

HOW A COMPANY CAN EVOLVE IN A DECENTRALIZED AUTONOMOUS ORGANIZATION (DAO): AN EMPIRICAL CASE STUDY

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ABSTRACT

The advent of blockchain technology presents a unique opportunity to pioneer innovative organizational models, as exemplified by the rise of Decentralized Autonomous Organizations (DAOs). This concept has garnered particular attention within the realm of digital platforms, where platform owners often wield significant influence over ecosystem actors, potentially leading to power imbalances and systemic issues. DAOs promise to change how platforms are governed by reducing the dominance of platform owners and addressing power imbalances in digital platforms. The extant literature highlights DAOs as a potential future business paradigm, although the path to their realization remains largely uncharted, especially in the platform domain. This article aims to bridge this gap by investigating the transformation of a conventional company into a DAO. Drawing on a case study of VeChain, a prominent blockchain platform provider undergoing such a transition, the research identifies key factors for organizations embracing decentralized governance. These considerations revolve around four key variables: decentralization level, process design, incentive mechanisms, and legal compliance. By elucidating these critical aspects, the study contributes both to theoretical understanding and practical guidance for organizations navigating the transition towards blockchain-enabled decentralized governance models.

KEYWORDS

Blockchain, platform, governance

1. INTRODUCTION

Digital platforms emerged as systems that facilitate commercial transactions, social interactions, and innovations (Cennamo, 2021; Gawer, 2014). These platforms serve as the foundation for some of the most successful businesses across various industries, offering significant value to both society and firms (Trabucchi et al., 2019; Cusumano et al., 2019; Evans and Schmalensee, 2016). As the prominence of digital platforms increases, so does the influence of the actors managing them, commonly referred to as “platform owners”. The role of platform owners has become increasingly significant, as they wield considerable power and influence in governing the rules and activities of digital platforms (Kyprianou, 2018). While platform owners play crucial roles in driving value creation within platform ecosystems (Boudreau, 2010), concerns have arisen regarding their ability to capture a disproportionate share of the value generated, potentially at the expense of other stakeholders (Cohen, 2019; Srnicek, 2017; Chen et al., 2020).

However, the emergence of blockchain technology has paved the way for a new paradigm of decentralized platforms, challenging the traditional model characterized by a dominant platform owner (Hsieh and Vergne, 2022). Blockchain offers firms the opportunity to develop platforms without granting a single entity monopoly control, thereby fostering competition, lowering entry barriers, and mitigating privacy risks (Catalini and Gans, 2016). By enabling the creation of peer-to-peer networks capable of authenticating transactions, blockchain holds the potential to reshape collaboration structures. This capability paves the way for decentralizing governance models. (Trabucchi et al., 2020; Lumineau et al., 2021).

The extreme case of governance decentralization is exemplified by a Decentralized Autonomous Organization (DAO), which constitutes in an organizational structure encoded via smart contracts on a blockchain, enabling peer participants to collectively engage in governance and wield control over decision-making (Beck et al., 2018; Hsieh et al., 2018). DAOs offer promise in reshaping platform governance, eradicating the predominant role of platform owners and thus directly addressing the power imbalances inherent in digital platforms (Aste et al., 2017).

Despite the promises of DAOs in challenging the dominant position of platform owners, research on decentralized governance systems and their creation remains scarce (Hsieh and Vergne, 2022). This highlights a gap in the literature that this study seeks to address. Specifically, we aim to investigate how companies developing platforms can transition towards a more decentralized governance model, leveraging blockchain technology, while providing empirical evidence to inform future research and industry practices.

2. THEORETICAL BACKGROUND

2.1 Digital platforms

The concept of platforms has been first introduced by Rochet and Tirole (2003), who referred to those markets where two (or more) groups of customers can have transactions through an enabling player, generating indirect network externalities. Gawer and Cusumano (2014) distinguish between internal and external platforms. They refer to internal platforms as “*a set of assets organized in a common structure from which a company can efficiently develop and produce a stream of derivative products*”. External or industry platforms are instead defined as “*products, services, or technologies developed by one or more firms, and which serve as foundations upon which a larger number of firms can build further complementary innovations and potentially generate network effects*”.

