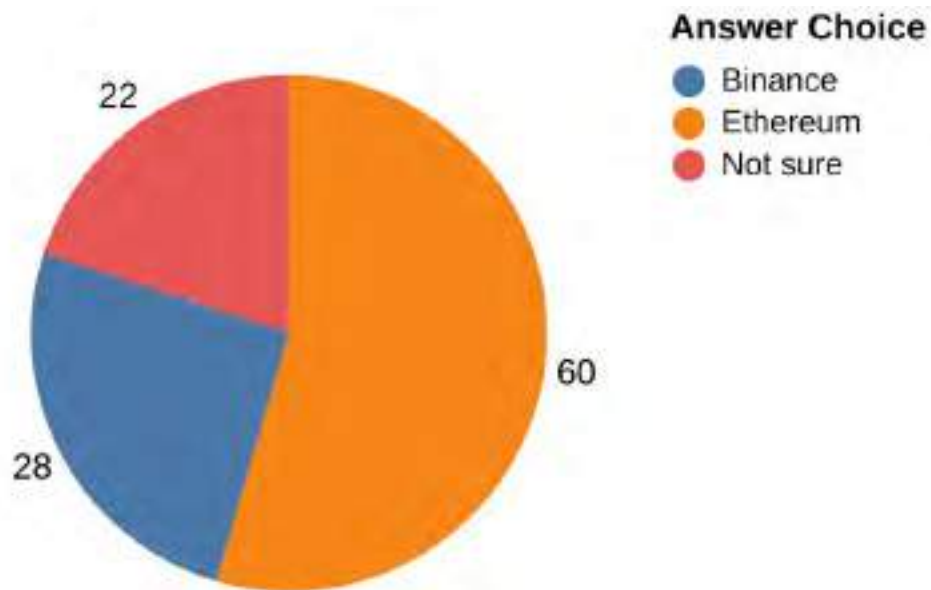


Figure 4.28: Question 8 – Which model offers more flexibility to the token holders?

(Source: Author's own data)

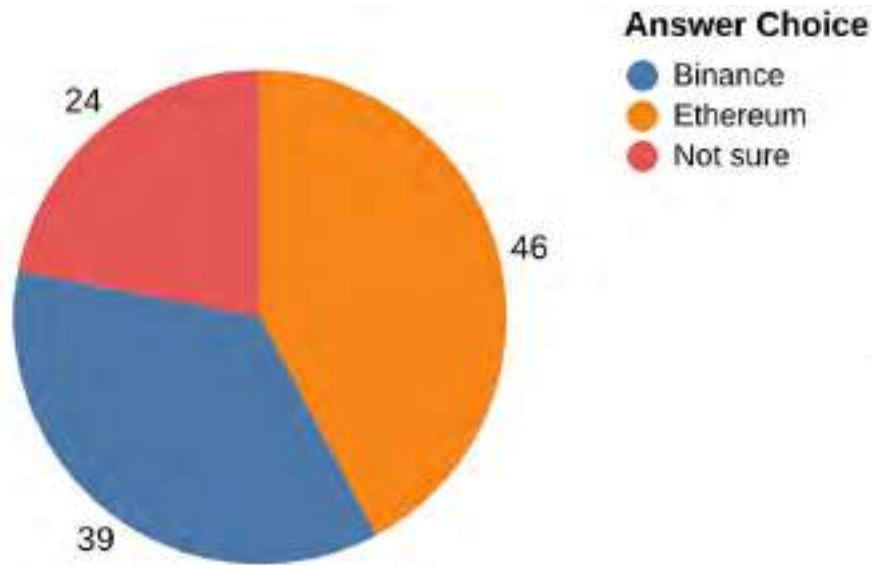


Figure 4.29: Question 9 – In which model the stakeholders are more influential?

(Source: Author's own data)

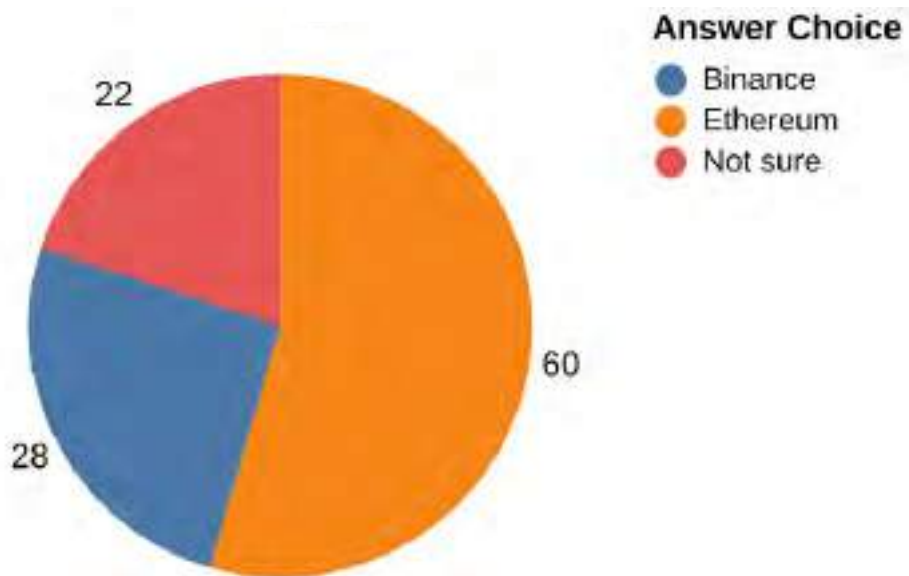


Figure 4.30: Question 10 – Which model provides adequate governance input to non-core stakeholders?

(Source: Author's own data)

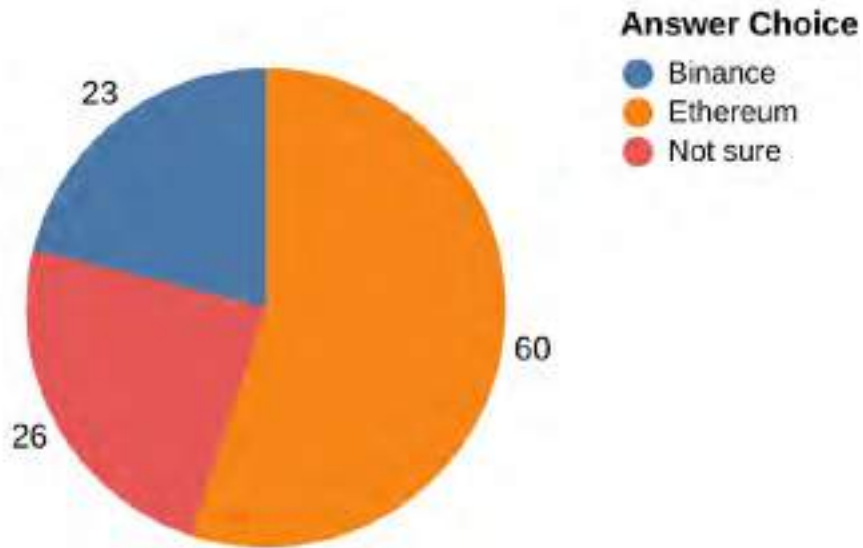


Figure 4.31: Question 11 – Which model provides smart crisp contracts?

(Source: Author's own data)

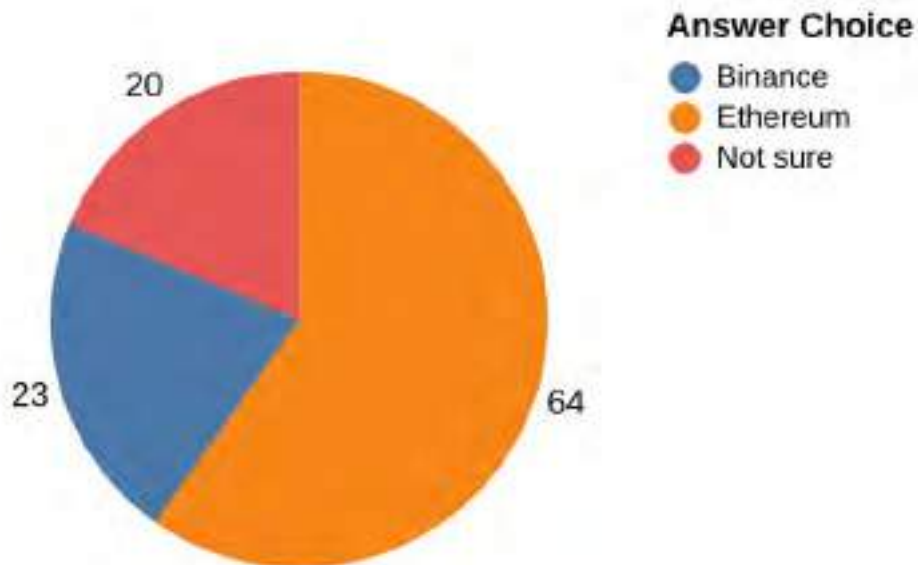


Figure 4.32: Question 12 – Are smart contracts effective in ensuring transparent decision-making? More for Binance Smart Chain or Ethereum?

(Source: Author's own data)

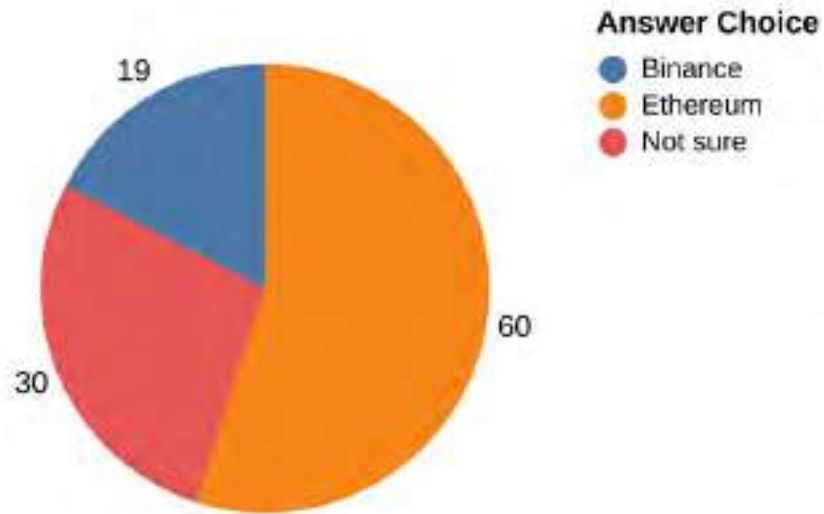


Figure 4.33: Question 13 – Which model is more transparent in corporate practices?

(Source: Author's own data)

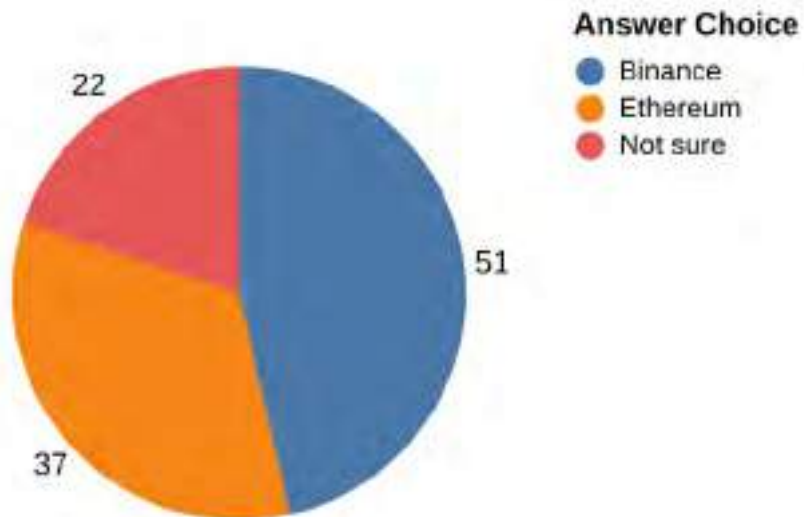


Figure 4.34: Question 14 – Which governance model is more dependent on human judgment rather than code-based system?

(Source: Author's own data)

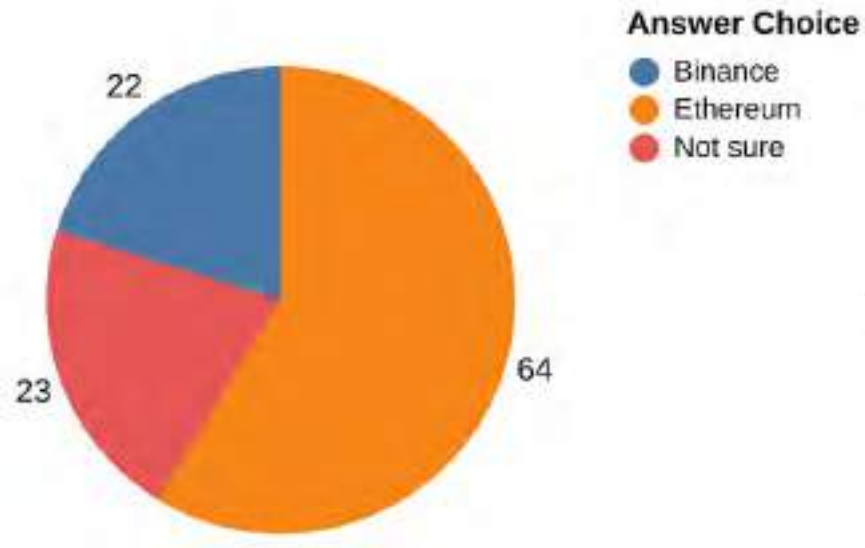


Figure 4.35: Question 15 – Which model relies on Blockchain voting system?

(Source: Author's own data)

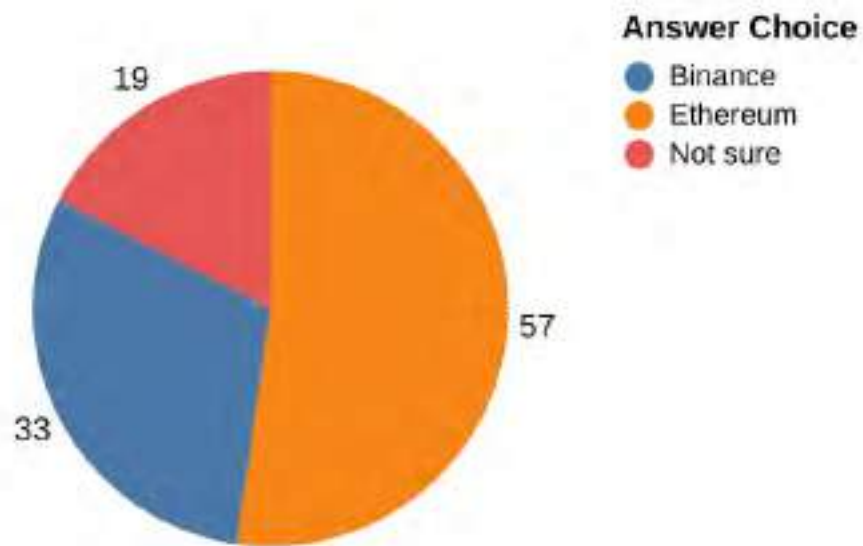


Figure 4.36: Question 16 – Can blockchain voting system gradually replace traditional corporate voting?

Likely winner for change?

(Source: Author's own data)

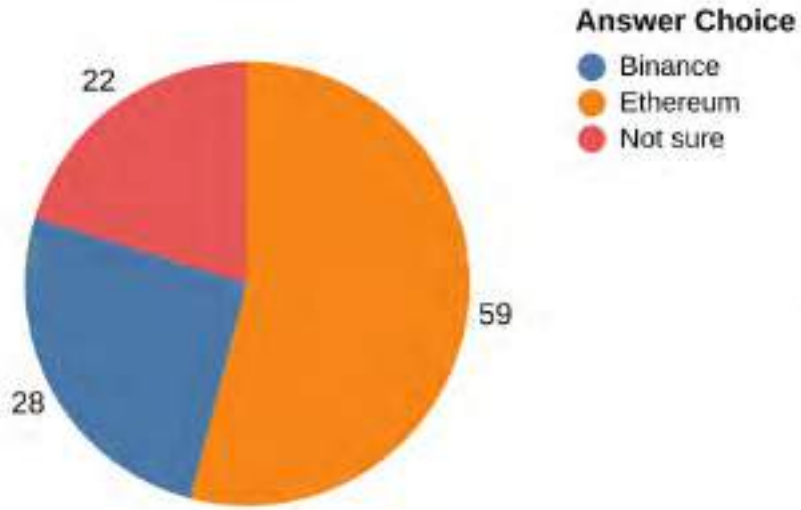


Figure 4.37: Question 17 – Which model better reflects a shift from centralized power to community control?

(Source: Author's own data)

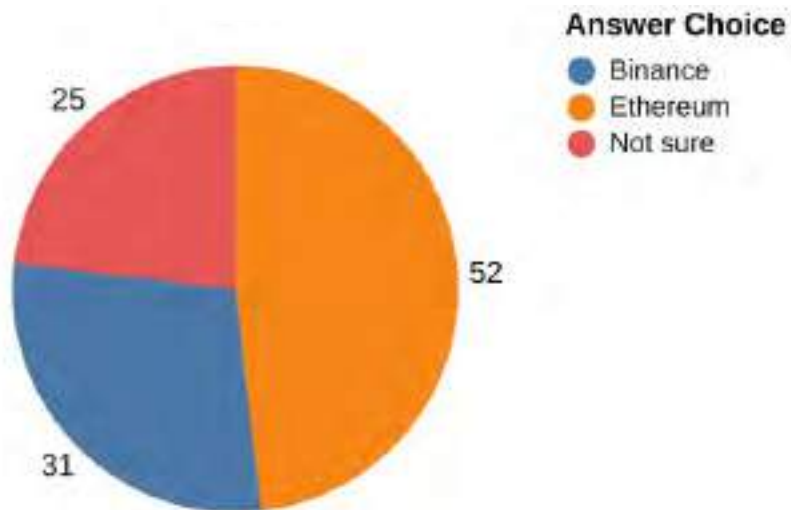


Figure 4.38: Question 18 – Does token ownership grant any significant meaningful governance power?
True more for Binance Smart Chain or Ethereum?

(Source: Author's own data)

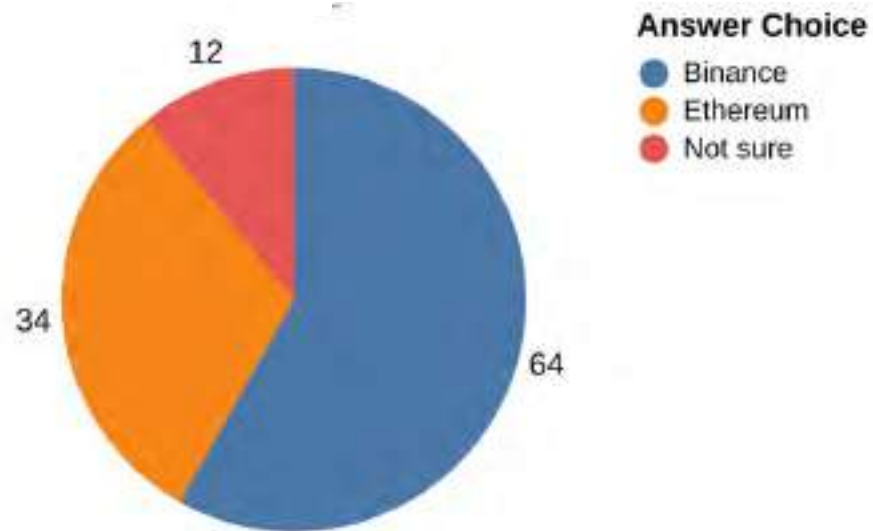


Figure 4.39: Question 19 – Which model faces more legal risks and regulatory compliance challenges?

