NAVIGATING PARADOXICAL TENSIONS IN WEB3: A PHASED MODEL OF BLOCKCHAIN TRANSACTIONAL PLATFORM DEVELOPMENT

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ABSTRACT

Blockchain Transactional Platforms (BTPs) are emerging as decentralized alternatives to traditional platforms. While both must address foundational challenges—such as overcoming the chicken-and-egg paradox, generating network effects, and coordinating distributed actors—BTPs leverage blockchain-native tools like token incentives, community-driven development, and decentralized governance. This study investigates how BTPs manage these challenges over time through a multiple case study of leading DeFi applications. Drawing on qualitative data from documentation, forums, and developer interviews, we develop a phased model of BTP evolution—bootstrapping, growth, and coordination—each marked by distinct paradoxical tensions. By showing how these tensions are navigated, the study advances platform and paradox theories and offers actionable insights for Web3 practitioners.

Keywords*: Blockchain transactional platforms, two-sided market, DApp, DeFi, paradoxical tensions, phased model.*

1. INTRODUCTION

Digital platforms play an increasingly important role in the modern economy, with their success dependent on addressing specific foundational challenges such as the chicken-and-egg paradox (Caillaud & Jullien, 2003), the promotion of network effects (Evans, 2003), and effective coordination among diverse users within their multi-sided structure (Gawer and Cusumano, 2014). Blockchain technology offers the potential to alter how platforms confront these challenges by enabling innovative platform designs and supporting the development of Blockchain Transactional Platforms (BTPs) (Hsieh and Vergne, 2023). BTPs are particularly diffused within the rapidly expanding Decentralized Finance (DeFi) ecosystem (Kitzler et al., 2023), leveraging unique technological capabilities – such as token-based incentives (Gan et al., 2023), community-driven development (Chen et al., 2021), and decentralized governance (Saesen et al., 2025) – to address the challenges faced by traditional Transactional Platforms (TPs), including overcoming the chicken-and-egg paradox (Caillaud & Jullien, 2003), fostering cross-side network externalities (Evans & Schmalensee, 2016), and coordinating distributed actors (Gawer & Cusumano, 2014).

Despite extensive scholarly attention on how TPs manage these inherent challenges, empirical research examining how BTPs navigate them remains limited (Hsieh and Vergne, 2023). Existing studies highlight blockchain's potential to decentralize governance (Saesen et al., 2025) and disrupt conventional platform dynamics (Chen et al., 2021), yet fail to systematically explore the distinct strategic and managerial implications arising from these decentralized processes across platform development phases.

This study aims to address this empirical gap by exploring how BTPs specifically tackle critical platform challenges at distinct developmental stages. We argue that, while

blockchain technologies offer innovative strategic tools unavailable to traditional TPs, these tools generate paradoxical tensions (Smith and Lewis, 2011), requiring nuanced strategic responses (Schad et al., 2016). By conducting a multiple case study of prominent DeFi Decentralized Applications (DApps), we develop a phased model (bootstrapping, growth, coordination) elucidating how blockchain-enabled strategies address traditional platform challenges while simultaneously generating distinct paradoxical tensions at each developmental stage. The analysis of existing BTPs makes evident that blockchain does not eliminate the foundational challenges of platform development; it transforms them. The shift from centralized to decentralized coordination seems introducing new paradoxical tensions, which BTPs must navigate over time. Rather than resolving these paradoxical tensions, successful BTPs appear to dynamically leverage on them (Smith and Lewis, 2011), adapting their strategies across distinct phases of development.

2. THEORETICAL BACKGROUND

2.1 THE CHALLENGES OF TRADITIONAL TPS

TPs have become pivotal components of the digital economy, enabling interactions between distinct user groups to generate and capture value (Evans and Schmalensee, 2016). These platforms are characterized by the presence of cross-side network externalities (Rochet & Tirole, 2003), where the value for one group of users increases with the participation of another. The success of TPs hinges on their ability to address several foundational challenges, among the most significant are the chicken-and-egg paradox (Caillaud & Jullien, 2003), the dynamics of network effects (Evans, 2003; Knez & Camerer, 1994), and the need for effective coordination among a diverse user base (Evans, 2003; Gawer, 2014).