The primary shift occurring when transitioning from internal to external platforms involves the concept of extending access to a product platform to external actors. These external entities can utilize the technological infrastructure provided by the platform as foundational components to create supplementary applications. This process enhances the value of the platform by generating network externalities. Scholars in the field commonly term these external actors as “complementors”.

Examples of industry platforms include Microsoft Windows, Google Android, Apple iOS, and Amazon Web Services. However, a key characteristic emerges when examining the development trajectory of these platforms. All of the highly influential innovation platforms in the market today originated from a single organization, typically a private company, which initially developed the platform and subsequently opened it to external players. In the literature, scholars have focused on studying how various business players organize and interact within a shared platform ecosystem. This research stream, centered on platform ecosystems, underscores the presence of a single actor that establishes the system's objectives and defines ecosystem governance and rules. This actor is known as the “platform owner” (Gawer and Cusumano, 2014).

Platform owners wield authority in establishing the rules governing interactions among users, whether they are individuals or organizations. They determine which behaviors to promote or deter on the platform and dictate the means of enforcement. Consequently, platform owners shape the business environment and exert considerable influence over participants within their platform ecosystem (Gawer, 2021).

Microsoft, Google, Apple, and Amazon are among the notable examples of large companies that have leveraged their leadership positions within their respective innovation platforms to gain increasing prominence in the market. Indeed, platform leaders have the ability to capture a substantial portion of the value generated within the platform, which arises from indirect or cross-side network externalities (Katz and Shapiro, 1985). These externalities occur when an increase in participants on one side of the platform enhances the platform's value for participants on the other side, and vice versa.

As a result, platform leaders often capitalize on their gatekeeper role to preserve and augment their market influence. In recent years, this has been achieved through the imposition of onerous contract terms, imposition of high fees, or extraction of data from platform users, enabling them to exploit information asymmetries with respect to complementors and reinforce their leadership position. Consequently, there has been a notable and concerning concentration of market, social, and economic power in the hands of a few large firms, a phenomenon observed by scholars as indicative of disproportionate power concentration (Chen et al., 2020).

2.2 Decentralized platforms

Platform technologies have historically served to facilitate transactions and interactions within a business ecosystem. However, they have often resulted in the platform owner assuming a dominant position. When platforms are excessively centralized, platform owners may wield excessive influence over ecosystem actors and their activities, potentially giving rise to unintended systemic issues (Chen et al., 2020).

In recent times, blockchain technology has facilitated the emergence of a novel category of “decentralized platforms,” which disrupt some of the fundamental assumptions underlying traditional platform models (Hsieh and Vergne, 2022).

Blockchain technology was unveiled to the world in 2008 with the publication of Bitcoin's whitepaper by an enigmatic figure using the pseudonym Satoshi Nakamoto (Nakamoto, 2008). Nakamoto not only introduced the pioneering concept of cryptocurrency but also proposed blockchain as a foundational technology enabling decentralized consensus within a trustless environment. This concept was further elaborated upon by Swan (2015), who underscored the transformative potential of blockchain beyond its application in cryptocurrencies. From its inception, blockchain has been heralded as a disruptive technological innovation (Chen & Bellavitis, 2020; Frizzo-Barker et al., 2020; Rico-Peña et al., 2023), offering diverse applications across various industries by virtue of its capacity to establish decentralized, transparent, and immutable ledgers.

Blockchain offers a novel approach to fostering cooperation, coordination, and the enforcement of agreements, distinguishing it from conventional contractual and relational governance approaches, as well as other information technology solutions (Lumineau et al., 2021). Organizations can therefore integrate blockchain technology not only within the domain of cryptocurrencies but also to establish general-purpose platforms not bound to a specific use case (Trabucchi et al., 2020). These platforms combine the potential to harness network effects (Evans, 2003) with the aim of avoiding the creation of significant power asymmetries within platform ecosystems (Hurwicz, 2008).