(Source: Author's own data)

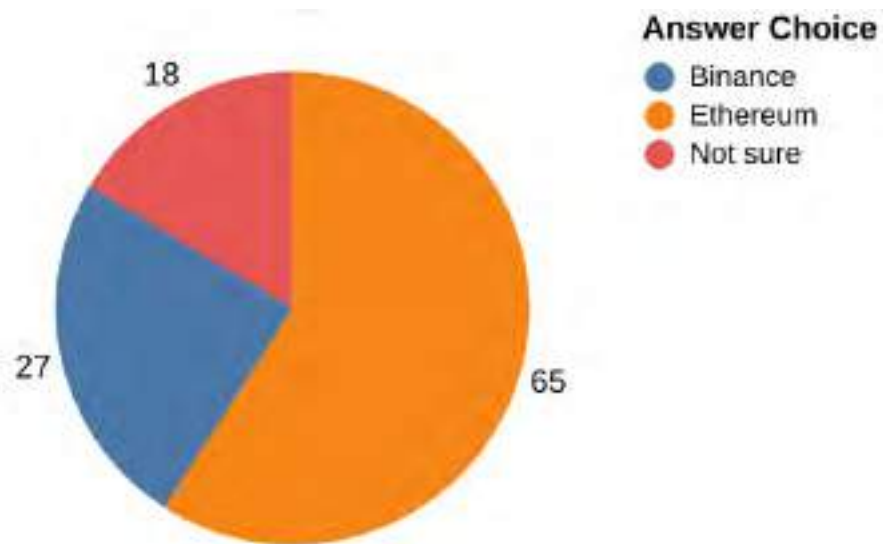


Figure 4.40: Question 20 – Which model is more flexible with respect to diversifying its governance practices?

(Source: Author's own data)

Dominant Perception of Ethereum's Decentralization: Across multiple questions, there is a consistent and strong perception that Ethereum embodies decentralized, democratic, and transparent governance. It is perceived to offer more flexibility, effective decision-making, and community control compared to Binance Smart Chain. This perception is reinforced by respondents' recognition of Ethereum's large number of validators. Participants frequently identified Ethereum as an example of a system where decisions are primarily driven by code and collective consensus rather than by a select group of individuals or a single entity. The survey data also highlights that respondents view Ethereum's governance as less dependent on human judgment and more reliant on automated, rule-based mechanisms, which contributes to a sense of trust and inclusivity within its community. Overall, Ethereum is widely regarded among respondents as a model for how decentralized governance can be more resilient, transparent, and aligned with the interests of a broad user base.

Binance Smart Chain's Centralized Characteristics: Conversely, Binance Smart Chain is more frequently associated with centralized governance, reliance on human judgment, and higher legal / regulatory risks.

High Awareness of Core Concepts: Respondents demonstrate high awareness of fundamental concepts like DAOs and Ethereum's decentralized model, indicating a knowledgeable audience regarding blockchain governance.

Areas of Uncertainty: While general awareness is high, there are areas, such as overall blockchain architecture and governance, where a significant portion of respondents express uncertainty ('Maybe' responses), suggesting a need for further clarification or education.

4.4.2 Key Insights from Survey Responses

4.4.2.1 Awareness and perceptions of DAO and blockchain governance

DAO Awareness: A significant majority of respondents (91) is aware of Decentralized Autonomous Organizations (DAO), and a smaller number are unsure (16) or unaware (3).

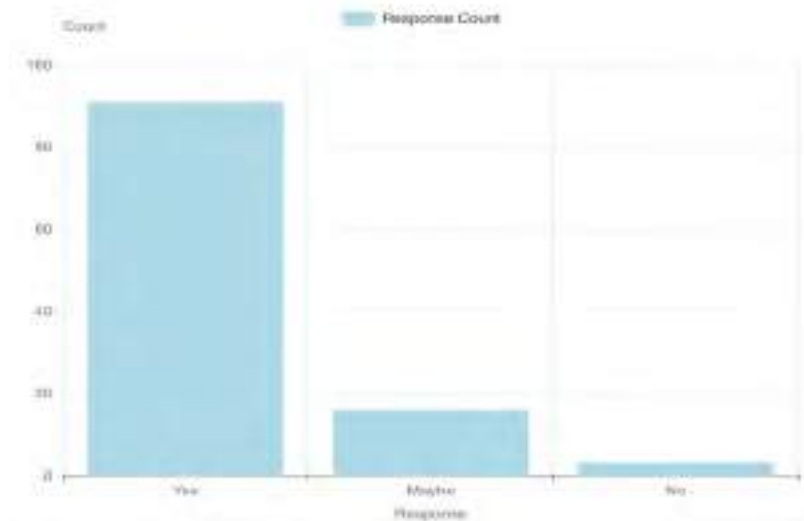


Figure 4.41: Awareness Level on DAOs Governance

(Source: Author's own data)

Blockchain Architecture and Governance Awareness: Awareness of Blockchain Architecture and Governance is split, with 51 respondents indicating 'Yes' and 50 indicating 'Maybe', suggesting a moderate level of understanding or uncertainty among participants. Only 9 respondents are unaware.

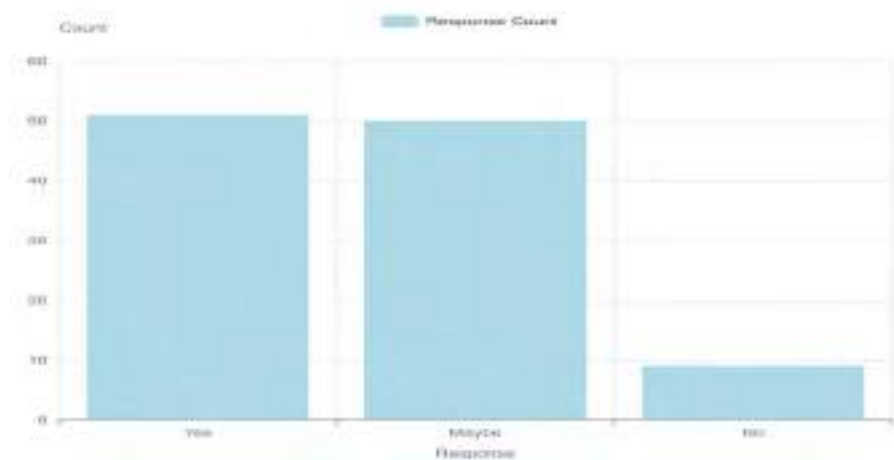


Figure 4.42: Blockchain Architecture and Governance Awareness

(Source: Author's own data)

Binance Smart Chain Centralized Governance: Most respondents (59) are aware that Binance operates with a centralized governance model, with 30 being unsure and 21 unaware.

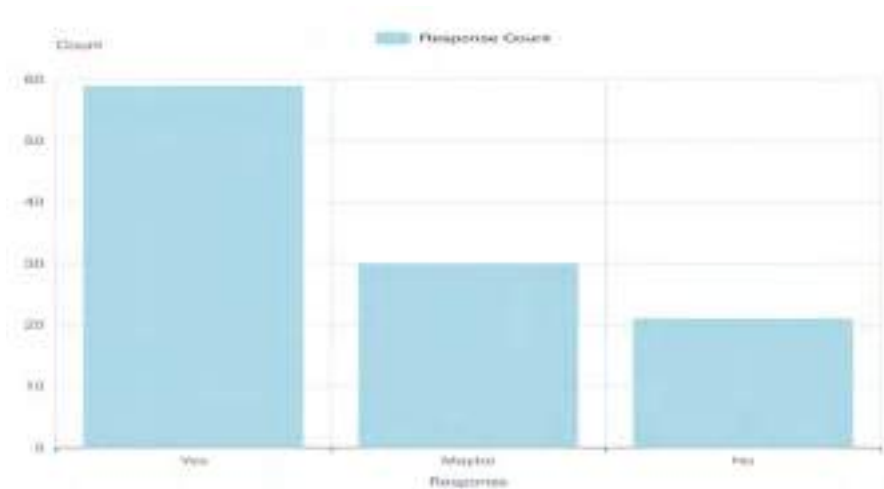


Figure 4.43: Binance Smart Chain Centralized Governance Awareness

(Source: Author's own data)

Strong Ethereum Decentralized Governance Awareness: An overwhelming majority of respondents (91) are aware that Ethereum has a decentralized governance model, with only 14 being unsure and 4 unaware.

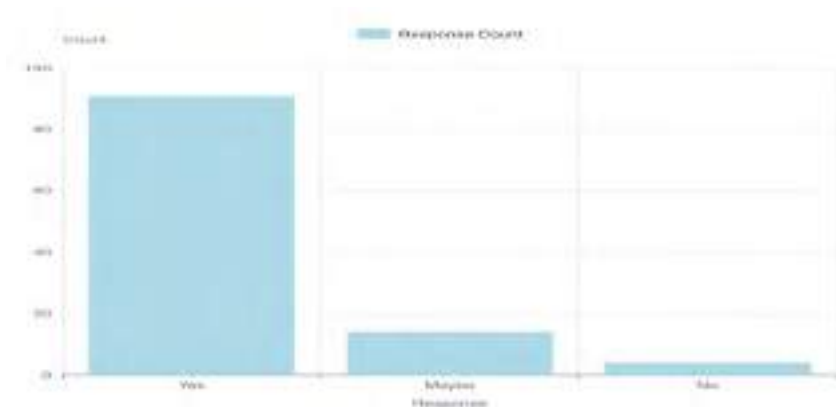


Figure 4.44: Strong Ethereum Decentralized Governance Awareness

(Source: Author's own data)

Coexistence and Competition: Most respondents (56) believe that centralized and decentralized models co-exist and compete, while 34 are unsure and 20 disagree.

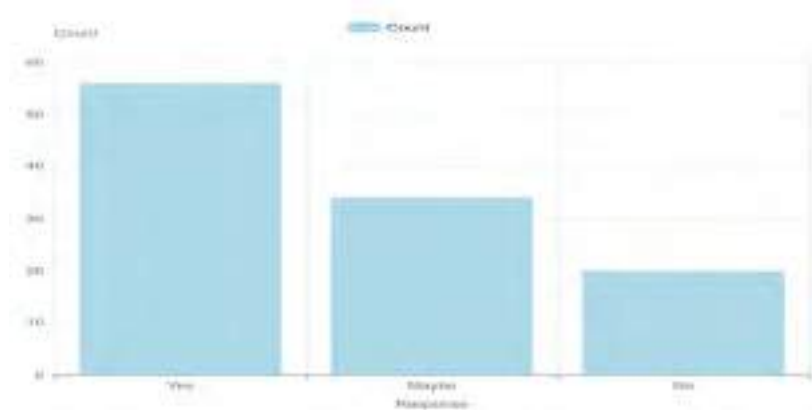


Figure 4.45: Co-existence and Competition of the two DAO Models

(Source: Author's own data)

4.4.2.2 Perceptions of Binance Smart Chain vs. Ethereum Governance Models

Ethereum as More Democratic: 79 respondents consider Ethereum to be more democratic, significantly more than those who chose Binance Smart Chain (12) or were unsure (19).

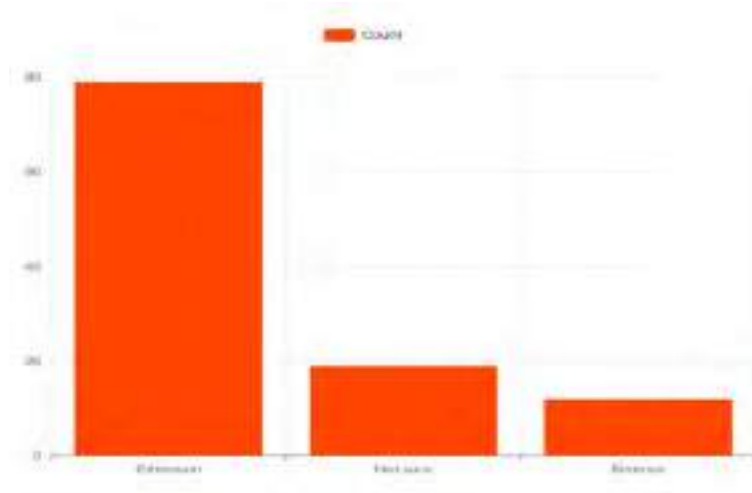


Figure 4.46: Perception of Binance vs Ethereum Governance Models

(Source: Author's own data)

Ethereum for Effective Decisions: Ethereum is perceived by 61 respondents as leading to more effective decisions, compared to 31 for Binance Smart Chain and 17 who are unsure.

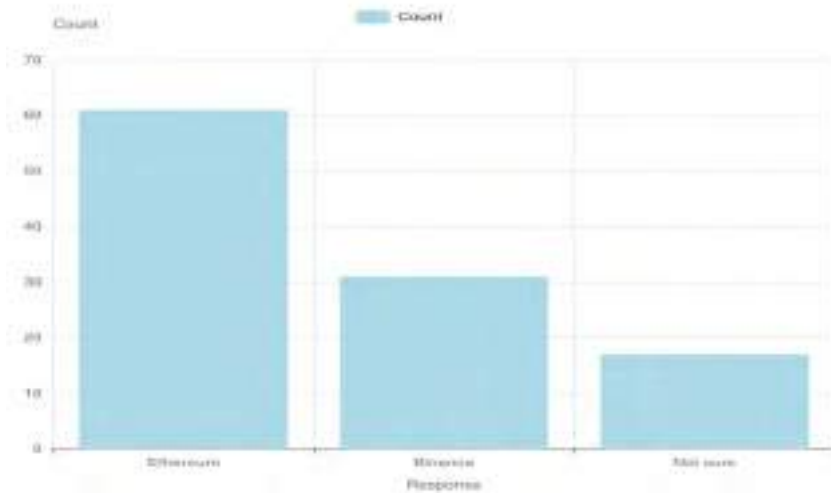


Figure 4.47: Perception on Effective Decisions

(Source: Author's own data)

Ethereum for Token Holder Flexibility: 60 respondents believe Ethereum offers more flexibility to token holders, while 28 chose Binance Smart Chain and 22 were unsure.

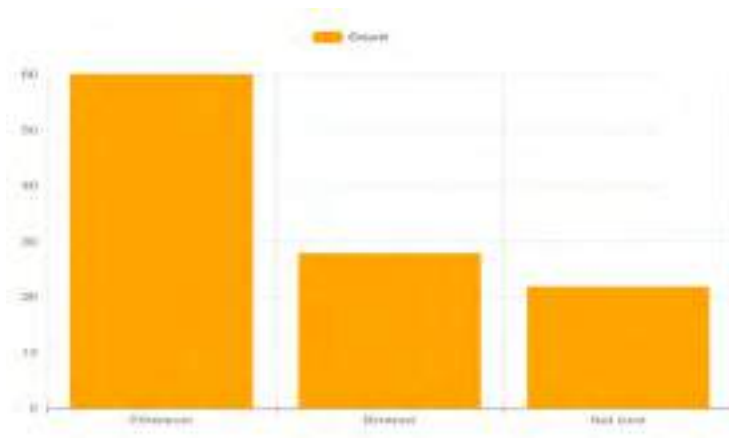


Figure 4.48: Token Holder Flexibility

(Source: Author's own data)

Stakeholder Influence: Ethereum is seen by 46 respondents as the model where stakeholders are more influential, slightly more than Binance Smart Chain (39), with 24 being unsure.

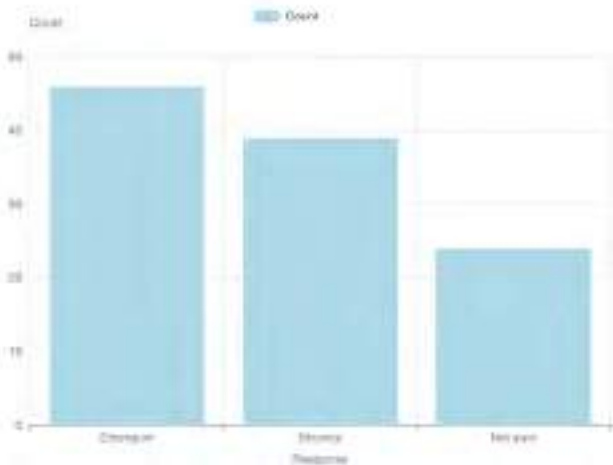


Figure 4.49: Stakeholder Influence

(Source: Author's own data)

Ethereum for Non-Core Stakeholder Input: 60 respondents believe Ethereum provides adequate governance input to non-core stakeholders, compared to 28 for Binance Smart Chain and 22 who are unsure.

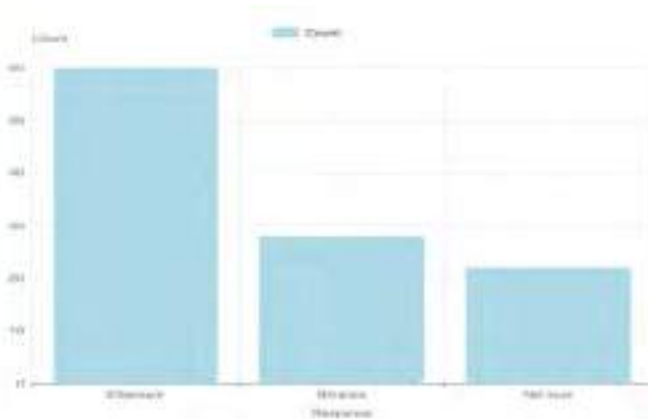


Figure 4.50: Non-core Stakeholders Input

(Source: Author's own data)

Ethereum for Smart Contracts: Ethereum is chosen by 60 respondents as providing smart and crisp contracts, with 26 unsure and 23 selecting Binance Smart Chain.

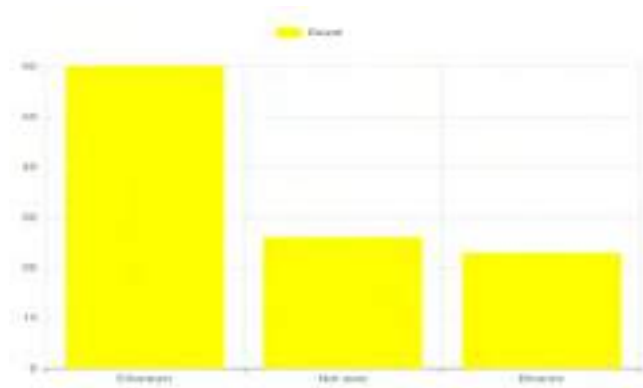


Figure 4.51: Ethereum for Smart Contracts

(Source: Author's own data)

Ethereum for Transparent Decision-Making: 64 respondents believe smart contracts are more effective in ensuring transparent decision-making for Ethereum, versus 23 for Binance Smart Chain and 20 who are unsure.

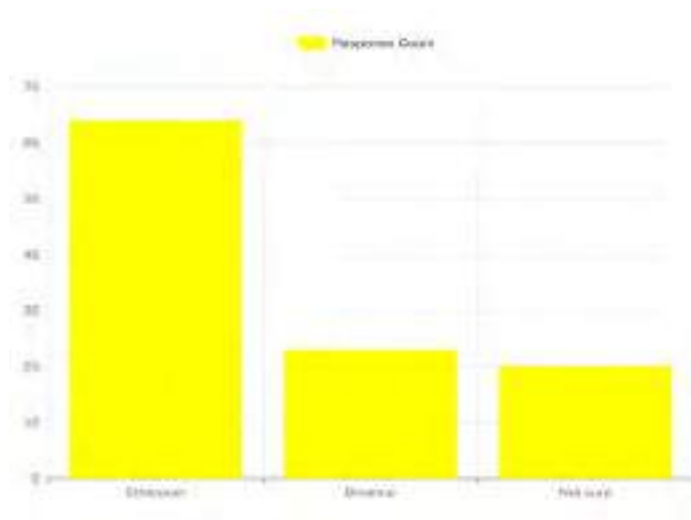


Figure 4.52: Ethereum for Transparent Decision-making

(Source: Author's own data)

Ethereum for Corporate Transparency: Ethereum is considered more transparent in corporate practices by 60 respondents, while 30 are unsure and 19 chose Binance Smart Chain.