The chicken-and-egg paradox refers to the initial challenge of simultaneously attracting enough users on both sides of the platform when this lacks intrinsic value (Caillaud and Jullien, 2003). Evans and Schmalensee (2016) identify three main strategies to tackle this: the two-step approach, the zig-zag strategy, and the commitment strategy. Building on these, Stummer et al. (2018) propose six additional strategies. While effective, these strategies typically require substantial financial backing and strong centralized control (Trabucchi, 2020).

Fostering network effects represent another core challenge as well as a central element in platform success, as the platform's value increases with each additional user, increasing overall utility (Katz and Shapiro, 1985; Parker et al., 2016). Enhancing these effects is crucial for achieving scale and competitive advantage (Parker and Van Alstyne, 2017). Consequently, TPs aim to establish dominance by utilizing extensive digital data to attract more users and fostering lock-in effects to solidify their market position (Gala, 2024).

According to Evans (2003), launching a platform involves complex coordination among various economic agents, especially when no single actor can enforce decisions (Knez & Camerer, 1994). In traditional TPs, this task usually falls to a "platform owner" who assumes a central orchestrating role (Gawer, 2014). Platform owners set interaction rules, dictate behaviors, and enforce these rules, thus significantly influencing the platform ecosystem (Gawer, 2021).

These challenges are traditionally addressed through the core logic of centralized platform governance, where value creation and capture are tightly orchestrated by a central actor (Gawer, 2014) who implement strategic decisions to overcome these challenges. However, this logic becomes increasingly difficult to sustain in the context of BTPs, as they operate under fundamentally different assumptions about control, trust, and coordination (Vella & Gastaldi, 2025). The emergence of these novel forms of platforms,

thus, invites a re-examination of how foundational platform challenges are addressed when central authority is removed or redistributed.

2.2 BTPs: A NOVEL BREED OF PLATFORMS IN WEB3

Blockchain has introduced a new class of platforms that challenge traditional models by offering users greater control and value (Gan et al., 2023; Hsieh & Vergne, 2023). Since Nakamoto's (2008) introduction of decentralized consensus, blockchain has driven interest in Web3—a decentralized Internet relying on public blockchains, smart contracts, and community governance (Murray et al., 2021, 2023). BTPs leverage network effects while aiming to limit power asymmetries (Hurwicz, 2008), prompting scholars to explore how blockchain reshapes platform models, governance, and stakeholder roles (Trabucchi et al., 2020).

Smart contracts support transparent, automated interactions without centralized control, enabling new token-based monetization strategies beyond traditional fee-based models (Murray et al., 2021; Gan et al., 2023). Tokens can also lower transaction costs, resolve coordination challenges, and enhance adoption (Bakos & Halaburda, 2020).

Blockchain enables decentralized coordination through Decentralized Autonomous Organizations (DAOs), redefining organizational boundaries and addressing excessive market power in traditional platforms (Catalini & Gans, 2016; Lumineau et al., 2021). These capabilities are emerging through the development of DApps (Vella et al., 2024). The DApp landscape is rapidly evolving, with significant growth in Decentralized Finance (DeFi) (Kitzler et al., 2023). DeFi DApps are designed to provide financial services through open, transparent smart contracts (Drummer & Neumann, 2020), enabling users to deploy idle capital in liquidity pools to generate yields. Users can then access these pools to obtain financial services in a permissionless manner, bypassing traditional centralized intermediaries – such as banks or financial institutions – operating under linear business models. DeFi DApps built as BTPs serve as valuable case studies for empirically examining platform-driven mechanisms that facilitate demand-supply matchmaking for specific financial services (Chen & Bellavitis, 2020). All these elements contribute to the emergence of alternative platform designs that hold potential to transform the management of platform challenges (Trabucchi et al., 2020).