Scholars (e.g., Hsieh et al., 2017) recognize that blockchain presents significant opportunities for platform businesses, with potential implications for existing business models, operations, governance, and stakeholder roles. Particularly, blockchain-based, decentralized platforms have the potential to provide promising solutions to common challenges encountered by such businesses (Trabucchi, 2020). Platform governance research emphasizes structuring decision-making authority and control rights to facilitate effective value creation and equitable value distribution (Tiwana et al., 2010). Central to governance is the degree of decentralization (Bresnahan and Greenstein, 2014), which denotes the extent to which governance rights and controls are shared between platform owners and participants (Walch, 2019).

Blockchain technology has the potential to significantly decentralize decision-making authority by enabling a platform governed collectively by complementors, rather than a central platform owner typical of traditional digital platforms. This shift could diminish platform owners' power or even render the concept of "platform owners" largely obsolete (Chen et al., 2020; Lumineau et al., 2021). Participants in blockchain governance adhere to predetermined rules encoded in algorithms, establishing agreements based on system rules and protocols. By accepting and adhering to these predefined rules, participants collaborate within the blockchain framework, where protocols assign and ensure task responsibilities are fulfilled in a predefined sequence (Lumineau et al., 2021).

This technical infrastructure offers a pathway to achieving and sustaining platform decentralization, shifting a portion of governance challenges from organizational to technical domains (Jensen et al., 2019). Furthermore, the technical architecture reduces information verification costs and associated transaction planning risks (Schmeiss et al., 2019).

At the pinnacle of decentralization in governance are the Decentralized Autonomous Organizations (DAOs), which are organizational structures existing on a blockchain without a single authority figure directing operations or assigning tasks (Beck et al., 2018; Hsieh et al., 2018). DAOs offer the potential for new types of non-hierarchical governance where decision-making is spread among the network's nodes rather than controlled from a central actor (Aste et al., 2017). In a fully decentralized governance system, participants collectively hold complete control (Ostrom, 1990).

Blockchain enables decentralized coordination, as demonstrated by decentralized autonomous organizations (DAOs), eliminating the need for centralized administrators (Lumineau et al., 2021). It redefines organizational boundaries, fostering nonhierarchical governance models where decision-making is distributed among network nodes (Aste et al., 2017). By implementing decentralized governance and distributed data infrastructure, blockchain-based platforms address issues of transparency, corruption, and excessive market power inherent in centralized platforms (Atzori, 2015; Catalini and Gans, 2016).

However, the absence of intermediaries and a single platform owner in blockchain ecosystems may introduce new inefficiencies and governance challenges (Catalini and Gans, 2016; Schmeiss et al., 2019). Although blockchain reduces intermediaries' market power, achieving optimal collaboration among participants in decentralized governance remains challenging (Hawlitschek et al., 2018). Excessive decentralization can hinder collective action and slow decision-making, underscoring the importance of finding a balance (Boudreau, 2010; Hardin, 1968; Olson, 1974; Chen et al., 2020).

2.3 The research gap

Despite the increasing adoption of blockchain-based business solutions, questions remain about how they are created and how they affect platform ownership dynamics (Klarin, 2020; Pereira et al., 2019; Schmeiss et al., 2019; Schneider et al., 2020). While blockchain promises decentralization in platform governance, the process of creating and implementing such platforms, and achieving consensus among participants, is unclear (Hsieh and Vergne, 2022). Consequently, empirical research is needed to understand the practical implications of transitioning from traditional single-owner platform models to decentralized platforms governed by a user community.

The paper aims to address this emerging gap by focusing on traditional organizations that have developed platforms and are now considering transitioning to a decentralized, blockchain-based governance model. Thus, the research seeks to answer the following question:

How can an established company orchestrate the transition towards a decentralized blockchain governance system?

3. RESEARCH DESIGN

This research seeks to explore how traditional organizations can transition to decentralized governance systems using blockchain technology. It aims to identify key considerations and challenges in implementing such a transition. Because knowledge in these areas is still limited, it's essential to collect data from individuals experiencing the phenomenon being studied (Gioia et al., 2013) within its real-life context (Yin, 2013).