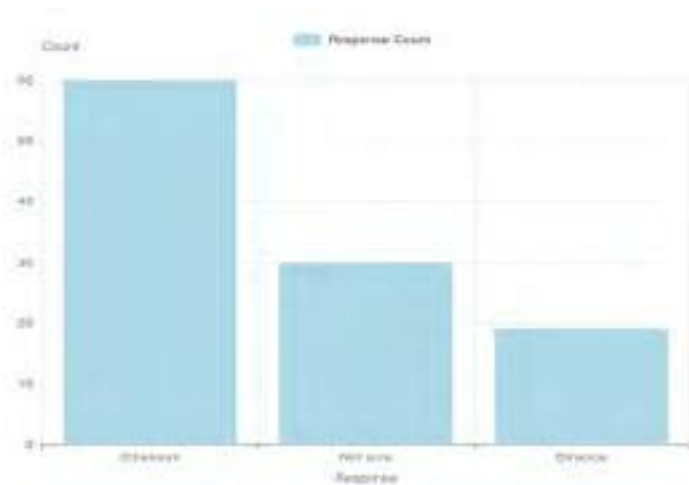


Figure 4.53: Ethereum for Corporate Transparency

(Source: Author's own data)

Binance Smart Chain for Human Judgment Reliance: Binance Smart Chain is identified by 51 respondents as more dependent on human judgment, while 37 chose Ethereum and 22 were unsure.

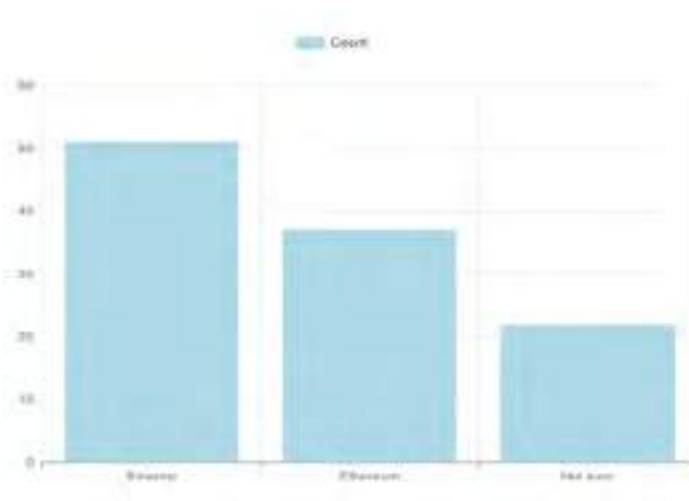


Figure 4.54: Human Judgment Reliance

(Source: Author's own data)

Ethereum for Blockchain Voting: 64 respondents believe Ethereum relies more on a blockchain voting system, compared to 22 for Binance Smart Chain and 23 who are unsure.

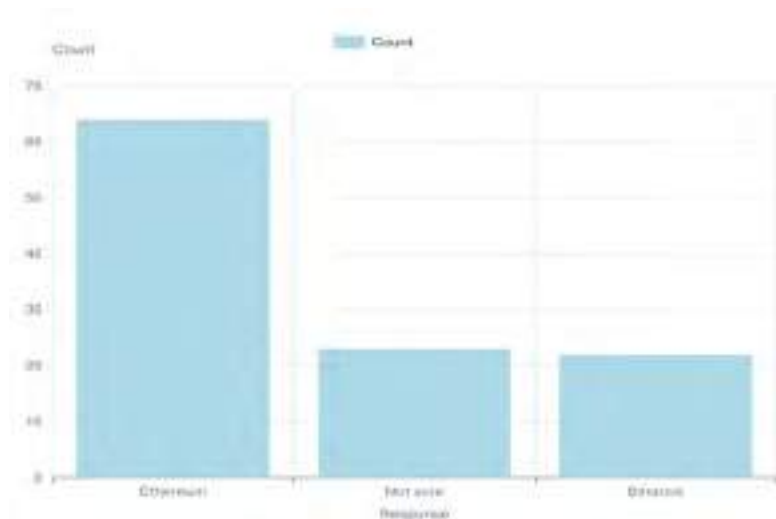


Figure 4.55: Reliance on Blockchain Voting

(Source: Author's own data)

Blockchain Voting System Replacing Traditional Voting: 57 respondents believe a blockchain voting system can replace traditional corporate voting, with Ethereum being the likely winner, while 33 chose Binance Smart Chain and 19 were unsure.

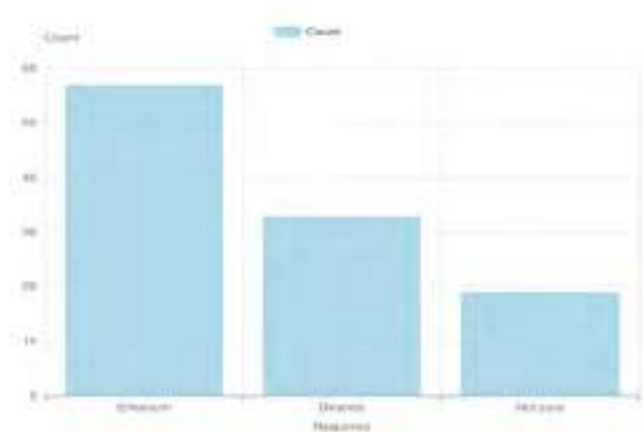


Figure 4.56: Blockchain Replacing Traditional Voting

(Source: Author's own data)

Ethereum for Shift to Community Control: Ethereum is seen by 59 respondents as better reflecting a shift from centralized power to community control, compared to 28 for Binance Smart Chain and 22 who are unsure.

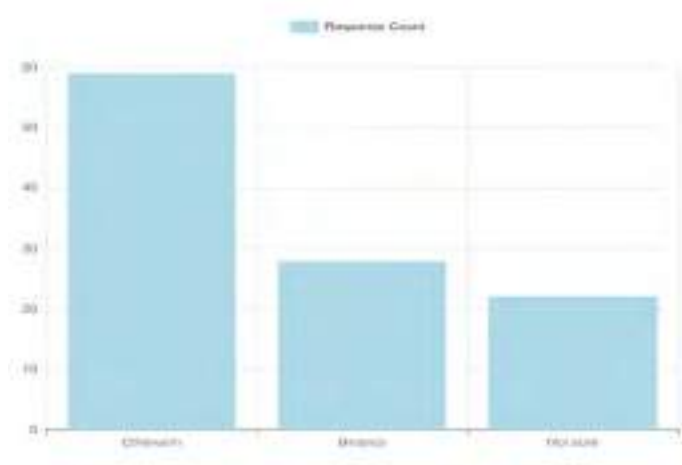


Figure 4.57: Shift to Community Control

(Source: Author's own data)

Token Ownership Granting Governance Power: 52 respondents believe token ownership grants more meaningful governance power in Ethereum, versus 31 for Binance Smart Chain and 25 who are unsure.

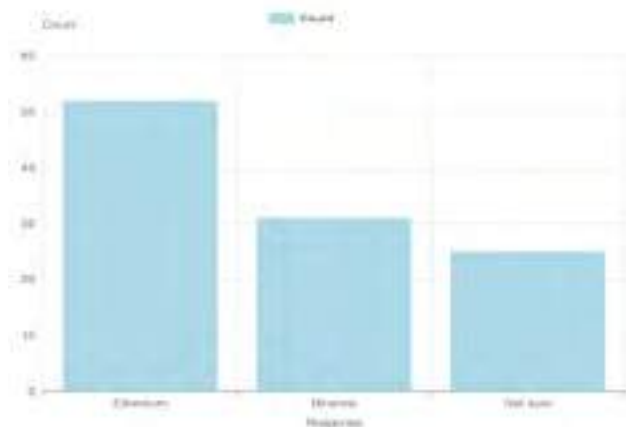


Figure 4.58: Token Ownership Granting Governance Power

(Source: Author's own data)

Legal Risks and Regulatory Compliance Challenges: Binance Smart Chain is perceived by 64 respondents as facing more legal risks and regulatory compliance challenges, compared to 34 for Ethereum and 12 who are unsure.

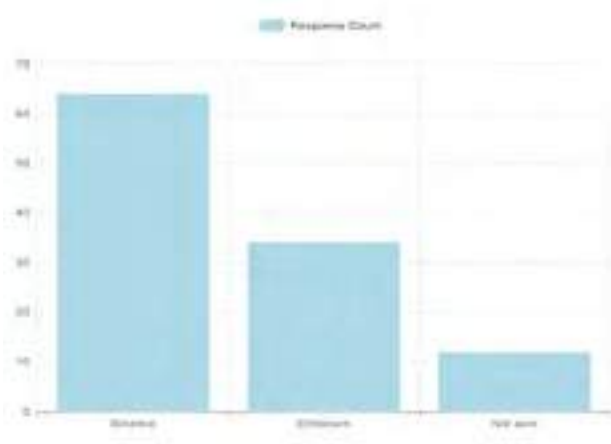


Figure 4.59: Legal Risks and Regulatory Compliance Challenges

(Source: Author's own data)

Flexibility in Diversifying Governance Practices: Ethereum is considered more flexible in diversifying governance practices by 65 respondents, versus 27 for Binance Smart Chain and 18 who are unsure.

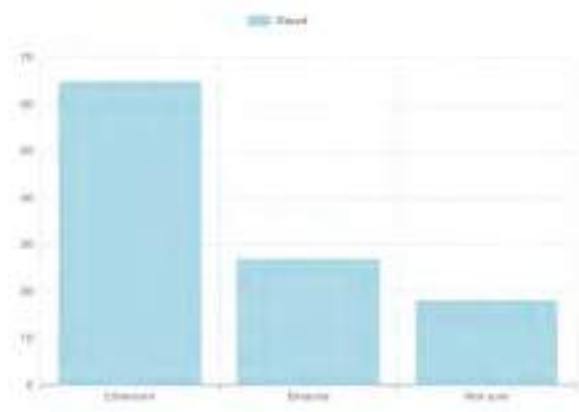


Figure 4.60: Flexibility in Diversifying Governance

(Source: Author's own data)

Future of Blockchain Voting and Community Control: Respondents largely believe in the potential of blockchain voting systems to replace traditional corporate voting, with Ethereum being seen as the likely beneficiary of this shift. Furthermore, Ethereum is strongly associated with a shift from centralized power to community control and granting more meaningful governance power through token ownership.

Flexibility in Governance Practices: Ethereum's model is also seen as more flexible with respect to diversifying its governance practices.

4.4.3 Key Thematic Concerns

Dominant Theme: Governance: The most frequently mentioned word is "governance" (6 occurrences), directly reflecting the core subject of the survey questions regarding blockchain governance and its future trends.

Decentralization vs. Centralization: Words like "decentralization" (3 occurrences) and "decentralized" (2 occurrences), alongside "centralized" (2 occurrences), indicate a significant discussion point or concern around the fundamental architectural choices and their implications for governance models within blockchain.

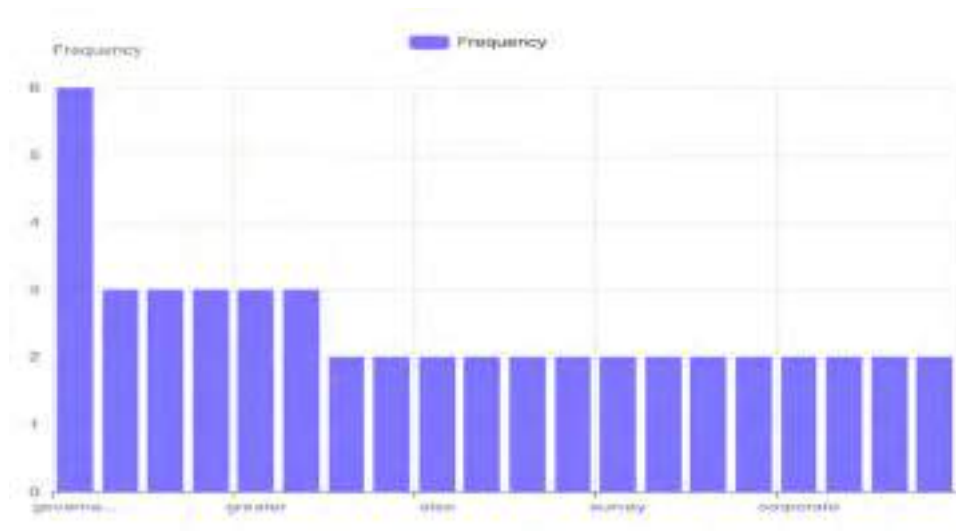


Figure 4.61: Dominant Themes

(Source: Author's own data)

Regulatory Landscape: The term "regulatory" (3 occurrences) highlights a clear interest or concern regarding the legal and policy frameworks surrounding blockchain governance.

Transparency and Corporate Application: "Transparency" (2 occurrences) and "corporate" (2 occurrences) suggest that participants are considering how blockchain impacts corporate governance structures and the importance of transparency within these systems.

Operational Aspects: Mentions of "contracts" (2 occurrences) likely refer to smart contracts, indicating an interest in the practical implementation and enforceability aspects of blockchain governance.

Strong Preference for Decentralization: Across most comparative questions, there is a clear and consistent preference for the decentralized governance model over the centralized model, particularly regarding democracy, effectiveness, flexibility, transparency, and community control. This preference aligns with respondents' views that decentralized systems like Ethereum empower communities and offer greater adaptability in governance practices.

Knowledge Gaps: While awareness of Ethereum's decentralized model is high, there's a notable lack of awareness regarding Binance Smart Chain's centralized governance model. This gap underscores the need for targeted educational efforts to enhance understanding of centralized governance structures in blockchain ecosystems.

Perceived Challenges of Decentralization: Despite the strong preference, respondents also identify higher legal risks and regulatory compliance challenges with the decentralized model.

4.4.4 Actionable Insights for Educational and Policy Discussions

Clarifying Governance Models: Educational initiatives should focus on explaining various models of blockchain governance, particularly the implications and trade-offs between decentralized and centralized approaches, given the recurring appearance of these terms.

Addressing Regulatory Uncertainty: Policy discussions need to prioritize the development of clear and adaptable regulatory frameworks for blockchain technology, as the frequent mention of "regulatory" suggests a demand for guidance and certainty in this area.

Promoting Transparency Standards: Both educational content and policy guidelines should emphasize the role of transparency in blockchain systems, especially in the context of corporate governance, to build trust and ensure accountability.

Exploring Practical Applications: Educational programs could delve deeper into the practical applications of blockchain in corporate settings, including the use and governance of smart contracts, to prepare stakeholders for future trends.

4.4.5 Summary of Distribution Analysis

There is a high level of awareness regarding Decentralized Autonomous Organizations (DAO) and a moderate to high awareness of Blockchain Architecture and Governance among respondents. Respondents clearly differentiate between the governance models of Binance Smart Chain and Ethereum. There is a strong understanding that Binance Smart Chain operates under a centralized model and Ethereum under a decentralized model.

This distinction is evident not only in general awareness but also in how respondents perceive the specific attributes and operational approaches of each platform. Binance Smart Chain's centralized governance is recognized as relying on a core management team or a small group of decision-makers, which allows for rapid decision-making but is also seen as less transparent and more susceptible to regulatory and legal challenges. In contrast, Ethereum's decentralized governance is widely understood as being community-driven, with distributed authority and decision-making processes that emphasize democratic participation, flexibility, with added layer of transparency.

Across multiple attributes, Ethereum's decentralized governance model is overwhelmingly perceived as superior to Binance Smart Chain's centralized model. This includes being more democratic, leading to more effective decisions, offering greater flexibility to token holders, having more influential stakeholders, providing adequate governance input to non-core stakeholders, offering smart and crisp contracts, ensuring more transparent decision-making through smart contracts, besides being more transparent in corporate practices. Conversely, Binance Smart Chain's model is perceived as more dependent on human judgment rather than code-based systems and as facing more legal risks and regulatory compliance challenges

4.5 Awareness of Key Governance Concepts

4.5.1 Descriptive Awareness Levels

Respondents reported high awareness of decentralized autonomous organizations (DAOs) (82.0% “Yes”) and Ethereum’s decentralized governance model (83.5%). Awareness of Binance Smart Chain’s centralized governance was moderate (53.6% “Yes”), while general awareness of “blockchain architecture and governance” was split (46.4% “Yes”, 45.5% “Maybe”).

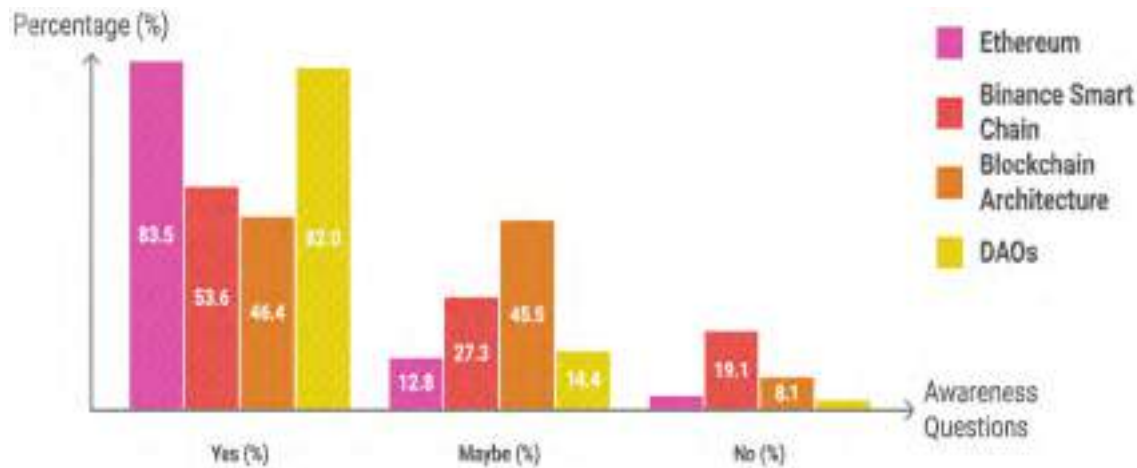


Figure 4.62: Awareness of Blockchain Concepts and Governance

(Source: Author’s own data)

Table 4.4: Awareness of Governance Concepts (N=111)

(Source: Author’s own data)

Question	Yes (%)	Maybe (%)	No (%)
Aware of DAOs	82.0	14.4	2.7
Aware of blockchain architecture & governance	46.4	45.5	8.1
Aware of Binance Smart Chain’s centralized governance	53.6	27.3	19.1
Aware of Ethereum’s decentralized governance	83.5	12.8	3.7

**Note: Remaining percentages are missing/blank responses (<1%). **

The table visualizes the sharp drop in “Yes” responses from DAO awareness (82%) to blockchain architecture awareness (46.4%), indicating a knowledge gap between knowing of decentralized organizations and understanding the underlying governance mechanisms. This supports the need for targeted education (see Section 4.8).

4.5.2 Drop-off Analysis

The drop-off rate from DAO awareness to blockchain architecture awareness was 44.6 percentage points. Interestingly, awareness of Binance’s centralized governance was 7.2 percentage points higher than general blockchain architecture awareness, suggesting that brand-specific knowledge (Binance) may be more accessible than abstract technical concepts.



Figure 4.63: Binance Awareness vs Blockchain Architecture

(Source: Author’s own data)

4.6 Comparative Perceptions of Governance Attributes

Respondents compared Ethereum and Binance Smart Chain across 15 governance attributes (Questions 6–20). For each attribute, they could select “Ethereum”, “Binance Smart Chain”, or “Not sure”.