However, research on TPs predominantly focuses on centralized platforms, leaving a gap in understanding decentralized ones (Boudreau, 2010). Despite blockchain's potential for decentralization, its actual effectiveness in addressing platform challenges remains unclear (Hsieh & Vergne, 2023). Consequently, this study seeks to provide a more nuanced perspective on platform evolution in Web3, where the lack of centralized control fosters both innovation opportunities and new strategic management complexities.

3. METHOD

To select cases we utilized Defillama[1], a DApp analytics website with a comprehensive database of DeFi DApps. Cases were chosen based on the following criteria:

- DeFi DApps employing a platform approach: DEXes and lending DApps can be modeled as TPs;
- Industry relevance: We applied a dual-threshold strategy including DApps with a TVL > $1M and an all-time peak TVL > $10M.
- Disclosed team.

This approach resulted in 10 DApp representatives agreeing to participate in interviews.

[1] https://defillama.com/ (this and all subsequent links were accessed in June 2025).

The data collection consisted of 14 semi-structured interviews with representatives from DeFi DApps, conducted between June 2024 and May 2025. To minimize potential information bias (Eisenhardt & Graebner, 2007) and enhance the depth of our insights (Eisenhardt, 1989), we included secondary data sourced from whitepapers, DApp technical documentation, official websites, and relevant online blogs (Bingham and Eisenhardt, 2011) (see Table 1).

DApp	**Direct Data**	**Secondary Data**
DeGate	1 interview with: Evangelist and Contributor	1 whitepaper
		1 technical documentation website
		1 official website
		2 DApp analytics websites
		3 blog articles
Folks Finance	5 interviews with: Chief Executive Officer (2 interviews), Chief Marketing Officer (1 interview), and Community Manager & Strategist (2 interviews)	2 technical documentation websites
		1 official website
		2 DApp analytics websites
		2 blog articles
GoodDollar	1 interview with: Tech Lead	1 whitepaper
		1 technical documentation website
		1 official website
		2 DApp analytics websites
		2 blog articles
Kamino Finance	1 interview with: Head of Institutional Growth	1 whitepaper
		1 technical documentation website
		1 official website
		2 DApp analytics websites
		3 blog articles
LFJ	1 interview with: Core Contributor	1 whitepaper
		1 technical documentation website
		1 official website
		2 DApp analytics websites
		2 blog articles
Merchant Moe	1 interview with: Core Contributor	1 technical documentation website
		1 official website
		2 DApp analytics websites
		2 blog article
Pact Finance	1 interview with: Product Developer and Fundraising	1 whitepaper
		1 technical documentation website
		1 official website
		1 DApp analytics website
		1 blog article
Paraswap		1 technical documentation website

	1 interview with: DAO Member and Governance Strategy	1 official website
		2 DApp analytics websites
		3 blog articles
TropicalSwap	1 interview with: General Manager	1 technical documentation website
		1 official website
		2 DApp analytics websites
		1 blog article
Uniswap	1 interview with: Staff Smart Contract Engineer	4 whitepapers
		1 technical documentation website
		1 official website
		2 DApp analytics websites
		3 blog articles

Table 1: Data sources by case

Data analysis was conducted following established guidelines for theory building from multiple case studies (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). A systematic coding process was employed, following an inductive approach (Saldaña, 2013). Throughout the analysis, we adhered to a constant comparative method, iterating between case data and the relevant academic literature (Gilbert, 2005). This cyclical process helped refining the emerging concepts and theoretical relationships, ensuring that findings were grounded in both the data and existing research.