Therefore, given the research's focus on understanding phenomena (Eisenhardt and Graebner, 2007), we conducted an exploratory case study (Yin, 2013) on VeChain, a company that has developed a layer 1 blockchain platform. VeChain offers tools and services for external developers and companies to build smart contracts, DApps, and other services. In this sense, the VeChain company acts as platform owner, and we analyze its transition towards decentralization. The VeChain case is particularly relevant as it is undergoing a decentralization process, aiming to distribute governance power to platform users. The goal is to transform the VeChain company into a Decentralized Autonomous Organization, eliminating its role as platform owner.

We employ a qualitative inductive approach, integrating insights from existing literature and initial interviews with DAOs that have implemented distributed governance systems. This approach forms the basis for developing a framework to analyze the design of decentralized governance models.

We derived the principles for our study from a comprehensive blockchain governance framework proposed by Liu et al., 2022. This framework encompasses key aspects such as decentralization, decision rights, incentives, accountability, ecosystem, and legal and ethical responsibilities. The authors applied these principles in real-world scenarios, conducting a qualitative analysis of five existing blockchain platforms.

To refine the framework for our study, particularly in the context of VeChain's transition to a DAO, we conducted preliminary interviews with representatives from leading DAOs in the market. Four DAOs were selected based on criteria including user base, treasury size, and community engagement. To this end we used deepdao.io, a comprehensive database of DAOs. Representatives from Uniswap, Aragon, Decentraland, and KlimaDAO were preliminarily interviewed to identify crucial variables, issues, and design considerations relevant to transitioning to decentralized governance mechanisms. This process helped us reframe the variables used in our analysis of the VeChain case study.

Data collection involved four preliminary, unstructured interviews with DAO representatives conducted between January 2023 and September 2023 and two semi-structured interviews with VeChain executives, conducted between May 2023 and November 2023. Interviews with VeChain representatives commenced with informants providing a brief overview of VeChain and their position within the company. Then, we delved into questions related to our analytical framework to examine VeChain's current governance and its evolution over time. Data were collected and analyzed simultaneously, and we adapted our approach based on the insights shared by the informants. Each interview lasted at least an hour and was conducted online via tools like Microsoft Teams or Google Meet by the researchers. Additionally, all interviews were recorded and transcribed verbatim. We used an abductive approach to code the interviews.

Additionally, to minimize potential biases (Eisenhardt & Graebner, 2007) and enhance the depth of our insights (Eisenhardt, 1989), we utilized diverse sources of evidence beyond the primary data from semi-structured interviews. This encompassed secondary data drawn from reports, whitepapers, social networks, online news articles, and websites.

4. RESULTS

Building upon existing literature on decentralized platforms and blockchain governance, our study aims to explore the crucial factors influencing the design of a decentralized governance system utilizing blockchain technology. To achieve this, we organize our findings around four key variables: decentralization level, process design, incentive mechanisms, and legal compliance. Drawing from the governance principles outlined by Liu et al., 2022, we seek to elucidate how these variables elucidate the primary design considerations when transitioning towards a blockchain governance model.

4.1 Decentralization level

VeChain's aim in its transition is to abolish the position of the platform owner and progress towards a decentralized blockchain governance model, empowering the community to oversee governance. To achieve this, VeChain seeks to establish a decentralized autonomous organization (DAO) to govern the platform.

“The internal governance system is intended to be controlled by a DAO.”

Enhancing the efficacy of governance processes does not solely entail maximizing stakeholder involvement; rather, it necessitates effectively navigating the trade-off between centralization and decentralization. As stated by VeChain, striking the right balance between these two models is essential for future DAO governances.

“Centralization and decentralization have good and bad sides, so the future DAO governances should have the correct balance between the two models. The goal in this choice should be focused in taking the strengths of the two options.”