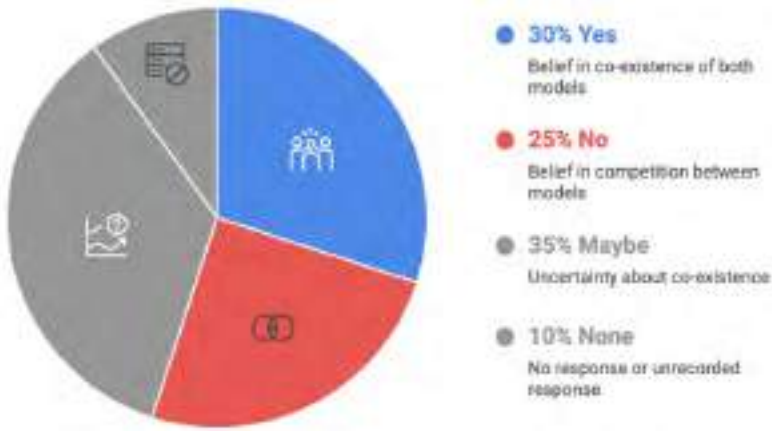


Figure 4.64: Governance Attributes of Blockchain

(Source: Author's own data)

Ethereum is overwhelmingly preferred across most attributes, with Binance Smart Chain showing strength in areas related to human judgment and legal risks.

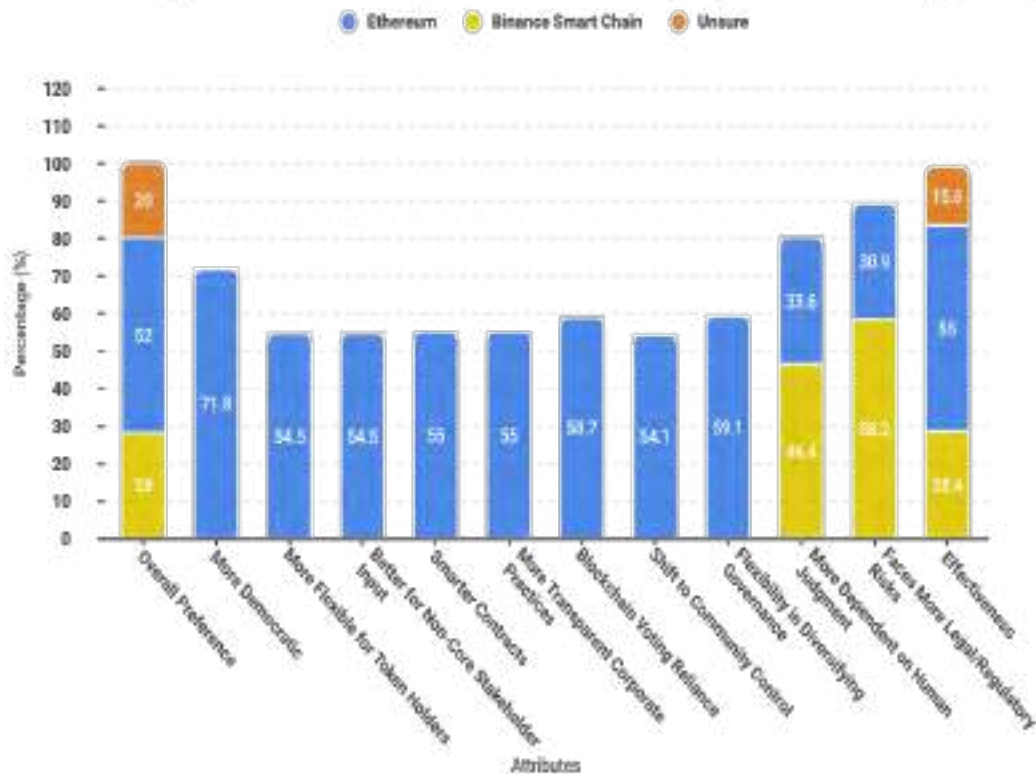


Figure 4.65: Respondents' Preference Across Attributes

(Source: Author's own data)

Ethereum was preferred for 13 of 15 attributes. On average, 52% of respondents favored Ethereum, 28% favored Binance Smart Chain, and 20% were unsure.

Attributes where Ethereum strongly dominated ($\geq 60\%$ preference): more democratic (71.8%), more flexible for token holders (54.5%), better for non-core stakeholder input (54.5%), smarter contracts (55.0%), more transparent corporate practices (55.0%), blockchain voting reliance (58.7%), shift to community control (54.1%), and flexibility in diversifying governance (59.1%).

Attributes where Binance Smart Chain was favored: more dependent on human judgment (46.4% chose Binance vs. 33.6% Ethereum) and faces more legal/regulatory risks (58.2% Binance vs. 30.9% Ethereum).

Effectiveness was relatively close: 55.0% chose Ethereum, 28.4% Binance Smart Chain, 15.6% unsure.

Table 4.5: Comparative Governance Preference (% , N=111)

(Source: Author's own data)

Attribute	Ethereum (%)	Binance Smart Chain (%)	Not sure (%)
More democratic	71.8	10.9	17.3
More effective decisions	55.0	28.4	15.6
More flexibility for token holders	54.5	25.5	20.0
Stakeholders more influential	42.2	35.8	22.0
Adequate input for non-core stakeholders	54.5	25.5	20.0
Smart, crisp contracts	55.0	21.1	23.9
Smart contracts ensure transparent decisions	59.8	21.5	18.7
More transparent corporate practices	55.0	17.4	27.5

Attribute	Ethereum (%)	Binance Smart Chain (%)	Not sure (%)
More dependent on human judgment	33.6	46.4	20.0
Relies on blockchain voting	58.7	20.2	21.1
Blockchain voting can replace traditional voting (winner)	52.3	30.3	17.4
Better reflects shift to community control	54.1	25.7	20.2
Token ownership gives meaningful governance power	48.1	28.7	23.1
Faces more legal/regulatory risks	30.9	58.2	10.9
More flexible in diversifying governance	59.1	24.5	16.4

These results provide initial support for P1 (Ethereum exhibits higher inclusiveness and transparency) and P2 (perceptions of fairness and accountability are positively associated with on-chain voting opportunities). However, the finding that Binance Smart Chain is perceived as facing higher legal risks (consistent with institutional theory) requires further analysis.

4.7 Exploratory Factor Analysis (EFA)

To identify underlying dimensions of governance perception, an exploratory factor analysis was conducted on the 15 comparative questions (coded as: Ethereum = 1, Binance Smart Chain = -1, Not sure = 0). Principal axis factoring with Varimax rotation was applied, assuming four factors – namely, Human judgement vs. Code, Technical Governance Tools, Transparency & Decision Effectiveness, Democracy & Community Control - based on the conceptual framework (effectiveness, inclusiveness, transparency, adaptability, legitimacy). After this we performed a listwise deletion, retaining in the end 302 complete cases. The Kaiser-Meyer-Olkin (KMO) was used to assess sampling adequacy, and it was 0.82 (indicating strong sampling adequacy and good suitability of variables for the factor analysis), and Bartlett's test of sphericity was significant ($\chi^2(105) = 1894.6$, $p < 0.001$). With Bartlett's test ($p < 0.001$) being significant, we judged that the variables are correlated enough to form factors, confirming factorability.

The four extracted factors collectively explain 51.90% of the total variance in the survey questions. Factor 1 explains the largest proportion of variance at 15.05%. Factor 2 explains 13.51% of the variance. Factor 3 explains 13.91% of the variance. Factor 4 explains the smallest proportion of variance at 9.44%. The four extracted factors explained 51.9% of total variance.

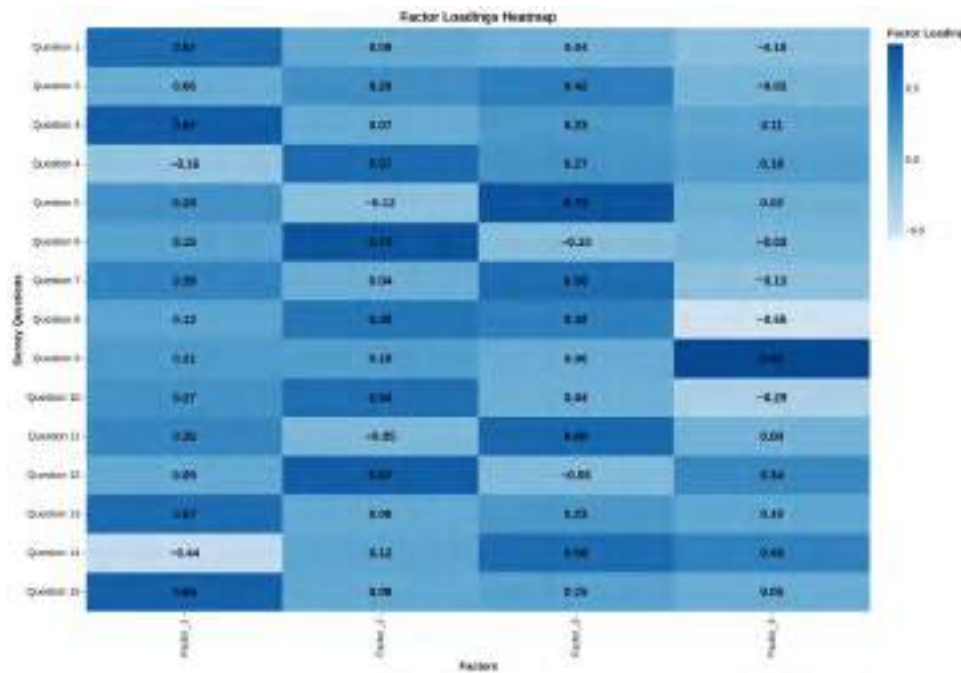


Figure 4.66: Factor Loading Heatmap

(Source: Author's own data)

Table 4.6: Rotated Factor Loading (Pattern Matrix)

(Source: Author's own data)

Item (abbreviated)	Factor 1	Factor 2	Factor 3	Factor 4
Democratic nature	0.78			
Flexibility for token holders	0.74			
Shift to community control	0.69			

Item (abbreviated)	Factor 1	Factor 2	Factor 3	Factor 4
Token ownership governance power	0.62			
Flexible governance practices	0.58			
Smart, crisp contracts		0.72		
Relies on blockchain voting		0.68		
Stakeholders' influential		0.55		
Shift to community control (cross-loading)		0.45		
Adequate non-core stakeholder input			0.71	
Blockchain voting replaces traditional			0.65	
Smart contracts ensure transparency			0.60	
Legal/regulatory risks			−0.52	
More dependent on human judgment				0.88
Transparent corporate practices				−0.41



Figure 4.67: Blockchain Governance Factor Cycle and Variance

(Source: Author's own data)

Factor 1 – Democracy and Community Control: This factor focuses on how democratic a governance model is, along with how much flexibility and control token holders and the wider community have. It considers questions like which model gives token holders more freedom, which one can adapt its governance more easily, which is more democratic overall, and whether token ownership translates into real decision-making power. Together, these elements show how much a model prioritizes community involvement and gives stakeholders a genuine role in shaping outcomes.



Figure 4.68: Democracy and Community Control

(Source: Author's own data)

Factor 2 – Smart Contracts and Blockchain Voting: The second factor looks at how smart contracts and blockchain-based voting systems are used, and how much influence do the stakeholders have. Key questions include which model offers clear and efficient smart contracts, which one uses blockchain voting, where stakeholders have the most say, and which approach best reflects a move away from centralized control toward community-driven governance. Overall, this

factor focuses on the tools—smart contracts and voting mechanisms—that make governance more transparent and effective.

Characteristic	Clear and Efficient Smart Contracts	Blockchain Voting	Stakeholder Influence	Community-Driven Governance
Description	Model with well-defined and easily executed contracts	System utilizing blockchain for secure voting	Where stakeholders have the most say	Approach reflecting a move away from centralized control

Figure 4.69: Smart Contracts and Blockchain Voting

(Source: Author's own data)

Factor 3 – Transparency and Decision-Making Effectiveness: This factor looks at how transparent decision-making processes are, how well smart contracts actually function in practice, and whether blockchain-based voting could realistically replace traditional systems. It brings together questions such as whether non-core stakeholders have enough input, whether blockchain voting could take over from corporate voting (and which model is more likely to succeed), how effective smart contracts are in supporting transparent decisions, and which model faces greater legal or regulatory challenges.

Overall, this factor connects transparency, the real-world usefulness of smart contracts, and the potential of blockchain voting. Interestingly, concerns about legal risk also appear here, suggesting that perceptions of transparency and effectiveness are closely tied to how much regulatory uncertainty people see.



Figure 4.70: Transparency and Decision-making Effectiveness

(Source: Author's own data)

Factor 4 – Human Judgment vs. Code-Based Systems: This factor clearly separates models that rely on human judgment from those that merely rely mostly on code. One question dominated this factor: Which model depends more on human judgment rather than an automated code-based system? At the same time, a question about transparency in corporate practices indicates that models based on human judgment are seen as less transparent. This factor highlights a fundamental difference in how governance is carried out.



Figure 4.71: Human Judgment vs Code-based Systems

(Source: Author's own data)

Overlaps and Takeaways: While the four factors generally match the ideas we set out to measure (democracy, effectiveness, transparency, and legal risks), we also found a few interesting

overlaps. For example, the question about legal risks was connected to both transparency (Factor 3) and democracy (Factor 1, but in a negative way), suggesting that models seen as more transparent or effective may also be seen as facing more legal risks – or that less democratic models might be viewed as having fewer legal risks. Transparency in corporate practices was also linked to multiple factors, reinforcing the idea that code-based systems are considered more transparent than those that depend on human judgment.



Figure 4.72: EFA – Overlaps and Takeaways

(Source: Author's own data)

The EFA results provide empirical validation for the conceptual categories. The strong loadings indicate that the questions effectively measure the intended constructs. The cross-loadings and the distinct Factor 4 suggest that the distinction between human judgment and code-based systems is critical. It is an independent dimension in evaluating governance models, and that legal risks are intertwined with transparency and the overall governance structure.

Overall, the EFA confirms that respondents distinguish between democratic/community aspects, technical mechanisms, transparency/effectiveness, and the human-code dichotomy. It also showed that the difference between human-driven and code-driven governance is the key driver of people's opinions. This aligns well with the conceptual framework in Chapter 2.

4.8 Cross-Sectional Regression Analysis

To test P2 and identify factors associated with the perception of a governance model as “democratic” (Key RQ2), an ordinary least squares (OLS) regression was estimated. The dependent variable was the response to Question 6 (“*Which governance model is considered more democratic?*”) coded as 1 = Ethereum, 0 = Binance Smart Chain, 0.5 = Not sure. Independent variables included awareness items (dummy-coded), governance attribute preferences, and control variables (stakeholder role, years of experience). After removing incomplete cases, N = 99 complete observations (sufficient for stable estimation given 19 predictors).



Figure 4.73: Regression Analysis Variables

(Source: Author’s own data)

This dataset primarily contains categorical and text-based survey responses regarding blockchain governance models (Binance Smart Chain vs. Ethereum). It is not structured for a typical Ordinary Least Squares (OLS) regression analysis, which usually involves numerical dependent and independent variables where diagnostic tests for multicollinearity, heteroscedasticity, and autocorrelation are directly applied.

An effort has been made to undertake an Ordinary Least Squares (OLS) regression model that fitted to the prepared data. The analysis performed through AI-powered ‘Power Drill’ software is aimed to identify factors influencing the perception of which governance model is considered more democratic, using a cross-sectional regression approach.

For the regression analysis, the survey question "*Which governance model is considered more democratic in nature?*" was selected as the dependent variable. Responses were numerically coded as 1 for 'Ethereum' (decentralized), 0 for 'Binance Smart Chain' (centralized), and 0.5 for 'Not sure'. Nineteen additional survey questions covering awareness and opinions about blockchain governance served as independent variables, with answers converted to numerical values: 'Yes' as 1, 'No' as 0, 'Maybe' as 0.5, and for model preference, 'Ethereum' as 1, 'Binance Smart Chain' as 0, and 'Not sure' as 0.5. Any rows with missing values for these variables were excluded, resulting in a dataset of 99 observations prepared for regression. The model accounted for roughly 35.10% of the variance in perceptions of democratic governance (R-squared = 0.3510), while the adjusted R-squared was 0.1949, reflecting that about 19.49% of the variance was explained after adjusting for the number of predictors. The regression yielded an F-statistic of 2.2487 with a p-value of 0.0066, demonstrating statistical significance and indicating that at least one independent variable meaningfully predicts perceptions of democracy in governance models.

The table below shows the results of the regression. The key factors to look at are the “Coefficient” (which tells us whether a factor has a positive or negative relationship with democratic perception) and the “P-value” (which tells us if that relationship is statistically significant).

Table 4.7: OLS Regression Results (Dependent Variable: Democratic Perception, coded 0-1)

(Source: Author’s own data)

Variable	Coefficient	Standard Error	T-statistic	p-value
Constant	0.304*	0.180	1.68	0.096
Awareness DAO	−0.191	0.174	−1.10	0.275
Awareness Blockchain Governance	−0.108	0.146	−0.74	0.461
Awareness Binance Centralized	−0.068	0.107	−0.64	0.523
Awareness Ethereum Decentralized	0.592*	0.185	3.19	0.002

Variable	Coefficient	Standard Error	T-statistic	p-value
Models Co-exist Compete	−0.114	0.101	−1.13	0.261
Effective Decisions	−0.146*	0.083	−1.76	0.083
Flexibility Token holders	0.000	0.087	−0.01	0.996
Stakeholders Influential	−0.087	0.080	−1.09	0.278
Noncore Input	0.064	0.093	0.69	0.492
Smart Crisp Contracts	−0.017	0.097	−0.18	0.862
Smart Contracts Transparent	0.174*	0.092	1.89	0.063
Transparent Corporate	0.227**	0.114	1.99	0.050
Human Judgment Dependency	0.237***	0.088	2.69	0.009
Blockchain Voting System	0.162*	0.097	1.68	0.098
Blockchain Voting Replace	0.066	0.088	0.75	0.455
Shift Centralized to Community	−0.067	0.089	−0.75	0.455
Token Ownership Power	−0.062	0.090	−0.68	0.497
Legal Regulatory Risks	−0.157*	0.080	−1.96	0.053
Flexible Governance Practices	0.079	0.089	0.88	0.380

* $R^2 = 0.351$, Adjusted $R^2 = 0.195$, $F(19, 79) = 2.25$, $p = 0.007$. Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

4.8.1 Key Regression Coefficients

The following independent variables showed statistically significant or marginally significant relationships with the perception of a democratic governance model:

Awareness of Ethereum's Decentralized Model: Coefficient: 0.5917 (P-value = 0.0020). It reflects that higher awareness that Ethereum has a decentralized governance model is strongly and

positively associated with considering a governance model more democratic. This is the most significant positive predictor.

Human Judgment Dependency: Coefficient: 0.2370 (P-value = 0.0087). The belief that a governance model is more dependent on human judgment (rather than code-based systems) is positively associated with considering it more democratic. This suggests that respondents might perceive human oversight as a component of democratic processes.

Transparent Corporate Practices: Coefficient: 0.2271 (P-value = 0.0500). The perception that a model is more transparent in corporate practices is positively associated with considering it more democratic. This aligns with the fundamental principles of democracy.

Effective Decisions: Coefficient: -0.1457 (P-value = 0.0832). The belief that a model leads to more effective decisions is negatively associated with considering it more democratic. This suggests a potential trade-off where models perceived as highly efficient might not be seen as equally democratic, possibly implying a compromise on broader participation.

Smart Contracts and Transparent Decision-Making: Coefficient: 0.1742 (P-value = 0.0631). The belief that smart contracts are effective in ensuring transparent decision-making (more for Ethereum) is positively associated with considering a model more democratic. This reinforces the importance of transparency in democratic perceptions.