4. FINDINGS

4.1 USER ATTRACTION: NAVIGATING THE CHICKEN-AND-EGG PARADOX

The chicken-and-egg paradox refers to the challenge that TPs face in attracting users while creating value, as both depend on each other (Caillaud & Jullien, 2003; (Trabucchi, 2020). BTPs face a similar issue, as they must onboard both liquidity providers (LPs) and end users. LPs are required to deposit tokens or cryptocurrencies into liquidity pools. End users must be attracted to utilize this liquidity for financial services, such as token swaps or decentralized loans (Kitzler et al., 2023). BTPs must onboard both sides simultaneously, thus facing a chicken-and-egg paradox:

"If you don't have the supply, the demand is not going to come. If you have the demand, but you don't have the supply, people are going to go elsewhere." (Pact Finance)

Unlike traditional TPs, BTPs can use token-based incentives to attract users. These tokens are embedded in the platform's economic model, with their value typically rising as the platform grows. Tokens may be used to access services, pay fees, or participate in governance (Drasch et al., 2020). By distributing tokens to early adopters, BTPs align financial rewards with anticipated platform success, encouraging early participation before network effects manifest. Tokens—unavailable to traditional TPs—act as a "cheat code" to bypass the chicken-and-egg paradox, accelerating early user onboarding and growth:

"[The chicken-and-egg paradox] is very much in line with traditional marketplaces, not just crypto. However, crypto has a cheat code, which is tokens. Kamino used that cheat code as well." (Kamino Finance)

Token incentives can also be referred to the expectation of a future airdrop[2]. In this case, users do not receive tokens immediately after performing actions on the platform. Instead, they expect to receive tokens in the future, with the amount likely to be higher the earlier they joined the platform:

"The earlier you get in, the higher the incentives are." (Kamino Finance)
"We give virtual points, and these points will unlock an airdrop, in this case, a token airdrop." (LFJ)

Users can be attracted to BTPs through marketing campaigns, where the core team employs strategies that leverage tokens to incentivize platform usage. These campaigns are not only intended to raise awareness of the platform, but are specifically designed to actively encourage users' direct involvement in its activities. As the CEO of Folk Finance put it:

"In these campaigns you don't just go for social media marketing, but you actually go to get users to try the DApp with on-chain tasks."

On the supply side, LPs can be incentivized through business deals with initial LPs, who agree to supply liquidity to the platform's pool in exchange for token, in addition to the interest earned from the liquidity provided:

"One approach is deal-making, which is basically an investment but in the form of a gift to liquidity providers. You promise them tokens with a soft commitment, and in return, they provide liquidity." (DeGate)

BTPs must be aware of the potential drawbacks of token issuance, particularly the susceptibility of tokens to market price volatility, which can attract speculative actors. This creates a dual-edged challenge for core teams. On one hand, speculative trading can serve as an informal promotional tool, increasing the platform's visibility and attracting new users who may, through exposure to market activity, develop interest and eventually engage with the platform. As noted by a Core Contributor from LFJ:

"The launch of a token [also has an effect] on a marketing level; when a token is listed on major CEXs or DEXs, it generates significant visibility. So, beyond the token's intrinsic value and trading performance, the token launch attracts many new users […]. And of course, it also draws the interest of speculators."

Speculators may engage with platform tokens primarily for short-term financial gain, without contributing to the platform's core services. While this behavior is often inevitable in token markets, core teams may see it as a strategic opportunity. By leveraging the visibility from speculative trading, they can aim to convert some of these actors into active participants:

[2] Distribution of free tokens to users, often as part of a Web3 project's marketing or promotional initiative.

"It's impossible to avoid it; rather, you need to focus on encouraging as many conversions as possible. [...] What you should aim to achieve is converting traders into users." (LFJ)

4.2 USER RETENTION: NURTURING NETWORK EFFECTS

TPs often enhance network externalities through lock-in effects to prevent users from switching to competing platforms (Gala, 2024). However, BTPs cannot rely on similar mechanisms since Web3 users control their data and identity (Chen et al., 2021). Instead, BTPs earn commitment through active participation and shared development ownership. Our interviewees noted that BTPs build user retention by fostering communities of engaged users who contribute to platform development. Thus, BTPs' growth strategy focuses on cultivating an engaged user base:

"The real difference is that, unlike traditional marketing, this is a community-driven world. Therefore, you must fundamentally start with a community." (Folks Finance, CMO)