This underscores the need for a nuanced governance strategy that leverages the benefits of both centralization and decentralization, adjusting the balance to suit the organization's unique needs. Recognizing that this equilibrium varies based on individual context, organizations must conduct thorough assessments and engage in continuous experimentation to determine the optimal balance.

Another significant trade-off arises between user participation in decision-making processes and the organization's agility in executing those decisions. This dilemma is linked to the challenges of effectively communicating all pertinent information to community members regarding the organization's various initiatives. Moreover, involving a substantial number of users in decision-making, particularly during the discussion phase, can considerably prolong the decision-making process.

“Of course, it is not possible to share every piece of information about every aspect that the organization addresses and works on. But, at the moment, VeChain's goal is to let the community decide where and how to engage at different levels.”

As organizations transition towards decentralized governance structures, the primary objective should not be maximal decentralization in every decision-making instance, but rather leveraging the active involvement of the user community.

Within this framework, two significant trade-offs must be carefully managed. Firstly, organizations must balance the degree of decentralization itself, determining which processes should involve the community and how, while identifying governance processes best suited for centralized handling by a smaller group within the organization, such as a committee. Secondly, a trade-off arises between the level of decentralization and community involvement in decision-making processes, and the organization's speed and agility in decision-making. Increased involvement of individuals in discussions can prolong the decision-making process and pose challenges in effectively communicating all relevant information about the decision to the entire community.

4.2 Process design

For all types of governance models, it is crucial to consider the design of processes to enable community members to voice their opinions, suggest pertinent changes for discussion and potential validation by other community members, and determine how these changes should be executed and implemented. In this context, the community emerges as the most pivotal actor to involve in the transition towards a decentralized governance model.

“VeChain must involve the community more and more because it is the key player in the transition to DAO.”

Before decisions are formalized and executed, specific proposals must be formulated. Hence, governance processes typically initiate off the blockchain, occurring across various communication channels where all community members and development teams can engage in interaction and discussion. These debates serve diverse purposes, including exchanging ideas, seeking consensus and agreements to inform and support changes, assessing community sentiment on prevailing issues, and endorsing or dismissing formal processes and structures. To streamline discussion topics, proposals may offer a more structured and detailed approach. Subsequently, some DAOs proceed by moving change proposals, which garner community support, to platforms like Snapshot. Here, users with voting power can express their stance by voting for or against the proposed changes.

in the case of VeChain, community members often spontaneously engage in discussions surrounding proposals via social media platforms. Then, decisions are reached through voting mechanisms. Voting processes may occur either on-chain using a voting smart contract or off-chain within the governing body. Following this, a voted on-chain action is presented to the governing body for final approval. Each proposal must garner approval from a majority of the governing body members. Once a proposal achieves the requisite majority approval, any individual can initiate the execution of the on-chain action outlined in the proposal.

“Today, community members spontaneously participate in some decisions made by VeChain or some projects through social media and instead express a more institutional opinion only when there is a vote in the steering committee. For the future, VeChain needs to educate and empower members to more smoothly guide everyone in a common decision.”

This process underscores the significant contribution of the community to the development of the VeChain platform. However, it also highlights a prevalent challenge encountered by DAOs. When a subset of community members forms a governing body tasked with operationalizing accepted proposals, there is a risk of centralizing strategic decision-making. Also in the case of VeChain, the concentration of decision-making authority within the steering committee, comprised of a select few individuals, raises apprehensions.

“So, right now, the situation is obviously typical of a startup where the founder, and whoever is there from the beginning, has key roles in all the organs. [...] Therefore, there is a possibility that a few people monopolize strategic decisions.”

To mitigate opportunistic behaviors, certain key considerations can be taken into account. Primarily, the efficacy of DAO implementation, particularly in the initial stages of transition, hinges on the requirement for individuals involved in this process to exhibit qualities such as integrity and ethics. These attributes play a vital role in fostering trust within the community.

“Another challenge for this process is the quality of people. Basically, it means that the people involved must be able to have integrity and ethical concern for the community. The connection that should be made is between personal goals and the common goals of the community. If all this happens, the implementation of DAO will be much easier.”