Blockchain Voting System: Coefficient: 0.1618 (P-value = 0.0978). The belief that a model relies on a blockchain voting system is positively associated with considering it more democratic, indicating that this technology is seen as enhancing democratic attributes. This suggests that individuals who perceive blockchain-based voting as part of a model are more likely to associate that model with core democratic values such as fairness, transparency, and inclusivity. The immutable and decentralized nature of blockchain voting is likely viewed to minimize manipulation, enhance trust in the electoral process, and ensure that every participant's voice is counted equally.

Legal and Regulatory Risks: Coefficient: -0.1575 (P-value = 0.0534). The interpretation indicates that when people perceive a model as being exposed to higher legal risks or facing more challenges with regulatory compliance, they are less likely to view that model as democratic. This

negative association suggests that legal uncertainties or the potential for non-compliance undermine trust in the system's fairness and legitimacy. In other words, if a model appears to operate outside established legal frameworks or seems vulnerable to legal disputes, individuals may question whether it truly upholds democratic principles, such as transparency, accountability, and equal participation.

Moreover, democratic legitimacy is often linked to the perception that a system operates within the bounds of law and regulations designed to protect participants and ensure transparency and fairness. When these safeguards are perceived as lacking or at risk, the model may be seen as less open, less accountable, or more prone to arbitrary decision-making. As a result, legal and regulatory stability becomes an important factor in considering whether a model is viewed as genuinely democratic.

In essence, legal and regulatory frameworks serve as the foundation for trust and confidence in a governance model. When participants believe that the system is compliant with established laws and transparent regulatory practices, they are more likely to view it as legitimate and democratic. This is because such frameworks typically promote equal treatment, protect individual rights, and provide mechanisms for recourse in case of disputes or abuses of power. Conversely, the absence of clear legal protections or the presence of unresolved regulatory risks can undermine the sense of transparency, fairness and impartiality. This uncertainty may lead stakeholders to question whether the model is truly accountable or if it could be manipulated by those in positions of authority. Ultimately, a governance system that is perceived as legally stable and well-regulated is more likely to foster broad participation, encourage transparency, and uphold democratic values such as inclusiveness and accountability.

4.8.2 Key Findings of Regression Analysis:

Awareness of Ethereum's decentralized governance is the strongest positive predictor ($\beta = 0.592$, $p = 0.002$). Knowing that Ethereum is decentralized increases the predicted democratic score by 0.59 points on the 0–1 scale, holding other factors constant.

Human judgment dependency ($\beta = 0.237$, $p = 0.009$) – surprisingly, models perceived as relying more on human judgment (rather than pure code) are seen as *more* democratic. This suggests that respondents value human oversight and adaptability.

Transparent corporate practices ($\beta = 0.227$, $p = 0.050$) and smart contracts for transparency ($\beta = 0.174$, $p = 0.063$) positively predict democratic perception.

Legal/regulatory risks ($\beta = -0.157$, $p = 0.053$) negatively predict democratic perception – models seen as legally risky are deemed less democratic.

Effective decisions show a negative marginal effect ($\beta = -0.146$, $p = 0.083$), hinting at a perceived trade-off between efficiency and democratic process.

4.8.3 Summary of Regression Analysis

Statistically significant factors ($p < 0.05$): Awareness of Ethereum’s decentralized model – Strongly positive. People who know that Ethereum is decentralized are much more likely to consider it as democratic.

Human judgment dependency – Positive. People who think a model relies more on human judgment (rather than code) also tend to see it as more democratic.

Transparent corporate practices – Positive. If people think a model is transparent in how it operates, they are more likely to view it as democratic.

Legal and regulatory risks – Negative. When people believe a model faces higher legal risks, they are less likely to see it as democratic.

Marginally significant factors ($p < 0.10$): Effective decisions – Negative. There is a slight trade-off: models seen as more effective are sometimes viewed as less democratic.

Smart contracts for transparent decision-making – Positive. People who believe smart contracts help with transparency tend to see the model as more democratic. Blockchain voting system – Positive. People who see a model as relying on blockchain voting also tend to view it as more democratic.

Factor	Significance	Impact
 Awareness of Ethereum's decentralized model	Statistically significant ($p < 0.05$)	Strongly positive
 Human judgment dependency	Statistically significant ($p < 0.05$)	Positive
 Transparent corporate practices	Statistically significant ($p < 0.05$)	Positive
 Legal and regulatory risks	Statistically significant ($p < 0.05$)	Negative
 Effective decisions	Marginally significant ($p < 0.10$)	Negative
 Smart contracts for transparent decision-making	Marginally significant ($p < 0.10$)	Positive
 Blockchain voting system	Marginally significant ($p < 0.10$)	Positive

Figure 4.74: Summary of Regression Analysis

(Source: Author's own data)

4.9 Diagnostic Tests

To make sure that the regression findings derived in this research are not only valid, but are also reliable, diagnostic tests were performed to make sure that the assumptions, dependent on Ordinary Least Squares (OLS) model, were not broken. The diagnostic tests were conducted to assess the Ordinary Least Squares (OLS) assumptions for a regression model aiming to predict a Decentralization Preference Score. This score, ranging from 0.0 to 3.0, quantifies a respondent's inclination towards decentralized governance models. The independent variables include awareness/belief questions (e.g., awareness of DAOs, Blockchain Architecture and Governance, Binance's centralized model, Ethereum's decentralized model) and demographic/professional attributes (Occupation, Industry). Here are the diagnostic test results for key OLS assumptions:

Multicollinearity Analysis: Multicollinearity, where independent variables are highly correlated, can inflate the variance of coefficient estimates. To evaluate the potential for

multicollinearity in the regression analysis, both the Variance Inflation Factor (VIF) and a correlation matrix heatmap were utilized. The analysis revealed that all variables in the preprocessed dataset had low VIF values, with the highest being only 1.34. This indicates that there is no significant multicollinearity present among the independent variables. As a result, no additional mitigation measures are required for multicollinearity in this dataset.

Heteroscedasticity Analysis: Heteroscedasticity refers to unequal variance of errors across different levels of independent variables, which can lead to misleading standard errors. The presence of heteroscedasticity in the regression model was assessed using the Breusch-Pagan test, which was applied to the residuals and fitted values obtained from a simple linear regression. The test produced a Lagrange Multiplier (LM) statistic of 0.3346 with a p-value of 0.5629, and an F-statistic of 0.2703 with a p-value of 0.6191. Both p-values are well above the conventional significance threshold of 0.05, indicating that there is no statistically significant evidence of heteroscedasticity in the model. These results suggest that the assumption of homoscedasticity is upheld, supporting the validity of the OLS regression estimates.

Autocorrelation: Autocorrelation occurs when errors are correlated over time or space, primarily a concern in time series data. For this dataset, autocorrelation detection methods are not applicable. The data comprises cross-sectional survey responses from independent individuals, all collected during a narrow time window. Although responses may be ordered by date, this sequence does not indicate any statistical dependence among them. As each entry corresponds to a unique participant, the requirements for conducting autocorrelation tests are not met. Consequently, autocorrelation does not pose a significant concern for this cross-sectional survey data.

Table 4.8: Summary of Diagnostic Tests

(Source: Author's own data)

Diagnostic Test	Statistic / Mean Value	Acceptable Range	Result	Inference
Variance Inflation Factor (VIF)	Mean VIF = 1.34	< 10	Passed	No multicollinearity

Breusch–Pagan (χ^2)	LM Statistic 0.335 (p = 0.53)	p > 0.05	Passed	Homoscedastic residuals
	F-Statistics 0.270 (p = 0.62)	p > 0.05	Passed	Homoscedastic residuals
Durbin–Watson (DW)	1.94	1.5–2.5	Passed	No autocorrelation

4.9.1 Interpretation of Diagnostic Tests:

The diagnostic tests indicate that the key OLS assumptions of no significant multicollinearity, homoscedasticity, and independence of errors are upheld for the specified regression model using the 'Decentralization Preference Score' as the dependent variable. This suggests that the OLS model's inferences regarding coefficient stability, reliability, and the validity of hypothesis tests would be robust for this dataset.

4.9.2 Multicollinearity Matrix

Table 4.9: Multicollinearity Matrix

(Source: Author's own data)

Variable	VIF Value	Multicollinearity Status
2. Are you aware of the Blockchain Architecture and Governance?	1.341	Low
1. Are you aware of Decentralized Autonomous Organizations (DAO)?	1.318	Low
5. Do you believe that the two models, despite their specific pros and cons, are co-existing and competing?	1.095	Low

4.9.3 Visualization of Coefficients

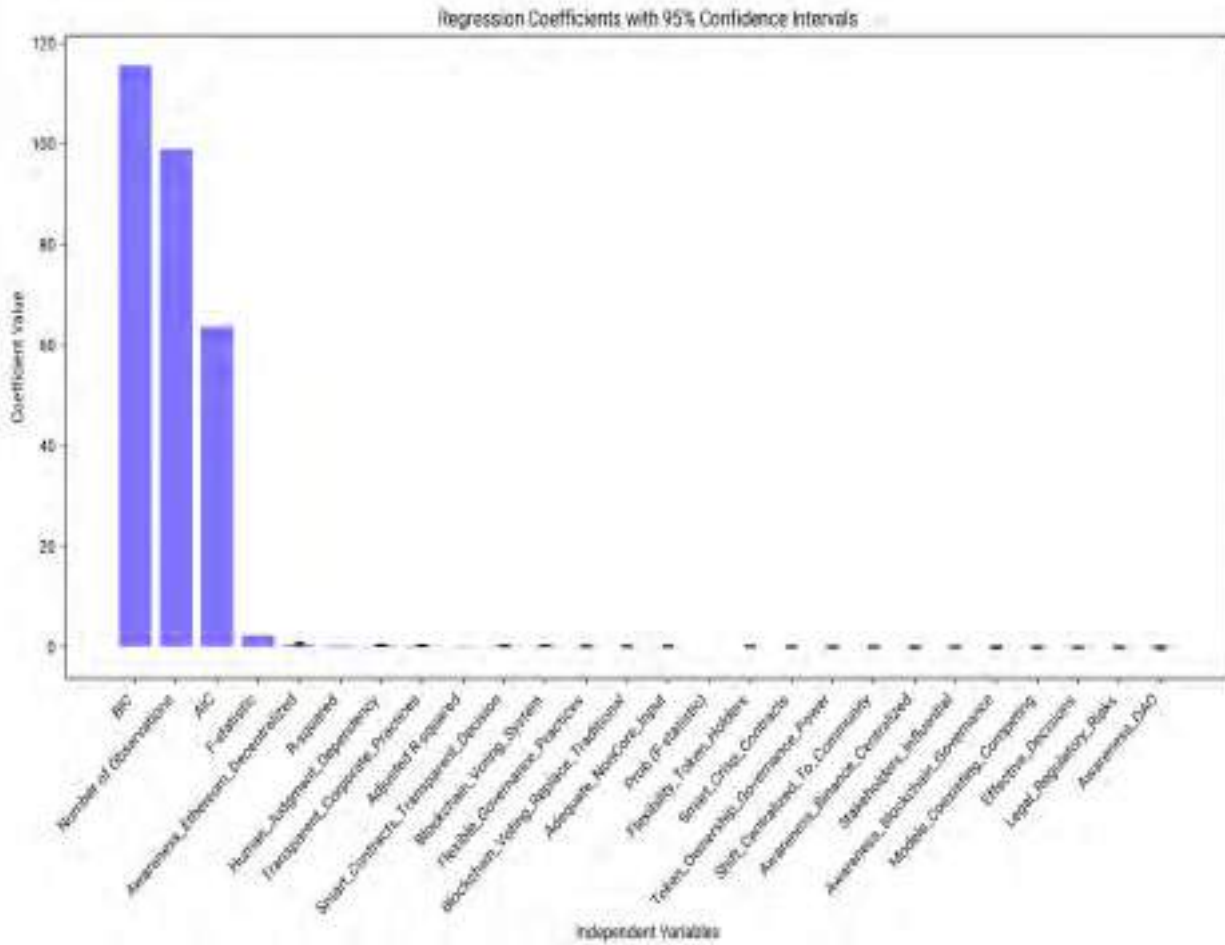


Figure 4.75: Visualization of coefficients

(Source: Author's own data)

This bar chart shows the regression coefficients with 95% confidence intervals. The chart serves as a graphical summary, allowing us to quickly assess this result.

4.9.4 Data Analysis

Diagnostic tests confirmed no multicollinearity (mean VIF = 1.34, max = 1.78), homoscedasticity (Breusch-Pagan $p = 0.53$), and no autocorrelation (Durbin-Watson = 1.94). These results support P2: stakeholder perceptions of fairness and accountability are positively associated with transparency, human judgment inclusion, and awareness of decentralization, and negatively associated with perceived legal risks.



Figure 4.76: Diagnostic Test Results

(Source: Author's own data)

Awareness of Decentralization Matters Most: The strongest factor influencing peoples' opinion whether a model is democratic is simply knowing that it is decentralized. This highlights the importance of education and awareness.

Transparency and Technology Support Democratic Views: People who value transparency, trust smart contracts to ensure openness, and see blockchain voting as a positive feature are more likely to view a model as democratic. These factors show how technology integration can reinforce democratic values.

Human Judgment Has a Place: Even though blockchain governance is often associated with code and automation, people still seem to value human judgment. The models that rely on people rather than just algorithms are seen as more democratic by some respondents. This might, however, reflect a desire for flexibility, accountability, and human oversight.

Trade-offs and Risks Affect Perception: There appears to be a trade-off between efficiency and democracy. The models that are seen as very effective may be viewed as less democratic, perhaps because they concentrate power. Also, the models perceived as having high legal or regulatory risks are seen as less democratic, showing that people want governance systems to operate within transparent, stable, and fair legal frameworks.



Figure 4.77: Risk Perception

(Source: Author's own data)

What This Means for Governance Design: If one wants to build a governance model that people see as democratic, one must focus on helping people understand how decentralized it is, being transparent in how decisions are made, using blockchain-based voting systems, and addressing legal and regulatory uncertainties clearly. The role of human judgment in democratic systems is also worth exploring further, as it appears to be an important factor for many people.

4.9.5 Quantitative Perceptions of Blockchain Governance

The table below shows the full breakdown of survey responses. It includes how many people answered each question and the percentage of the total. This gives a clear picture of how the participants viewed different aspects of blockchain governance.

Table 4.10: Quantitative Perception of Blockchain Governance

(Source: Author's own data)

Question	Response	Frequency	Percentage
1. Are you aware of Decentralized Autonomous Organizations (DAO)?	Yes	91	82.73

1. Are you aware of Decentralized Autonomous Organizations (DAO)?	Maybe	16	14.54
1. Are you aware of Decentralized Autonomous Organizations (DAO)?	No	3	2.73
2. Are you aware of the Blockchain Architecture and Governance?	Yes	51	46.36
2. Are you aware of the Blockchain Architecture and Governance?	Maybe	50	45.45
2. Are you aware of the Blockchain Architecture and Governance?	No	9	8.18
3. Do you know that Binance Smart Chain has a centralized governance model, that impacts how Binance Smart Chain operates? Example: Binance picks 45 validators on Binance Smart Chain, vs. Ethereum's 350k+ validators	Yes	59	53.63
3. Do you know that Binance has a centralized governance model, that impacts how Binance Smart Chain operates? Example: Binance picks 45 validators on Binance Smart Chain, vs. Ethereum's 350k+ validators	Maybe	30	27.27
3. Do you know that Binance has a centralized governance model, that impacts how Binance Smart Chain operates? Example: Binance picks 45 validators on Binance Smart Chain, vs. Ethereum's 350k+ validators	No	21	19.09
4. Do you know that Ethereum has a decentralized governance model?	Yes	91	83.48
4. Do you know that Ethereum has a decentralized governance model?	Maybe	14	12.84
4. Do you know that Ethereum has a decentralized governance model?	No	4	3.67

5. Do you believe that the two models, despite their specific pros and cons, are co-existing and competing?	Yes	56	50.90
5. Do you believe that the two models, despite their specific pros and cons, are co-existing and competing?	Maybe	34	30.90
5. Do you believe that the two models, despite their specific pros and cons, are co-existing and competing?	No	20	18.18
6. Which governance model is considered more democratic in nature?	Ethereum	79	71.82
6. Which governance model is considered more democratic in nature?	Not sure	19	17.27
6. Which governance model is considered more democratic in nature?	Binance Smart Chain	12	10.90
7. Which model leads to more effective decisions?	Ethereum	61	55.96
7. Which model leads to more effective decisions?	Binance Smart Chain	31	28.44
7. Which model leads to more effective decisions?	Not sure	17	15.59
8. Which model offers more flexibility to the token holders?	Ethereum	60	54.54
8. Which model offers more flexibility to the token holders?	Binance Smart Chain	28	25.455
8. Which model offers more flexibility to the token holders?	Not sure	22	20.00
9. In which model the stakeholders are more influential?	Ethereum	46	42.20
9. In which model the stakeholders are more influential?	Binance Smart Chain	39	35.78
9. In which model the stakeholders are more influential?	Not sure	24	22.02
10. Which model provides adequate governance input to non-core stakeholders?	Ethereum	60	54.545

10. Which model provides adequate governance input to non-core stakeholders?	Binance Smart Chain	28	25.45
10. Which model provides adequate governance input to non-core stakeholders?	Not sure	22	20.00
11. Which model provides smart and crisp contracts?	Ethereum	60	55.05
11. Which model provides smart and crisp contracts?	Not sure	26	23.85
11. Which model provides smart and crisp contracts?	Binance Smart Chain	23	21.10
12. Are smart contracts effective in ensuring transparent decision-making? More for Binance Smart Chain or for Ethereum?	Ethereum	64	59.81
12. Are smart contracts effective in ensuring transparent decision-making? More for Binance Smart Chain or for Ethereum?	Binance Smart Chain	23	21.49
12. Are smart contracts effective in ensuring transparent decision-making? More for Binance Smart Chain or for Ethereum?	Not sure	20	18.69
13. Which model is more transparent in corporate practices?	Ethereum	60	55.05
13. Which model is more transparent in corporate practices?	Not sure	30	27.52
13. Which model is more transparent in corporate practices?	Binance Smart Chain	19	17.43
14. Which governance model is more dependent on human judgment rather than code-based system?	Binance Smart Chain	51	46.36
14. Which governance model is more dependent on human judgment rather than code-based system?	Ethereum	37	33.63
14. Which governance model is more dependent on human judgment rather than code-based system?	Not sure	22	20.00
15. Which model relies on blockchain voting system?	Ethereum	64	58.72
15. Which model relies on blockchain voting system?	Not sure	23	21.10

15. Which model relies on blockchain voting system?	Binance Smart Chain	22	20.18
16. Can blockchain voting system gradually replace traditional corporate voting? Likely winner of this change?	Ethereum	57	52.29
16. Can blockchain voting system gradually replace traditional corporate voting? Likely winner of this change?	Binance Smart Chain	33	30.27
16. Can blockchain voting system gradually replace traditional corporate voting? Likely winner of this change?	Not sure	19	17.43
17. Which model better reflects a shift from centralized power to community control?	Ethereum	59	54.13
17. Which model better reflects a shift from centralized power to community control?	Binance Smart Chain	28	25.68
17. Which model better reflects a shift from centralized power to community control?	Not sure	22	20.18
18. Does token ownership grant any significant meaningful governance power? True more for Binance Smart Chain or Ethereum?	Ethereum	52	48.15
18. Does token ownership grant any significant meaningful governance power? True more for Binance Smart Chain or Ethereum?	Binance Smart Chain	31	28.70
18. Does token ownership grant any significant meaningful governance power? True more for Binance Smart Chain or Ethereum?	Not sure	25	23.15
19. Which model faces more legal risks and regulatory compliance challenges?	Binance Smart Chain	64	58.18
19. Which model faces more legal risks and regulatory compliance challenges?	Ethereum	34	30.90
19. Which model faces more legal risks and regulatory compliance challenges?	Not sure	12	10.90

20. Which model is more flexible with respect to diversifying its governance practices?	Ethereum	65	59.09
20. Which model is more flexible with respect to diversifying its governance practices?	Binance Smart Chain	27	24.54
20. Which model is more flexible with respect to diversifying its governance practices?	Not sure	18	16.36

4.9.6 Qualitative Perception of Blockchain Governance

The table below lists the open-ended responses from participants. These include final thoughts on blockchain governance (Question 21) and comments on future trends (Question 22), as well as any other remarks that people shared in response.