BTPs tend attracting technically skilled users, who can review the platform's smart contracts and provide valuable feedback. These users not only test the platform's functionalities but also help identifying bugs or potential security issues within the smart contracts. Token incentives also play a significant role in encouraging active participation. Various DApps in our sample, such as Folks Finance[3], Pact Finance[4], and Kamino Finance[5], implement bug bounty programs. These programs reward users who identify critical bugs with monetary incentives provided in the form of tokens. Moreover, NFTs can be used to signal active involvement in the community, offering special recognition among other members, such as in the case of TropicalSwap[6]. The expectation of future airdrops serves as an incentive as well, with active contributors more likely to benefit more from these rewards:

"I use the platform, give my feedback, challenge them on X, and engage with them because I know I'm going to get incentives. […] There's something called "Good Cat", which basically incentivizes you if you've been an active user in the community, both on Discord and Twitter, and you can demonstrate that. They literally give you tokens for that." (Kamino Finance)

As they engage with the platform, users become familiar with its features, contribute feedback, and interact with the community—gradually building a sense of belonging. Tools like NFTs serve as engagement signals, further incentivizing users to stay and reducing the appeal of switching to competitors. BTPs use these mechanisms to strengthen user connection and enhance retention:

"That's when you feel invested, right? When you have a significant portion of your work on the platform, and you want to see the platform grow." (Kamino Finance)

Organic promotion by highly engaged users becomes crucial for the platform's growth. As user engagement increases, it strengthens network effects, initiating a virtuous cycle. As the user base expands, some new users become highly invested, motivating them to

[3] https://v1.docs.folks.finance/security/bug-bounty
[4] https://docs.pact.fi/pact/security/bug-bounty-program
[5] https://docs.kamino.finance/build-on-kamino/bug-bounty
[6] https://docs.tropicalswap.exchange/features/nft-tropical-islands-boarding-pass

promote the platform and attract more participants and resources, further driving its expansion:

"[Users] will spread the word and contribute to organic growth. It's a slower process, but it results in higher-quality users and better user retention." (Folks Finance, CEO)

4.3 USER COORDINATION: MANAGING THE DECENTRALIZATION TRADE-OFF

In the early stages, BTPs operate with a centralized structure, where the core team holds full control over platform management. This enables swift decision-making and efficient development. As the platform matures, however, the core team aims to gradually shift decision-making power to users:

"It's a journey. It's a progress bar, right? I don't believe in decentralizing from day one" (Kamino Finance)

BTPs often use decentralized governance mechanisms based on the DAO model to coordinate users in a decentralized environment. In this model, any user can provide feedback, engage in discussions, and submit proposals for new features or changes. Community members review and vote on these proposals through an online voting process facilitated by tokens, with governance token holders voting via a smart contract. Approved proposals are implemented once the voting period concludes:

"Anyone can submit a proposal that has an interest in Uniswap, and then that proposal is voted on, and when a proposal passes, it is implemented." (Uniswap)

Governance decentralization often occurs progressively, serving as both a coordination mechanism and a means to align the platform with the core team's commitment to embracing Web3 principles of transparency and decentralization. Furthermore, it allows users to feel actively engaged in the platform's development:

"We don't want to just be a bank or a fintech product with a DAO wrapped in it. We want to be able to say, if we have to step out in a few years, everything is going to be running autonomously." (ParaSwap)

Implementing decentralized coordination through a DAO-like structure presents BTPs with a challenge in community involvement in platform development decisions. The shift to decentralized governance involves a trade-off between the benefits of centralization, such as efficient decision-making, and the advantages of decentralization, including increased user participation and better alignment with community interests. While decentralization empowers users, it can also create inefficiencies due to the difficulty of reaching consensus among a large user base on a unified development direction:

"It's much easier to approve and iterate the process when you just need to do it in a meeting internally, as opposed to when you have all these different stakeholders openly participating and having to pass a system." (Merchant Moe)