Moreover, it is crucial to ensure that individual objectives align with the collective goals of the community. This alignment is essential for facilitating smoother DAO implementations, where the collective welfare holds significant importance. To facilitate this, it is essential to establish an appropriate set of incentives to deter censorship or opportunistic behaviors by actors. These incentives are pivotal for ensuring the proper functioning of the entire system.

4.3 Incentives mechanism

DAOs often encounter several challenges inherent to decentralized systems. Examples include user apathy, the concentration of power among wealthier token holders, and the design of a voting system capable of resolving decisions even when participation rates are low.

“Another problem that has been discussed in several papers is the low participation in voting. For this reason, it is important to create a proper incentive mechanism to get people with tokens to vote.”

Low participation in voting processes poses a critical challenge for VeChain, which highlights the significance of establishing an effective incentivization mechanism to encourage token holders to vote. Such mechanisms are essential for ensuring active community participation in the voting process. Incentive mechanisms can be related to the design of on-chain voting protocols.

“The one share one vote rule creates the problem of having very few actors in charge and having a greater impact on the outcome of the decision, even if the system is defined as decentralized. In this case, smaller actors will not participate because they feel their vote is useless. An example of a mechanism that can address this problem is quadratic voting.”

This passage highlights a challenge associated with the "one share, one vote" principle, wherein a minority of influential stakeholders often wield a disproportionate degree of voting authority. This concentration of power may deter smaller participants from engaging in the decision-making process due to their perceived insignificance. VeChain proposes quadratic voting as a prospective remedy to mitigate such disparities and foster broader participation.

Instead of a “one token, one vote” system, quadratic voting introduces a quadratic relationship between the number of tokens used and the voting power. Therefore, the more tokens a participant allocates to a specific option, the higher the weight of their vote, but the cost of each additional vote increases quadratically. In a blockchain-based governance system, quadratic voting can be implemented through smart contracts. These contracts would manage the allocation of tokens, tally the votes, and determine the outcome of each decision or proposal based on the quadratic voting mechanism. Overall, quadratic voting in blockchain-based governance systems offers a novel approach to decision-making that aims to be more inclusive, transparent, and democratic.

“Not all voters have the right qualifications to be able to make an important choice because it requires expertise. So, what happens in these cases is that people can choose to assign some of the voting power to someone they trust who is competent for what needs to be decided and executed.”

“Delegation incentivizes stakeholder participation, because the more someone participates, the more they will be regarded by the community and this will result in an increase in their voting power.”

“If the largest token holders rely on those who are most adept at executing a specific choice, the entire organization will benefit and have greater growth.”

Another incentive mechanism integrated into the voting system's architecture is delegation. Delegation serves as a catalyst for bolstering community involvement and interaction, as individuals can enhance their voting influence through acknowledgment of their contributions to the community. This strategy reinforces the concept that community members are incentivized for their proactive engagement.

Nevertheless, it is important to acknowledge that delegation systems also pose challenges.

“In the current DAO system, it is not always possible to figure out who is best qualified to deal with a specific decision based on ability. Therefore, the delegation system right now works more in the sense of choosing someone you trust in general and not for a specific situation.”

This passage highlights a challenge in the current DAO system: assessing qualifications for specific decisions. Delegation often relies on trust in the delegatee's general competence rather than suitability for each situation, reflecting the complexity of decentralized decision-making. Delegation addresses expertise gaps, allowing voting for qualified decision-makers and promoting informed communal decisions. Token holders assigning voting authority to experts shows potential for improving overall decision quality, aligning with community trust and specialization values. However, the DAO system's existing structure complicates evaluating criteria for judgments, leading to reliance on general confidence instead of detailed analysis for each circumstance.

“The current voting process is still under development and should be modified to reach the needs of this specific community decision-making process.”

VeChain acknowledges the ongoing design process of the voting system and suggests it might not fully meet the unique demands of a community-driven decision-making process at present. It also underscores the iterative nature of DAO development, emphasizing the need for continual adjustments to align with the evolving needs of the community.