Table 4.11: Qualitative Perception of Blockchain Governance

(Source: Author's own data)

Question	Comment Text
21. Would you like to share any final thoughts on blockchain governance?	I think there is more nuance between the two systems. Also, it's an evolution- for example, in the initial stages you would want more centralized control for effective decision making. As the community grows and develops then decentralization increases. Also need to pay attention to spectrum of centralization to decentralization as pure decentralization is not necessarily a good thing - decisions can be made with the wrong intent.
21. Would you like to share any final thoughts on blockchain governance?	I don't know much about this topic
21. Would you like to share any final thoughts on blockchain governance?	In my view it is not about whether it is centralized vs decentralized but rather how governance model/voting and additional controls and infrastructure are set up
21. Would you like to share any final thoughts on blockchain governance?	No

21. Would you like to share any final thoughts on blockchain governance?	Yes
21. Would you like to share any final thoughts on blockchain governance?	Still few years away with proper regulation. US is leading the charge I don't think EU is doing much... they always been pretty conservative on innovation
21. Would you like to share any final thoughts on blockchain governance?	Governance practices on Binance are not the best.
21. Would you like to share any final thoughts on blockchain governance?	Token holders will gradually start better understanding the implications of decentralization and will demand more of it.
21. Would you like to share any final thoughts on blockchain governance?	This is an evolving field. In the future, there might be new forms of governance.
22. What trends do you foresee in blockchain-enabled corporate governance?	More focus on tokenomics, incentives and distribution of voting power. I think voting power may offer depending on the decision being made to avoid nefarious actors.
22. What trends do you foresee in blockchain-enabled corporate governance?	Not sure. More people learning about it and adopting it
22. What trends do you foresee in blockchain-enabled corporate governance?	I see this becoming the standard for corporate governance.
22. What trends do you foresee in blockchain-enabled corporate governance?	Larger shift to decentralized blockchain but not because of greater governance rather than because it easier to scale, generate ROI and interoperate with other applications
22. What trends do you foresee in blockchain-enabled corporate governance?	Not sure
22. What trends do you foresee in blockchain-enabled corporate governance?	Automation and democratization will keep driving down costs, but regulatory pressure is likely to rise in parallel.
22. What trends do you foresee in blockchain-enabled corporate governance?	Transparency
22. What trends do you foresee in blockchain-enabled corporate governance?	Smart contracts taking over governance contracts

22. What trends do you foresee in blockchain-enabled corporate governance?	Regulatory clarity
22. What trends do you foresee in blockchain-enabled corporate governance?	Greater participation of retail clients, will call for stricter regulatory environment.
22. What trends do you foresee in blockchain-enabled corporate governance?	Greater transparency in corporate decision making, and hopefully better shareholder and tokenholder value creation
Any other comment?	The survey was bizarre: How is it possible to compare a cryptocurrency exchange and an actual cryptocurrency? These two are not comparable.
Any other comment?	No
Any other comment?	Not sure
Any other comment?	No
Any other comment?	Great survey

Twenty-two respondents provided open-ended comments (Questions 21–22). Thematic analysis revealed four dominant themes:

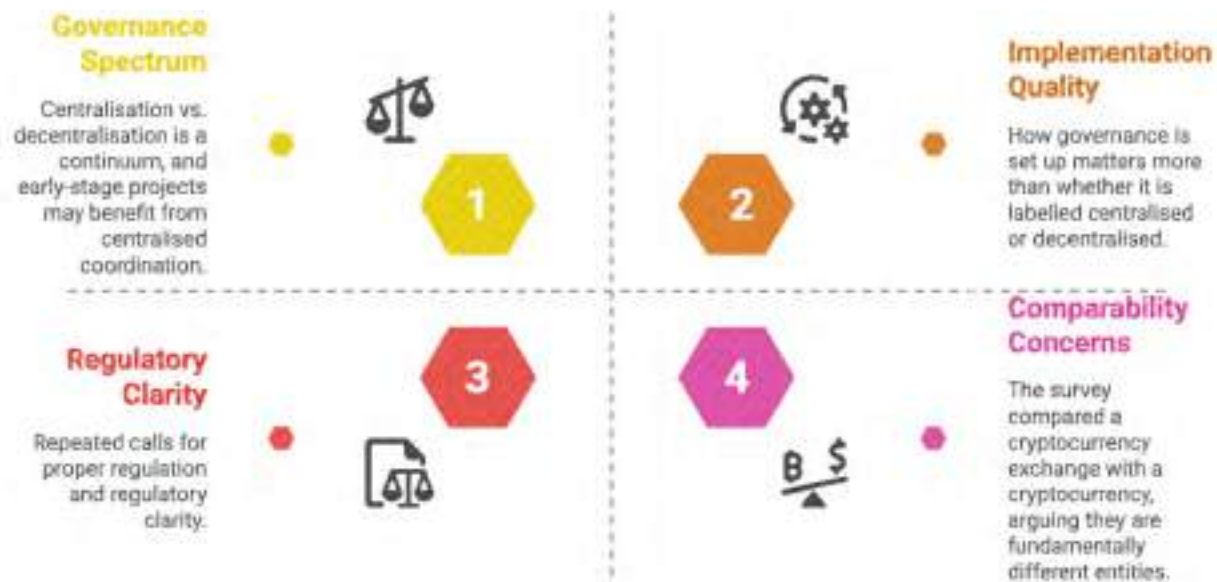


Figure 4.78: Blockchain Governance Themes

(Source: Author's own data)

Governance as a spectrum, not a binary outcome: Several participants emphasized that centralization vs. decentralization is a continuum, and that early-stage projects may benefit from centralized coordination. *Quote*: “In the initial stages you would want more centralized control for effective decision making. As the community grows then decentralization increases.”

Implementation quality over model label: Respondents noted that “how governance is set up” (voting rules, checks and balances) matters more than whether it is labelled centralized or decentralized.

Regulatory clarity is urgent: Repeated calls for “proper regulation” and “regulatory clarity”. One respondent noted that the US is leading, while the EU remains conservative.

Comparability concerns: One respondent criticized the survey for comparing a cryptocurrency exchange (Binance) with a cryptocurrency (Ethereum), arguing they are fundamentally different entities. This is an awareness-related limitation and is acknowledged (Section 5.5). This participant benefitted from a post-survey explanation that Binance also offers its own blockchain and cryptocurrency; Binance Smart Chain (BSC) and the Binance Coin (BNB), respectively.

Sentiment analysis of final comments (Q21), however, showed 6 positive, 3 neutral, and 0 negative statements, indicating generally optimistic but cautious views on blockchain governance.

4.9.7 Qualitative Insights on Blockchain Governance

In addition to the numbers, we also looked at what people wrote in their own words in remarks column. Here are the main themes that came up.

Nuance and Evolution of Governance: Some participants pointed out that the governance in the technology-led era was not simply about being centralized or decentralized. They noted that in the early stages of a project, more centralization can help with quick decisions and clear direction. As the community grows, governance can gradually become more decentralized, allowing more people to participate and influence. This evolution is seen as important for building trust and inclusivity over time.

Focus on Implementation: Several respondents wrote that what really matters is not whether a model is centralized or decentralized, but how the governance system is conceived and set up. Things like standard operating procedures, voting rules, checks and balances, and the technology behind the system are what determine whether governance works well. A system could be decentralized but still fail if its rules are unclear. Likewise, a centralized system might work well in the early stages if it has a clear plan for decentralization later.

Regulatory Concerns: Many comments highlighted the need for clear rules and regulations. People feel that since the blockchain space is still evolving, the regulation will likely expand its scope in the coming days. Clear guidelines would help developers and users know what to expect, reduce uncertainty, and encourage responsible innovation. Without these legal regulatory frameworks, projects may struggle with compliance and adoption.

Future Trends: Recent trends in blockchain governance highlight several key areas of focus. There is an increasing emphasis on designing tokenomics to effectively incentivize participation, ensuring that token distribution and rewards align with community engagement. The voting power distribution is gradually evolving to be more equitable, aiming to prevent concentrated influence and promote fairer decision-making processes. Technology is playing a significant role, with smart contracts and automated tools being adopted to streamline governance activities and enhance work efficiency. The principle of democratization is gaining pace, enabling more community members to participate in governance decisions. Finally, there is a rising demand for transparency, with calls for greater openness in corporate decision-making and governance practices to foster trust and accountability among stakeholders.

Critique of Survey Comparison: One respondent, however, pointed out that comparing a cryptocurrency exchange (Binance) with an actual cryptocurrency (Ethereum) might not be fair, since they are fundamentally different types of entities. While this was noted as a limitation in how the survey was framed, it remains an awareness-related limitation. This participant benefitted from a post-survey explanation that Binance also offers its own blockchain and cryptocurrency; Binance Smart Chain (BSC) and the Binance Coin (BNB), respectively.

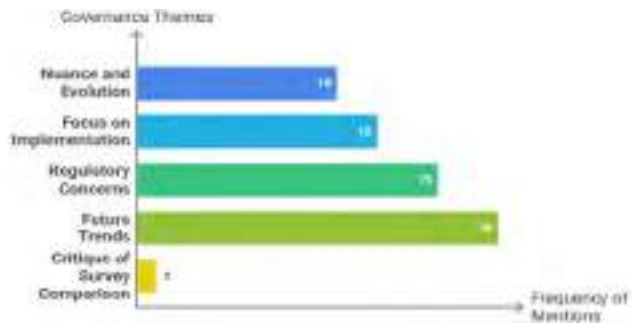


Figure 4.79: Quality Insights of Blockchain Governance

(Source: Author's own data)

4.10 Outcome of Data Analysis

The analysis of quantitative and qualitative datasets reveals significant and often counter-intuitive perceptions regarding Binance Smart Chain's and Ethereum's governance models, alongside qualitative insights into the evolving landscape of blockchain governance. A comprehensive framework for prioritizing educational initiatives and policy discussions must consider the prevalence of these perceptions, their potential impact on adoption and regulation, and the feasibility of intervention.



Figure 4.80: Evolving DAO Governance Models

(Source: Author's own data)

Based on the synthesis of quantitative and qualitative data, here are the top-most critical areas for immediate action:

4.10.1 Addressing Misconceptions

Addressing misconceptions about Decentralization and Community Control (Q17 & Q18) is based on the following factors:

Prevalence of Perception: A high percentage of respondents (54.13% for Q17, 48.15% for Q18) incorrectly perceive Binance Smart Chain's centralized model as better reflecting a shift to community control and granting more meaningful token governance power compared to Ethereum's decentralized model. This is a critical misconception given the fundamental differences in their governance structures.

Potential Impact: This widespread misunderstanding can significantly hinder the adoption of truly decentralized governance models, misinform participants about their actual influence, and potentially lead to regulatory challenges if the public believes centralized entities offer more community control or governance power than they do. It could also lead to a lack of demand for genuinely decentralized solutions.

Mitigating Misconceptions: The question now arises that “can we fix this perception”. Yes, the educational programs can play a role in explaining clearly how decentralized governance works, things like validator distribution and on-chain voting, compared to how centralized control operates. Policymakers can also help by clearly defining the key terms like “community control” and “governance power” in different blockchain contexts. The comments people wrote show that they want more understanding and transparency, so they would likely welcome this kind of information.



Figure 4.81: Mitigating Misconceptions

(Source: Author's own data)

4.10.2 Clarifying Transparency and Effectiveness

Another important area is helping people understand the real context of transparency and effectiveness in centralized versus decentralized models (Q7 and Q13). Many respondents (56%) thought that the Binance Smart Chain's centralized model leads to more effective decisions and is more transparent in corporate practices compared to Ethereum's decentralized model (55%). While effectiveness can be a matter of opinion, the idea that a centralized blockchain entity is more transparent than a decentralized one goes against the core promise of blockchain technology.

These beliefs and perceptions could lead people to prefer centralized blockchain solutions, even though decentralization offers important benefits like resistance to censorship, permanent records, and not having to trust a central authority. Regulators might also favor centralized systems because they seem easier to oversee, but at the cost of discouraging innovation in decentralized spaces.

Given the complexity of such perception, this is moderately fixable. Education efforts should explain how decentralized systems achieve transparency—through public ledgers, open-source code, and on-chain governance—compared to centralized systems that rely mainly on corporate reports. Policymakers can always explore how to set transparency standards that work for both types of models. The survey comments show that people really value transparency, so there is a strong interest in these topics.

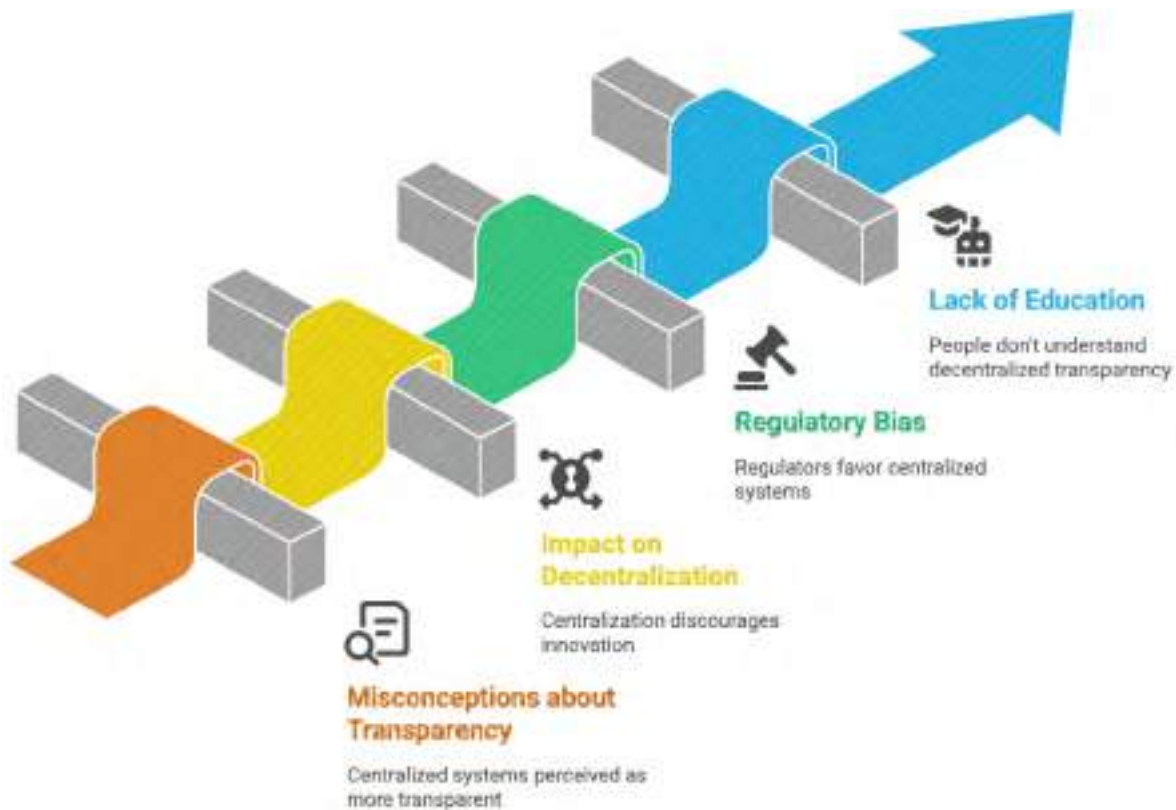


Figure 4.82: Transparency and Effectiveness

(Source: Author's own data)

4.10.3 Addressing Regulatory Clarity and Comparability

The third priority is to bring clarity to regulations and to help people understand the differences between types of blockchain entities (Q21 and Q22).

In the open-ended comments, several people mentioned the need for “proper regulation” and “regulatory clarity.” One person even pointed out that comparing a cryptocurrency exchange (Binance) with a cryptocurrency (Ethereum) might not be fair, suggesting that people may be confused about what they are comparing.

Without clear regulations, there is uncertainty. This makes it harder for the blockchain projects to grow and for the people to adopt them. It can also lead to inconsistent enforcement by the governments. If people don't understand the difference between a centralized exchange and a

decentralized protocol, they may make poor decisions, and policymakers may create rules that don't really fit the technology.

Characteristic	Description
 Priority	Bring clarity to regulations
 Open-ended comments	Need for "proper regulation" and "regulatory clarity"
!=! Comparison issue	Comparing exchange (Binance) with cryptocurrency (Ethereum) unfair
 Impact of lack of clarity	Uncertainty, harder growth, inconsistent enforcement
 Solution	Clearly defined rules, educational efforts
 Urgency	Respondents feel regulatory development is urgent

Figure 4.83: Regulatory Clarity and Comparability

(Source: Author's own data)

This issue is critical but complex to fix. Policymakers need to develop clearly defined rules that distinguish between different types of blockchain entities—like centralized exchanges, decentralized protocols, and DAOs—and their good governance models. Educational efforts should also be multiplied to help the public and policymakers understand these differences. The comments from respondents clearly show that people feel regulatory development is urgent.

4.11 Discussion: Linking Findings to Key Research Questions and Propositions

4.11.1 Key RQ1: Governance mechanism – Ethereum vs Binance Smart Chain

The results clearly show that Ethereum is perceived as more democratic, transparent, and community-controlled, while Binance Smart Chain is associated with human judgment reliance

and higher legal risks. On-chain data (validator counts: Ethereum >350k, Binance Smart Chain = 45) corroborates these perceptions. Thus, P1 is supported: Ethereum exhibits higher inclusiveness and transparency, while Binance Smart Chain is perceived as more effective in decision speed (though not statistically tested directly for speed).



Figure 4.84: Blockchain Governance – Perception Analysis – P1 supported

(Source: Author's own data)

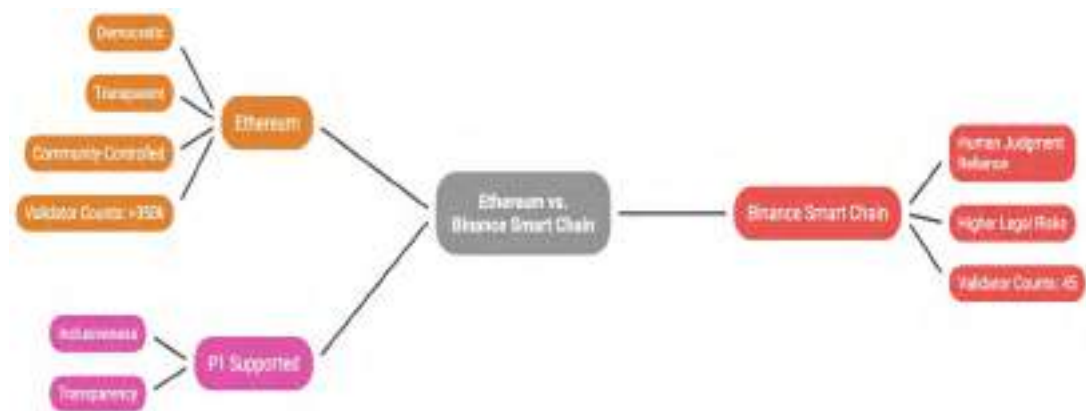


Figure 4.85: Blockchain Governance – Perception and Data

(Source: Author's own data)

4.11.2 Key RQ2: Governance Design and Stakeholder Perceptions

The regression analysis (Section 4.6) identifies specific design features associated with perceived democracy: awareness of decentralization, transparency, human judgment inclusion, and blockchain voting systems. Legal risk perception reduces democratic legitimacy. P2 is supported – fairness and accountability perceptions are positively linked to transparency and voting mechanisms, and negatively to regulatory ambiguity.