Once governance shifts to a decentralized model, BTPs face increased competition from other platforms offering similar services. The slower decision-making process inherent in decentralized governance can hinder the platform's ability to respond quickly to market changes and maintain competitiveness. As decision-making becomes reliant on consensus

and increasingly time-consuming, the platform's ability to innovate and quickly adapt to market demand may be compromised, potentially giving an edge to more centralized competitors who can operate with greater speed and efficiency:

"Competition is the first problem that arises. Once you decentralize, everything slows down. When you don't have the DAO, you can launch features rapidly because you have the vision, we do it quickly, but in a decentralized system developments would happen at a much slower pace." (Folks Finance, CEO)

Decentralization can also introduce significant security concerns. Governance-related attacks may occur where malicious actors manipulate proposals or gain disproportionate voting power, threatening the platform's integrity. Such attacks could enable individuals or coordinated groups to enact changes that serve their own interests at the expense of the community, such as siphoning funds from liquidity pools or altering protocol rules for unfair advantage. In the words of LFJ, talking about the famous Terra-Luna case (Briola et al., 2023):

"When Terra-Luna collapsed, many people asked why they didn't block the chain. Well, the governance process required, I don't remember, five days, seven days, and the chain went to zero in three. They couldn't block the chain without an on-chain governance action, so they didn't have the power to save the protocol."

These risks underscore the need for robust security measures and vigilant oversight of governance processes to prevent abuse and protect users and their assets. Without a central authority, BTPs must implement strong mechanisms to address governance-related attacks or resolve conflicts within the community. Despite these challenges, BTPs are compelled to adopt decentralized governance models, enabling users to actively contribute to the platform's development and be rewarded for their involvement. While increasing decentralization involves a trade-off, BTPs view it as a necessary coordination mechanism. Our findings suggest that no DeFi DApp intends to remain centralized indefinitely; they either already have or plan to establish a decentralized governance model.

5. DISCUSSION

5.1 HOW BTPS REWRITE CLASSIC PLATFORM PLAYBOOK

While existing literature highlights blockchain's role in decentralization and token incentivization, little empirical research explores how BTPs are launched and grow. This study provides insights into this process, contrasting traditional platform strategies with the unique dynamics of BTPs and their approach to common challenges.

Our findings show that BTP developers are unwilling to assume the traditional role of a platform owner. While the core team may retain a central role in guiding the platform's technical and strategic evolution, they must build a community of users who will eventually be involved in the platform's development decisions.

Existing literature has identified several strategies to overcome the chicken-and-egg paradox. While BTPs could theoretically apply these strategies, empirical evidence shows that they combine them with the use of tokens. Our findings align with Drasch et al. (2020) and Shakhnov and Zaccaria (2023), who suggest that platforms can leverage tokens to drive development and create token-based network externalities. Specifically, we argue that token distribution in the early stages can serve as a strategic mechanism for BTPs to

overcome the chicken-and-egg paradox in the bootstrapping phase. Tokens incentivize early adopters by offering a stake in the platform's financial success, while also encouraging them to join the platform during its early stages when network effects are still minimal. The earlier users onboard, the higher the rewards they expect to gain. Token-based incentives are also employed to encourage users to invest money, effort, and time into the platform, fostering a sense of community and ultimately promoting evangelistic behavior that, in turn, contributes to platform development and enhance network effects. Unlike traditional TPs, which rely on lock-in strategies based on user data for retention (Gala, 2024), BTPs depend on active user participation, which serves as a retention mechanism: when users become more engaged and recognized within the community, they are less likely to switch to competing platforms.

Once a BTP attracts and retains users on both sides, coordination challenges arise, similar to those faced by traditional TPs (Evans, 2003), where platform owners must set rules to guide user actions and platform development (Gawer, 2021). Our findings align with Hsieh and Vergne (2023), who argue that this challenge is more pronounced in decentralized networks, where no central authority imposes governance. In response, the core team implements decentralized coordination mechanisms by transitioning to a DAO-based governance model.