4.4 Legal compliance

Compliance with laws is crucial for Decentralized Autonomous Organizations (DAOs) especially if they operate in a real-world context, therefore within the existing regulatory frameworks.

“One of the things that needs to be resolved is the fact that the DAO, in its purest concept, then collides with a legislative reality that does not take into account how such an organization functions.”

Interviews emphasized the importance of legal compliance, yet uncertainty prevails regarding DAO regulation across jurisdictions, as existing regulations do not recognize DAOs as established entities. This fundamental challenge arises from the core concept of DAOs, which strive for complete decentralization and autonomy, often conflicting with existing legal systems that are unprepared to accommodate such organizational structures.

“In terms of compliance, the problem with these organizations is that there is a legal loophole.”

“If you have a legal entity, you have to have a board of directors and a legal representative. Inevitably some decisions go through traditional bodies, and so the goal was to try to implement a DAO concept, but at the same time be in compliance with regulatory instruments. So at this time, DAO could be limited to certain things.”

DAOs operate in environments with evident legal ambiguities or gaps, making it challenging to understand how to conduct operations without violating local regulations.

“The main issue of this topic is that in many countries there are different types of companies according to legal standards. These are for-profit companies, non-profit companies, and listed companies. DAOs are not part of this picture, they are a middle ground because they can be for-

profit but also a kind of foundation because there are no shareholders but members and the scope can vary according to the specific situation.”

“At present, the only way to get regulatory coverage is to create DAOs where there is a regulatory framework for them. [...] The only law that explicitly mentions DAOs is in Wyoming, in the U.S., where the legislature has created a dedicated form. This may be a first step in creating regulations for these types of organizations.”

Regulators have made some progress in crafting regulatory frameworks for blockchain and cryptocurrencies, but DAOs still remain outside the vast majority of the regulatory frameworks.

“Of course, there are some aspects that are different and only with clarity from the regulatory parties can this process be managed optimally. For the future, cryptocurrency projects should be run as non-profit organizations, but even then, something should be changed because they are not the same as any other type of organization.”

A suggested approach is to classify DAOs as nonprofit associations, allowing them to engage in conventional business activities like tax filing, maintaining a bank account, legal agreements, and mitigating liability for members. However, this approach still doesn't fully capture the essence of DAOs.

5. DISCUSSION

The analysis findings illuminate key considerations for companies and organizations seeking to transition toward a decentralized governance model within their platforms. This shift aims to redefine platform governance by eliminating the central figure of the platform owner and engaging the platform user community, thereby mitigating power imbalances identified in platform literature. Consistent with existing research, blockchain technology presents a technical framework, utilizing tools such as tokens and smart contracts, to facilitate and propel the transition toward decentralized governance.

Decentralization appears to manifest along a spectrum rather than as an all-or-nothing attribute. This spectrum is intricately linked to the complexity and multifaceted nature of governance processes. Consequently, community involvement can occur at various levels, prompting each organization to meticulously assess its unique circumstances to achieve the optimal balance between centralization and decentralization. An essential consideration emerges regarding the trade-off between user participation in decision-making and the organization's agility in executing those decisions. A significant challenge lies in striking the delicate equilibrium between community engagement and the agility required for decision-making. For organizations like VeChain, the shift from a centralized to a decentralized governance model necessitates recognizing decentralization as an ongoing journey rather than a singular event.

Decentralization demands more than just a technical transformation. It necessitates a cultural and philosophical shift aligned with the organization's goals and values. Traditional companies cannot merely adjust their internal structures to achieve decentralization, they must also transform stakeholders' perspectives on accountability, governance, and decision-making. Consequently, decentralization entails a profound shift in the mindset of all involved stakeholders.

In blockchain-based platforms, community participation typically involves proposing ideas, discussing, and voting on them. While proposals and discussions often occur off-chain, in digital

spaces like social media, voting can take place on-chain using tokens and smart contracts. However, if the voting process does not occur on-chain or if the results do not trigger a smart contract action, the voting merely serves as a signaling event, and ensuring the enforcement of decisions becomes crucial. If a subset of community members is tasked with implementing the changes outlined in an accepted proposal, it's essential to establish a set of proper incentives to prevent censorship or opportunistic behaviors by those individuals.