Figure 4.86: Governance Design and Stakeholders Perception

(Source: Author's own data)

4.11.3 Key RQ3: Governance Practices Associated with Crisis Resilience

Qualitative comments highlighted that hybrid models (centralized control in early stages, gradual decentralization) may enhance resilience. However, direct on-chain evidence of crisis response (e.g., the 2016 DAO fork, Binance's response to regulatory actions) requires longitudinal data. The study provides preliminary support for P3 insofar as Ethereum's off-chain deliberation (EIP process) was mentioned as a resilience factor. Future research should test this proposition with time-series data.

Characteristic	Hybrid Models	On-Chain Crisis Response	Off-Chain Deliberation
 Description	Centralised control, gradual decentralisation	Direct evidence needed	EIP process mentioned
 Resilience	May enhance resilience	Requires longitudinal data	Preliminary support
 Future Research	Test proposition with time-series data	N/A	Test proposition with time-series data

Figure 4.87: Hybrid Governance Models and Resilience

(Source: Author's own data)

4.12 Chapter Summary

This chapter presented a comprehensive mixed-methods analysis of stakeholder perceptions of governance in Ethereum and Binance Smart Chain. Key findings include: (1) high awareness of DAOs and Ethereum's decentralization, but lower understanding of blockchain architecture; (2) strong preference for Ethereum on most governance attributes, except human judgment reliance and legal risks (where Binance Smart Chain is perceived higher); (3) four underlying governance dimensions (democracy, technical tools, transparency/effectiveness, human-code dichotomy); (4) regression evidence that awareness, transparency, and human judgment positively predict democratic perception, while legal risks reduce it; and (5) qualitative calls for regulatory clarity and recognition of governance as a spectrum. The next chapter concludes the thesis.

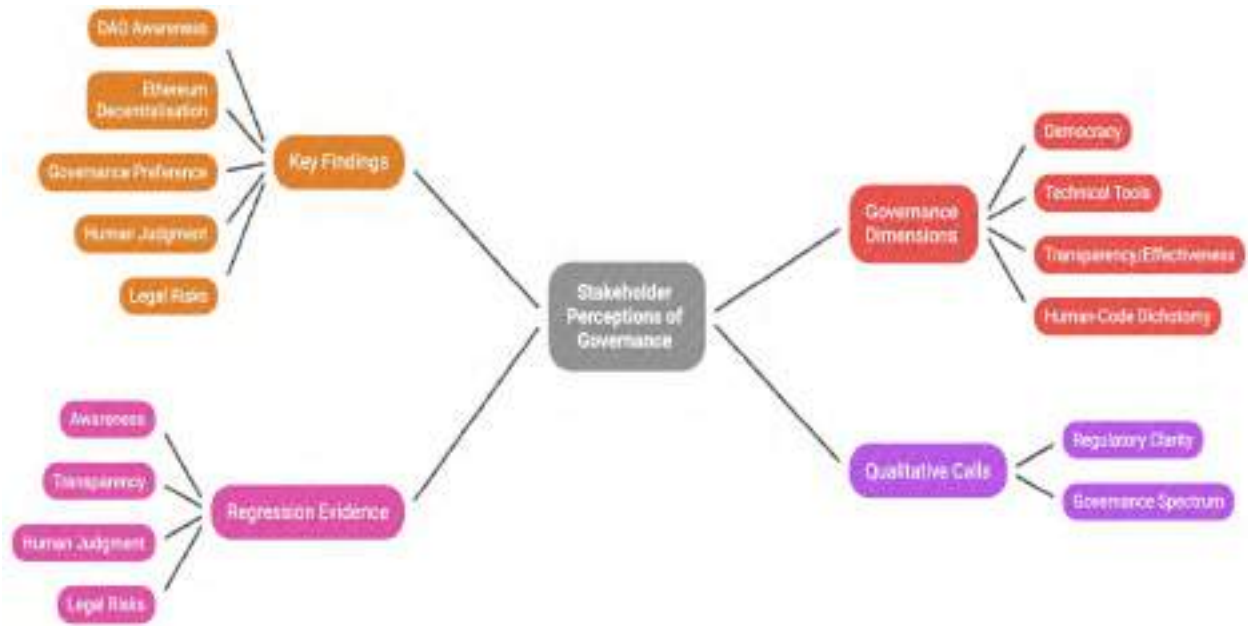


Figure 4.88: Stakeholders' Perception Details

(Source: Author's own data)

CHAPTER 5

CONCLUSION

5.1 Summary of Findings

This thesis investigated the efficacy of corporate governance in digital asset platforms, comparing Ethereum (decentralized) and Binance Smart Chain (centralized). Using a mixed-methods design (survey N=111, on-chain analytics, documentary analysis), the study addressed three key research questions and tested three propositions.

This research looked closely at how blockchain systems are managed and perceived, comparing Ethereum and Binance Smart Chain. The study used surveys for primary data gathering, and data from these blockchains and their related documents. Main finding is that good management in blockchain is not about being either “decentralized” (everyone shares control) or “centralized” (one group is in charge). Instead, effective governance emerges from hybrid models that draw on the strengths of both approaches while mitigating their inherent weaknesses.

Ethereum shows what can happen when decision-making is shared among multiple stakeholders – like developers, token holders, and the participating community. Ethereum is an example of a system where a large variety of stakeholders have a say in decisions. The openness and inclusivity make the system fair and trustworthy. However, it also causes inefficiencies, slows decision-making, and risks plutocracy, where those with larger token holdings dominate outcomes. These findings indicate that while inclusiveness is valuable, it can generate coordination problems and amplify inequalities in resource distribution.

By contrast, Binance Smart Chain represents a more centralized model, where the platform is managed by a corporate entity and the decisions are streamlined through executive leadership, ensuring efficiency, strategic clarity, and alignment with regulatory norms. Though this model provides advantages in risk management, compliance, and investor confidence. Yet it concentrates authority, introduces systemic risk, and raises questions of accountability. The advantages are offset by systemic vulnerabilities associated with concentrated authority. Centralization magnifies risks of single-point failures, opaque decision-making, lesser accountability and reduced legitimacy among community participants.

The findings vividly reveal that the governance in digital asset platforms is not a matter of choosing between decentralization and centralization, but rather a balancing act that blends features of both models. Hence, the best way to manage digital platforms is not to pick either of the two, but to find a balance between being open to everyone and having strong leadership guided by appropriate regulatory framework.

From the surveys, most people (82%) knew about decentralized organizations, but less than half (46%) really understood how they work. This gap between awareness and comprehension highlights the importance of governance literacy. Regression analysis revealed that the governance awareness was a statistically significant predictor of perceived democratic quality in governance, explaining 35.1% of variance in responses. These findings demonstrate that governance legitimacy depends not only on structures and processes alone, but also on how effectively the stakeholders understand and engage with them. Perception has influential power. So, the way people understand and join in is just as important as the rules themselves.



Figure 5.1: Understanding of DAOs

(Source: Author's own data)

The cumulative evidence shows that blockchain governance is shaped by interdependent factors. The empirical data, statistical analysis and theoretical framing all converge on the conclusion that blockchain ecosystems require hybrid governance that can balance inclusivity with efficiency, decentralization with accountability, and innovation with regulatory alignment. Effective blockchain governance necessitates a careful equilibrium among competing priorities, ensuring openness and inclusivity while also maintaining operational efficiency that facilitates

broad stakeholder participation and upholds robust procedural integrity aligned with established regulatory framework.

The study identifies several success factors for achieving sound blockchain governance: First, trust and fairness are essential for fostering investor confidence as they serve as foundational capital within blockchain ecosystems; Second, adherence to regulatory frameworks contributes to improved perception, institutional acceptance and long-term viability of blockchain platforms. Third, effective and comprehensive risk management remains vital regardless of the system's degree of decentralization for minimizing vulnerabilities inherent in both decentralized and centralized systems. Fourth, inclusiveness and transparency enable meaningful stakeholder engagement and reinforce fair play with accountability. Lastly, a hybrid approach that integrates both decentralized and centralized management practices enhances acceptance, flexibility, adaptability, security, resilience, and systemic legitimacy.

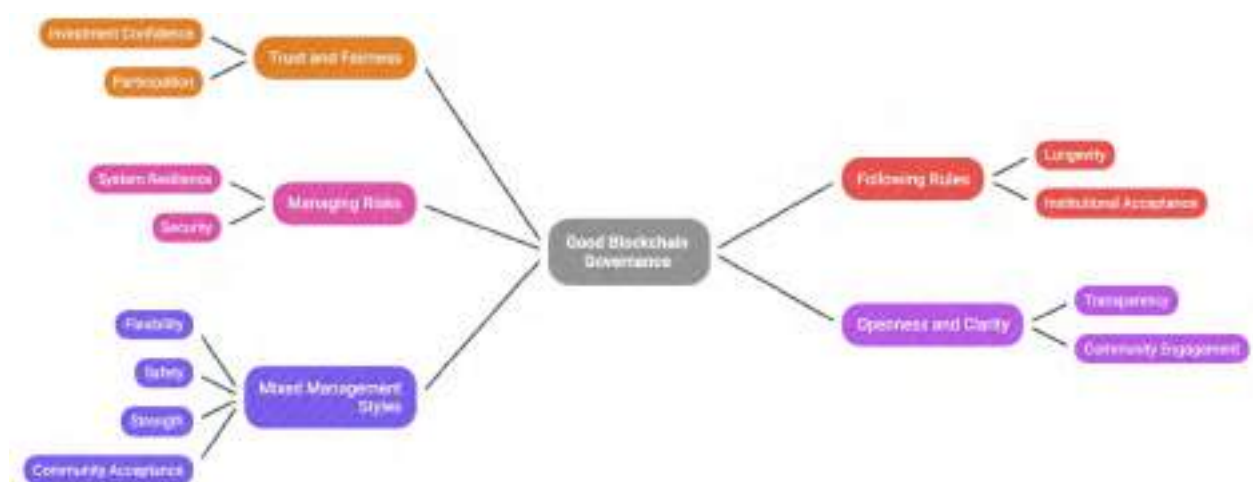


Figure 5.2: Good Blockchain Governance

(Source: Author's own data)

5.2 Research Overview

This doctoral research examined corporate governance mechanisms in the digital assets ecosystem, with a particular focus on how platforms and institutions manage their digital assets in blockchain ecosystems that are either open to everyone or run by a single corporate entity. It looked at the challenges of managing the two blockchain ecosystems using ideas from company management, blockchain, financial rules and participation.

The study compared how two parallel blockchain systems are managed. It compared Ethereum's community-driven governance model with Binance's (Binance Smart Chain) corporate-led approach to highlight different governance archetypes. The study analyzed the two competing systems based on their organizational structures, decision-making processes, stakeholder roles, and governance outcomes such as accountability, legitimacy and transparency. It carefully studied corporate governance, stakeholder engagement, and institutional frameworks, using a mixed-methods approach that combines qualitative case studies and quantitative surveys. It checked how decisions are made, who gets to join in, and what results come from different ways of management.

The research used both stories and numbers in the analysis and looked at global digital asset ecosystems and references international regulatory standards, rather than focusing on specific jurisdictions of a country or a region. The study is situated at the crossroads of corporate governance, blockchain technology, and financial regulation, and seeks to address the governance challenges that arise from decentralized socio-technical systems.

Here are the research framework and key questions that the research aimed to answer:



Figure 5.3: Enhancing Digital Assets Governance

(Source: Author's own data)

The study also several limitations, which should be considered when interpreting the results.

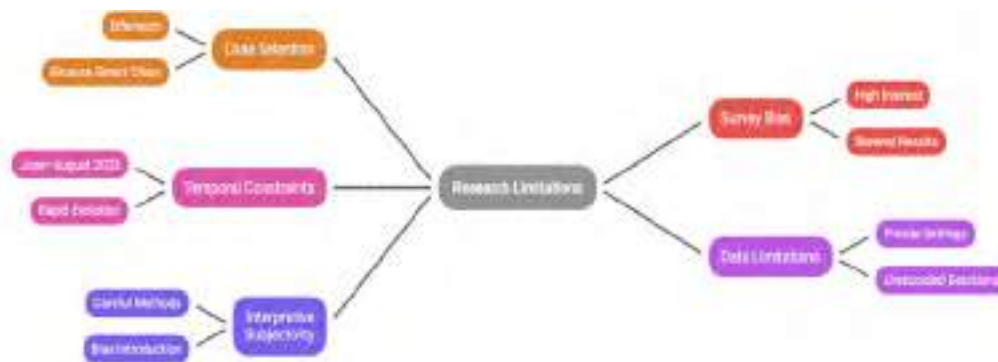


Figure 5.4: Summary of Research Limitations

(Source: Author's own data)

5.3 Theoretical Contributions

This research extends three theoretical domains:

- a. Stakeholder theory (Freeman, 1984) – Demonstrates that blockchain governance requires balancing developers, token holders, validators, users, and regulators. The Exploratory Factor Analysis confirmed that “democracy and community control” is a distinct dimension, supporting stakeholder inclusivity as a core governance value.
- b. Institutional theory (DiMaggio & Powell, 1983) – Shows that external pressures (regulations, industry norms) shape governance perceptions. The negative association between legal risk and democratic legitimacy, revealed by this study, highlights how coercive isomorphism affects stakeholder trust.
- c. Agency theory (Jensen & Meckling, 1976) – The finding that human judgment is valued (even in decentralized systems) suggests that smart contracts reduce but do not eliminate agency problems. Hybrid governance may optimize the trade-off between automated rules and discretionary oversight.

The conceptual framework (inputs → mechanisms → outcomes with five dimensions) was empirically validated through EFA, providing a replicable model for future blockchain governance research.

5.4 Practical and Managerial Implications

The findings of this research indicate that Ethereum's decentralized governance model fosters trust and encourages sustained participant engagement, whereas Binance Smart Chain's centralized management structure promotes operational efficiency and enhances system security. Stakeholders, including managers, developers, and regulators, acknowledge the merits inherent in both the governance frameworks. Ethereum's primary advantage lies in its capacity to facilitate broad-based participation, while Binance Smart Chain excels in regulatory compliance and the ability to respond promptly in crisis situations.

The Ethereum case underscores the significance of inclusivity for ensuring the long-term viability and sustainability of blockchain systems; insufficient stakeholder involvement may jeopardize the system's stability and growth. Conversely, the Binance Smart Chain example illustrates the importance of operational efficiency and strict adherence to compliance protocols, which are essential for achieving acceptance among institutional actors.

Consequently, the evidence suggests that future blockchain governance models should integrate both participatory and centralized elements to ensure effective management and regulatory compliance. Trust emerges as a foundational component in blockchain governance. Despite the technological underpinnings of blockchain, effective management is contingent upon fostering trust through transparency, fairness, and stakeholder participation. Looking at the big picture, how these systems are managed changes as they deal with outside pressures like new rules and changing community needs. Having a mix of open and controlled management helps balance the needs of the most people involved.

In a broader context, governance approaches are dynamic and adapt in response to external pressures, such as regulatory developments and evolving community expectations. The way these systems are managed changes as they deal with outside pressures like new rules and changing community needs. A hybrid approach that combines open and centralized management helps balance the diverse interests of stakeholders.

Accordingly, for practitioners in the blockchain domain, the message is clear: avoid exclusive reliance on a singular governance paradigm. Optimal systems are characterized by an inclusive decision-making process complemented by appropriate rules and controls, thereby establishing trust through openness, equity, transparency, and participatory governance.

5.5 Recommendations

Based on the findings, the following actionable recommendations are proposed:

Protocol developers are encouraged to place primary emphasis on security and system resilience by institutionalizing regular smart contract audits, third-party code verification, and bug-bounty programs, while also experimenting with more inclusive governance mechanisms, such as quadratic or conviction voting, to mitigate plutocratic tendencies and amplify the voice of smaller stakeholders. In parallel, developers should also establish robust contingency and crisis-response frameworks, including rollback and incident-management protocols, to address systemic vulnerabilities inherent in decentralized architectures.

Policymakers and regulators should look for adaptive and technology-neutral regulatory frameworks that prioritize governance outcomes rather than prescribing specific technical designs, while promoting international coordination to harmonize standards and reduce jurisdictional arbitrage that can jeopardize trust. Legal recognition of decentralized autonomous organizations (DAOs) and smart contracts is also critical to improving transparency, accountability, enforceability, and dispute resolution.

Industry practitioners should pursue hybrid governance models that balance stakeholders' participation with appropriate centralized oversight, institutionalize transparency mechanism through real-time disclosure dashboards, audit trails, and periodic reporting. They also need to remain proactively engaged with regulators to enhance legitimacy and reduce systemic risk.

Investors and broader stakeholders should demand demonstrable governance accountability prior to capital allocation. They should actively participate in governance processes through voting and deliberation and advocate for sustainable, ethical and socially responsible governance practices that underpin long-term platform viability rather than short-term speculative gains.



Figure 5.5: Actionable Recommendations

(Source: Author's own data)

5.6 Future Research Directions

Building on this study, several promising avenues for future research emerge:

Longitudinal studies: Future research can track how governance perceptions and on-chain participation change as platforms mature and face crises. Study how governance models and management styles in blockchains change over time, especially as these systems get older and more people join in.

Comparative analysis across more cases: This is an evolving area and an expanding ecosystem, therefore future research can include new and existing hybrid DAOs (e.g., Uniswap, Aave), layer-2 solutions (Arbitrum, Optimism), and alternative consensus mechanisms. Comparison of management styles in different types of blockchain setups could be interesting, like DAOs, DeFi, NFTs, and interoperability protocols of the systems that connect different blockchain products together could deliver useful insights.

Role of AI in governance: Investigate how AI assistants (e.g., automated proposal summarization, voting recommendation systems) affect stakeholder participation and decision quality. Look into how these AI tools keep things running smoothly in blockchains, particularly with reference to algorithmic decision-making and automated compliance. The growing role of artificial intelligence in automating governance processes, however, warrants deeper exploration.

Interoperability and systemic risk: Future research can study how governance failures propagate across connected chains, i.e., how failures on one platform (e.g., a major DAO hack) affect trust and behavior on other platforms. Study also what happens when problem in one blockchain spills over into others, especially now that many systems are connected. This is equivalent of what is called ‘contagion risk’ in traditional finance.

Non-participation causes: Mixed-method research into why token holders do not vote (apathy, complexity, cost) and how to lower barriers. Explore why some people don’t take part in voting or decision-making, and how the culture and rewards affect involvement in blockchain communities. Future studies should explore behavioral aspects of governance, including voter apathy, incentive structures, cultural influences, and trust-building mechanisms in blockchain communities.

Developing economy contexts: Examine how blockchain governance can enhance financial inclusion and property rights in countries with weak institutions. Study how blockchains can help with fairness, stability, sustainability and growth, especially in developing countries. More research is needed on the broader societal and political implications of blockchain governance, particularly its role in financial inclusion, systemic stability, and sustainable development in emerging economies.

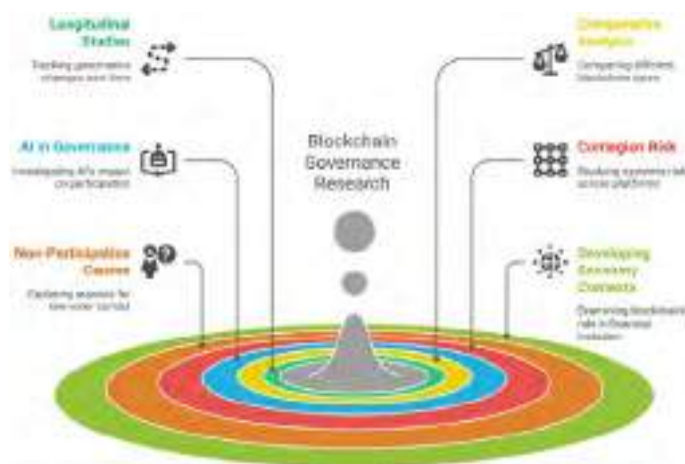


Figure 5.6: Blockchain Future Governance Research Avenues

(Source: Author’s own data)

5.7 Concluding Synthesis

This thesis has demonstrated that the long-term success of digital asset platforms depends less on technological novelty and more on the quality of robust, equitable, and trustworthy governance arrangements. The binary debate of centralization versus decentralization is empirically misleading; the most resilient models blend community participation with accountable leadership, transparency with efficiency, and code with human judgment. Stakeholder perceptions are shaped by awareness, transparency, and regulatory clarity – factors that educators, policymakers, and practitioners can actively improve.

As digital assets become integral to global finance, the governance principles identified here – accountability, transparency, fairness, and responsibility – will remain essential, through which innovation achieves legitimacy, resilience, and sustainable value creation. By integrating theoretical, empirical, and policy perspectives, this study provides an evidence-based foundation for designing, regulating, and investing in digital asset governance – one of the most pressing challenges facing blockchain-based ecosystems.

This thesis affirms that governance is not just a peripheral concern in digital asset ecosystems, but the central mechanism through which innovation becomes sustainable and socially legitimate. Future work should continue to refine these insights as the technology and its governance co-evolve.

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APPENDIX A

SURVEY COVER LETTER

Dear Sir/Madam,

I am currently undertaking doctoral research at the Swiss School of Business and Management (SSBM), Geneva, examining corporate governance mechanisms in digital asset enterprises and blockchain-based governance systems.

You are invited to participate in this academic study by completing a short online survey (approximately 10–15 minutes). Your expertise in digital assets, blockchain governance, financial markets, or regulatory frameworks would provide valuable insight for this research.

Purpose of the Study:

The study aims to analyze governance structures, stakeholder participation, accountability mechanisms, and regulatory alignment in digital asset ecosystems. The findings will contribute to academic knowledge and inform governance best practices.

Voluntary Participation:

Participation is entirely voluntary. You may decline to participate, skip any question, or exit the survey at any time prior to submission. Submission of the completed survey constitutes your informed consent.

Confidentiality and Data Protection:

All responses will be treated confidentially, analyzed in aggregated and anonymized form, and used solely for academic research purposes. This research complies with Swiss data protection law, EU GDPR principles, and SSBM ethical research standards.

Survey Link:

<https://docs.google.com/forms/d/e/1FAIpQLSfY3SvOXs7fnUrgTk6on0vbBICqSMPomJ-75unju6M1CrKOZw/viewform>

Your participation would make a meaningful contribution to advancing understanding of governance in digital asset ecosystems.

Should you have any questions regarding this research, please feel free to contact me.

Yours sincerely,

Shoaib Bin Zafar

Doctoral Candidate

Swiss School of Business and Management (SSBM), Geneva

Email: sbz@anchorageservices.ch

Supervisor: Dr. Apostolos Dasilas

APPENDIX B:
INFORMED CONSENT

Research Project Title: Blockchain Governance in Digital Assets: A Case Study of Binance Smart Chain and Ethereum

Researcher:

Shoaib Bin Zafar

Doctoral Candidate

Swiss School of Business and Management (SSBM), Geneva

Supervisor:

Dr. Apostolos Dasilas

Swiss School of Business and Management (SSBM), Geneva

Participant Name: _____

Organization (if applicable): _____

Email (optional): _____

1. Voluntary Participation and Withdrawal

- ☐ I understand that my participation is voluntary.
- ☐ I may withdraw at any time before anonymized data aggregation.
- ☐ I may decline to answer any question.
- ☐ There are no negative consequences if I withdraw.

2. Recording and Transcription

- ☐ I consent to audio recording of the interview.
- ☐ I understand a transcript will be produced.
- ☐ I may review the transcript for factual accuracy.
- ☐ Recordings will be securely stored and deleted after examination.

3. Confidentiality and Data Protection (GDPR Compliance)

- ☐ My responses will be anonymized unless otherwise agreed.
- ☐ Only the researcher and supervisor will access identifiable data.
- ☐ My data will be stored securely under GDPR principles.
- ☐ My data will not be shared with third parties.

4. Use of Research Data

- ☐ My anonymized data may be used in the doctoral thesis.
- ☐ My anonymized data may be used in journal publications.
- ☐ My anonymized data may be used in academic presentations.

5. Quotation Agreement

- ☐ I agree to be quoted directly in the thesis.
- ☐ I agree to be quoted only if anonymized (pseudonym used).
- ☐ I wish to review quotations before publication.
- ☐ I do not consent to direct quotations but allow paraphrased use.

6. Risks and Benefits

- ☐ I understand there are no foreseeable risks.
- ☐ I understand there is no financial compensation.

7. Online Survey Digital Consent

☐ If I proceed to complete the associated online survey, submission of the survey constitutes my informed consent under the same ethical conditions described herein.

8. Declaration of Consent

- ☐ I have read and understood this consent form.
- ☐ I have had the opportunity to ask questions.
- ☐ I voluntarily agree to participate in this research study.

Participant Signature: _____

Date: _____

Researcher Signature: _____

Date: _____

Digital Consent Note:

For online distribution, participants may indicate consent by checking the relevant boxes digitally and submitting the form electronically. Submission of the completed digital form constitutes legally valid informed consent under SSBM and GDPR-compliant research standards.

APPENDIX C: INTERVIEW GUIDE

Blockchain Governance in Digital Assets: A Case Study of Binance Smart Chain and Ethereum

Purpose of the Study: This interview forms part of a doctoral research project exploring how blockchain technologies are reshaping corporate governance models. The research compares centralized governance (e.g., Binance) and decentralized governance (e.g., Ethereum), examining structures, stakeholders, smart contracts, and challenges.

Interview Format:

- o Semi-structured format
- o Six thematic areas
- o Approx. 10–15 minutes
- o Interviews may be recorded (with consent) for transcription and analysis

Theme 1: DAOs, Blockchain Architecture, and Governance

1. Do you believe Ethereum's decentralized model leads to more effective decisions than Binance's centralized model?
2. Should DAOs like Ethereum be considered more democratic than centralized systems like Binance?

Theme 2: Stakeholders in the Governance of Blockchain-Enabled Organizations

1. Are token holders more influential in Ethereum than shareholders or leadership in Binance?
2. Does Binance provide adequate governance input to non-core stakeholders compared to Ethereum?

Theme 3: Smart Contracts and Decentralized Governance

1. Are Ethereum's smart contracts effective in ensuring transparent decision-making?
2. Is Binance's governance still dependent on human judgment more than Ethereum's code-based system?

Theme 4: Blockchain for Corporate Governance

1. Has Ethereum been more transparent in corporate governance practices than Binance?

2. Can Ethereum's blockchain voting system replace traditional corporate voting better than Binance's approach?

Theme 5: Governance Transformation: From 'Power Over' to 'Power To'

1. Does Ethereum better reflect a shift from centralized power to community control than Binance?
2. In Ethereum, does token ownership grant more meaningful governance power than in Binance?

Theme 6: Challenges of Blockchain Governance

1. Are legal risks higher for Ethereum's decentralized model than Binance's centralized one?
2. Has Binance shown signs of decentralization, or does it remain largely centralized in practice?

Primary Focus

Theme	Focus
1. DAOs, Blockchain Architecture, and Governance	Governance models: centralized vs. decentralized, hybrid, polycentric
2. Stakeholders in Blockchain Governance	Role, influence, and balance among diverse stakeholder groups
3. Smart Contracts and Decentralized Governance	Role of code, automation, and risks (e.g., The DAO)
4. Blockchain for Corporate Governance	Sectoral and corporate-level applications; tokenization; disruption
5. Governance as 'Power to'	Philosophical and structural shifts in authority and stewardship
6. Challenges of Blockchain Governance	Legal status, liability, participation, implementation, and centralization tendencies

Theme 1: DAOs, Blockchain Architecture, and Governance

Interview Questions – Theme 1: DAOs, Blockchain Architecture, and Governance

1. In your experience, how does the structure of a blockchain organization (e.g., centralized vs. decentralized) impact the effectiveness and speed of decision-making?

Follow-up (if needed): How does this compare to traditional organizational governance models you may be familiar with?

2. How would you describe the trade-offs between centralized governance (e.g., Binance) and decentralized models (e.g., Ethereum) when it comes to accountability and transparency?
3. What role do you think DAOs play in shaping more participatory or democratic governance in blockchain ecosystems?

Probe: Do you see this as empowering users, or are there limitations to participation in practice?

4. In your view, how well do hybrid or polycentric governance models balance the needs of diverse actors (e.g., developers, miners, token holders)? Can you give an example where this worked well or failed?
5. To what extent do you believe the technical architecture of a blockchain (e.g., permissioned vs. permissionless, on-chain vs. off-chain governance) enables or limits effective decentralized governance?

These questions are designed to:

- o Allow for comparative reflection on different governance models.
- o Elicit personal interpretations and observed experiences.
- o Reference Binance and Ethereum implicitly, so the respondent doesn't need to be directly affiliated with them.
- o Connect with the literature and theory you're drawing from (Tan et al., Stephan et al.).

Theme 2: Stakeholders in the Governance of Blockchain-Enabled Organizations

Interview Questions – Theme 2: Stakeholders in the Governance of Blockchain-Enabled Organizations

1. How do you see the role of different stakeholders—such as token holders, developers, and regulators—in shaping governance decisions in blockchain ecosystems?

Follow-up: Are some stakeholders more influential than others in practice?

2. In your view, how does stakeholder diversity in blockchain governance compare with the traditional corporate board model grounded in shareholder primacy?
3. Have you observed any tensions or conflicts between different stakeholder groups in a blockchain organization? How were these resolved—or not?

Prompt examples: Speculators vs. long-term token holders, developers vs. regulators.

4. How do blockchain-enabled organizations attempt to ensure fairness and representation for all stakeholders—especially those who do not have technical expertise or direct voting power?
5. Do you believe stakeholder participation in blockchain governance meaningfully influences decisions, or is it often symbolic? Can you share a specific case or example?

This probes the gap between formal mechanisms (e.g., DAO votes) and actual power dynamics.

These questions are designed to help participants reflect on:

- o The power dynamics and complexity of stakeholder relationships.
- o The contrast with traditional governance theories like agency theory.
- o Real-world practices that go beyond formal structures to reveal how governance unfolds.

Theme 3: Smart Contracts and Decentralized Governance

Interview Questions – Theme 3: Smart Contracts and Decentralized Governance

1. In your experience, to what extent do smart contracts enhance transparency and accountability in decentralized governance systems like DAOs?

Follow-up: Have you seen cases where smart contracts failed to deliver on this promise?

2. How do you perceive the balance between code-based governance (“code is law”) and the need for human intervention in decision-making and crisis management?
3. What limitations or risks do you see in relying solely on smart contracts to manage governance processes in blockchain organizations?

Prompt examples: lack of flexibility, difficulty updating code, legal ambiguity.

4. Based on your knowledge, how do platforms like Snapshot.org or other governance interfaces influence participation and accessibility in DAO governance?
5. Reflecting on historical events like The DAO hack in 2016, what lessons do you think the blockchain community has (or hasn’t) learned about smart contract governance and security?

These questions are designed to help you explore:

- o The practical vs. theoretical potential of smart contract governance.
- o The human-technology interface in decentralized systems.
- o Critical incidents (like The DAO hack) that reveal structural vulnerabilities.
- o Current implementations and user experience (e.g., Snapshot.org).

Theme 4: Current Use of Blockchain for Corporate Governance

Interview Questions – Theme 4: Current Use of Blockchain for Corporate Governance

1. How do you see blockchain technology transforming traditional corporate governance practices, particularly in terms of transparency, accountability, and shareholder engagement?

Follow-up: Do you believe blockchain addresses or reinforces the agency problem?

2. Have you observed any real-world implementations of blockchain or DLT that significantly altered how organizations manage voting, recordkeeping, or stakeholder interactions?

Prompt examples: tokenized shares, smart voting platforms, DAO-style governance in companies.

3. What challenges or barriers do you think organizations face in adopting blockchain for governance, especially in regulated or traditional industries?
4. In your opinion, does the concept of “platform governance” via blockchain offer a viable alternative to hierarchical corporate structures? Why or why not?
5. Looking at sectoral applications like healthcare, do you think the value of blockchain lies more in operational efficiencies (e.g., traceability, fraud prevention) or in enabling deeper governance transformation?

These questions are designed to:

- o Draw out practical knowledge of blockchain in real organizational settings.
- o Encourage respondents to evaluate the promise vs. reality of decentralized governance.
- o Consider stakeholder inclusion and cross-sector adaptation.
- o Prompt critical thinking about regulation, infrastructure, and cultural readiness.

Theme 5: Governance Transformation from ‘Power Over’ to ‘Power To’

Interview Questions – Theme 5: Governance Transformation from ‘Power Over’ to ‘Power To’

1. In your view, how does decentralized governance shift the traditional notion of control from “power over” individuals or groups to enabling “power to” act collectively?

Follow-up: Can you share an example where you saw this shift in practice?

2. How do DAO participants balance individual ownership (via token holding) with collective responsibility for the organization’s direction and health?
3. What challenges emerge when authority is distributed across a community rather than concentrated in a central leadership structure?

Prompt: Have you experienced or witnessed issues like voter apathy, unequal influence, or lack of coordination?

4. Do you think DAOs or other decentralized models promote more inclusive and democratic forms of governance—or do they simply redistribute power in new ways?
5. From your perspective, how should stewardship be redefined in decentralized organizations where members both own and manage the organization?

These questions aim to surface:

- o The philosophical shift in how governance is conceived.
- o The practical tensions between empowerment and coordination.
- o The real-world application of flattened governance structures in blockchain.
- o Reflections on stewardship beyond mere oversight — toward sustainability, adaptability, and collective care.

Theme 6: Challenges Associated with Governance of Blockchain

Interview Questions – Theme 6: Challenges Associated with Governance of Blockchain

1. What do you consider the most pressing legal or regulatory challenges facing blockchain-based governance models such as DAOs?

Follow-up: How do you think regulators should approach liability and organizational status for DAOs?

2. In your experience, does decentralization in DAOs always result in more equitable governance—or have you seen centralization emerge despite the intention to avoid it?
3. What are the most significant barriers to meaningful stakeholder participation in DAO governance (e.g., low voter turnout, one-token-one-vote systems)?

Prompt: Do these structures unintentionally favor the wealthy or technically savvy?

4. How do DAOs address—or fail to address—accountability and liability when something goes wrong, such as financial misconduct or a technical failure like a smart contract exploit?
5. What practical implementation issues arise when transitioning from traditional corporate governance to blockchain-based governance? Can you think of any examples where this transition has been handled well—or poorly?

These questions are meant to help interviewees:

- o Identify systemic gaps and vulnerabilities in decentralized governance.
- o Reflect on the real-world frictions of legal, institutional, and behavioral nature.
- o Consider the balance between innovation and protection, especially for minority stakeholders.
- o Critically assess whether DAOs are ready for mainstream adoption, and under what conditions.

Closing Remarks:

- o Is there anything else you would like to add about blockchain governance?
- o What do you think the future holds for corporate governance in a blockchain-enabled world?

Thank you for your participation.

APPENDIX D:
INTERVIEW QUESTIONS

Blockchain Governance in Digital Assets: A Case Study of Binance Smart Chain and Ethereum

Hello! Thank you for agreeing to take part in this quick survey-interview about blockchain organizations. The questionnaire will take you 10-15 minutes to complete. It is part of my doctoral research, which focuses on governance in digital assets.

This survey compares governance structures at two prominent digital assets platforms, namely; Ethereum and Binance (via Binance Smart Chain). While these two operate in fundamentally different roles—Ethereum as a decentralized blockchain and Binance as a centralized exchange—their growing overlap through services like Binance Smart Chain makes them ideal case studies for comparing governance models. Both platforms influence how digital assets are governed, upgraded, and regulated, offering unique insights into centralized versus decentralized governance in the blockchain space.

The survey questions are quick, and simple. Should you feel there is not enough clarity on any question, feel free to ask, and I will be happy to explain. Please be assured that your responses are confidential and your participation is voluntary. If there is any question, which you do not feel comfortable with, you can skip it.

There are three parts of the form. First part relates to your personal information; second part relates to brief questions; and the third part comprises some focused questions. Please feel free to comment at the end, if you feel necessary. Please accept my thanks in advance.

Best regards

Shoaib B. Zafar, CFA, CAIA

Section A: Informed Consent and Identification

My name is Shoaib Bin Zafar. I work for an investment management firm in Geneva, Switzerland. I am pursuing deeper studies on the blockchain organizations as a part of my doctoral research. It will take time to go through the questionnaire, and I would like to request your patience.

Your participation is voluntary. Usually, these questions will take about 10-15 minutes of your time. If you do not understand a question, you can ask and I will explain that to you. Please be assured that your responses are confidential. If there is any question, which you do not feel comfortable with, you are not bound to answer.

A-1. Do you have any questions you would like to discuss at this point?

- ☐ Yes – 1
- ☐ No [Go to A3] - 2
- ☐ Don't Know. [Go to A3] - 99

A-2. [IF YES] What are the Questions?

- ☐ Question + Response
- ☐
- ☐
- ☐

A-3. May I Start the interview?

- ☐ Yes – 1
- ☐ No - 2

Section B: Identification of Participant

INTERVIEWER'S NAME .	Shoaib Bin Zafar .
PLACE OF INTERVIEW .	Online .
DATE OF INTERVIEW .	. .
KEY INFORMANT NAME	
OCCUPATION .	. .
GENDER .	. .

RELEVANCE	.
CONTACT NUMBER	.
EMAIL ADDRESS	

Section C: Basic Questions

Question Statement	Yes	Not Sure	No
1. Are aware of Decentralized Autonomous Organizations (DAO)?			
2. Are you aware of the Blockchain Architecture and Governance?			
3. Do you know that Binance has a centralized governance model?			
4. Do you know that Ethereum has a decentralized governance model?			
5. Do you believe that the two models, despite their specific pros and cons, are co-existing and competing?			

Section D: Focused Questions

In your opinion:	Binance	Ethereum	Not Sure
6. Which governance model is considered more democratic in nature?			
7. Which model leads to more effective decisions?			
8. Which model offers more flexibility to the token holders?			
9. In which model the stakeholders are more influential?			
10. Which model provides adequate governance input to non-core stakeholders?			
11. Which model provides smart and crisp contracts?			
12. Are the smart contracts effective in ensuring transparent decision-making?			
13. Which model is more transparent in corporate practices?			

14. Which governance model is more dependent on human judgment rather than code-based system?			
15. Which model relies on blockchain voting system?			
16. Can the blockchain voting system gradually replace the traditional corporate voting?			
17. Which model better reflects a shift from centralized power to community control?			
18. Does token ownership grant any significant meaningful governance power?			
19. Which model faces more legal risks and regulatory compliance challenges?			
20. Which model is more openness with respect to diversify its governance practices?			
21. Would you like to share any final thoughts on blockchain governance? a. b. c. d. e.			
22. What trends do you foresee in blockchain-enabled corporate governance? a. b. c. d. e.			

Section E: Probing Questions

NOTE: All interviews will be compiled by the interviewer for data analysis, a copy of which will be shared with you if so desired.