Incentives play a crucial role not only for users tasked with enforcing community decisions but also for addressing challenges that are peculiar to decentralized organizations, such as user apathy, power concentration among wealthier token holders, and the design of a voting system capable of resolving decisions even with low user participation. Insights from interviews suggest that the most common approach to addressing these issues involves establishing appropriate incentives for users within the system. These incentives can take various forms, including economic incentives such as token grants, informal influence within the community, or formal voting power. To this end, Decentralized Autonomous Organizations (DAOs) are exploring specific mechanisms in voting design, such as quadratic voting and delegation.

Although quadratic voting remains relatively experimental and less widespread, delegation has become prevalent in large DAO communities. Users have the ability to delegate their voting power to others and observe how their votes align with those of fellow users. This cultivates trust and facilitates informed decision-making. However, delegation also presents challenges, such as the potential for misuse, the need for transparent governance protocols, and concerns about the concentration of authority among delegates. The effectiveness of a delegation-based voting system hinges on its design, implementation, and regulation.

DAOs typically extend beyond the blockchain and increasingly interact with the traditional business world. Whether it involves individuals or businesses engaging with the DAO, all governance-related decisions and processes must comply with existing legal regulations and ethical responsibilities. This presents a significant challenge for DAOs because, in many jurisdictions, there lacks a legal or regulatory framework that fully encompasses decentralized autonomous organizations. Even if an organization has its own legal entity, there is a requirement for one or more individuals to be legally accountable for overseeing the operations of the DAO. Consequently, there is a difficulty in appointing a single member or a small group of individuals to bear responsibility for decisions made collectively by the entire community in a decentralized manner. In traditional companies, such as those with a CEO or a board of directors, individuals are legally responsible for the company's choices and are vested with formal power to make strategic decisions. In DAOs, this becomes a critical issue because allocating more governance power to a single individual or subset of individuals diminishes the level of decentralization achieved. While economic incentives may motivate individuals to assume responsibility, in companies these individuals also possess the formal authority to make significant strategic decisions. In DAOs, striking a balance between accountability and decentralization becomes paramount.

Despite some progress in the legal recognition of tokens, smart contracts, and blockchain-based solutions, DAOs are generally not included in the majority of legal frameworks worldwide. This presents significant challenges for DAOs operating in the real world, as emphasized in all interviews, where the importance of complying with the law was underscored. Adherence to applicable laws and regulations is crucial for DAOs to establish trust, credibility, and legitimacy within the broader regulatory and business environment. It enables DAOs to navigate potential regulatory obstacles, safeguard the interests of community members, and cultivate relationships with external entities, including governments, financial institutions, and other organizations.

6. CONCLUSIONS

In this study, we examined VeChain as an exemplar of an organization transitioning towards a decentralized, blockchain-based governance model, investigating how this transition can be practically addressed. This led us to delineate the key elements that organizations and companies in similar situations must consider when seeking to remove the role of platform owner and to distribute governance power among users. Theoretical insights from our research contribute to the literature on digital platforms by addressing the gap in understanding how blockchain technology can mitigate power imbalances between platform owners and platform users. To the best of our knowledge, this topic remains relatively underexplored in academic literature, especially from an empirical standpoint. From a practical perspective, our findings provide valuable insights for individuals involved in structuring a decentralized governance model for traditional organizations or, more broadly, for firms seeking to leverage blockchain technology to decentralize their governance structures.

However, this study presents some limitations, which may suggest avenues for further research. Firstly, the generalizability of the findings may be limited as the analysis is based on a single case study of VeChain. Therefore, investigating other organizations undergoing similar decentralization processes of their governance models could provide additional insights. Moreover, the study relies on only two semi-structured interviews with executives from VeChain. Further rounds of interviews will be conducted to challenge and refine the insights that have emerged from the current stage of the study.

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