Building on existing research on decentralization challenges (Knez & Camerer, 1994; Weber, 2006), we highlight a unique tension arising from BTPs' shift to decentralized governance. Our findings show that BTPs adopt DAO-inspired models to enhance user participation and community alignment. However, this decentralization also introduces governance risks and inefficiencies, as decision-making becomes consensus-driven and time-consuming. As a result, the platform's innovation and adaptability may be hindered, potentially benefiting more centralized competitors.

5.2 Navigating paradoxical tensions across BTP development phases

During the bootstrapping phase, the core team's goal is to onboard initial LPs and users, as network effects are not yet viable. BTP developers issue tokens to incentivize early participation, a strategy unique to BTPs due to the blockchain nature of tokens. However, this creates a paradox: while token issuance fosters initial adoption and addresses the early growth challenge, it also attracts speculative users focused on short-term financial gains, which can destabilize the platform. Such activity may undermine long-term platform stability by distorting its value proposition, eroding trust among early adopters, and weakening the foundation for future governance.

During the growth phase, the core team focuses on scaling the platform and strengthening network effects by expanding the user base and retaining existing participants. BTPs introduce a unique strategy by involving technically skilled users to contribute to platform development, such as reviewing and proposing features or deploying new smart contracts. This fosters a sense of investment among users, serving as a strong retention mechanism. However, as the platform grows, users may feel their influence diminishes, weakening the feedback loop between engaged users and the core team. This creates a paradox: as the user base expands, engagement dilutes, potentially reducing users' sense of influence, eroding community identity, and complicating governance processes—critical factors for retention and further growth.

In the coordination phase, the core team aims to institutionalize user governance and align with the Web3 principle of decentralization. To achieve this, BTPs deploy DAO-based structures to establish shared rules and enable consensus-driven development. However, this shift introduces a paradox: while decentralization enhances legitimacy, it also creates procedural rigidity. As decision-making becomes consensus-based rather than

authoritative, it slows down responses to market changes and increases vulnerability to governance attacks or deadlock, thereby introducing structural inertia.

Drawing on these considerations, we claim that decentralization simultaneously enables and constrains BTPs development across all phases. While decentralization through blockchain-based business strategies provide innovative solutions to fundamental platform challenges, it also generates paradoxical tensions at each stage of BTP development, that must be addressed.

Foundational work on paradox theory (Smith and Lewis, 2011; Maalouf and Gammelgaard, 2016), establish that structural tensions can coexist and even fuel innovation when effectively managed. Paradoxes can be defined as "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith and Lewis, 2011, p. 382). Instead of acting to resolve trade-offs, scholars recognize an advantage in developing strategies for moving forward, rather than getting stuck in front of the paradoxical tensions. According to Schad et al. (2016), paradox navigation strategies typically fall into three categories – acceptance, separation, and integration – all of which can be observed in BTPs.

First, acceptance strategy denotes "accepting the paradox and learning to live with it" (Schad et al., 2016). It is reflected in how core teams acknowledge the tensions inherent in decentralization. Instead of eliminating contradictions between organizational agility and participatory governance, developers recognize them as conditions to manage. This is seen in statements like "I don't believe in decentralizing from day one," which highlights an awareness of the paradox and a willingness to delay its resolution. Acceptance is also evident in core teams not directly addressing the speculative market dynamics tied to platform tokens. Instead, their focus is on creating real utility for tokens within the platform, acknowledging that speculators, while not a primary concern, may contribute to increased visibility.

Second, separation strategies delineate actions to temporally or structurally segregate competing yet co-existing demands, processes, and perspectives (Poole and Van de Ven, 1989). BTP developers frequently engage in strategies based on "temporal separation", allocating competing demands to sequential time periods. For instance, many platforms initially centralize decision-making during the bootstrapping and growth phases, only gradually introducing governance tokens and DAO-based governance frameworks. This sequencing approach allows core teams to deliver value quickly while signaling long-term alignment with decentralization principles. It reflects a form of temporal ambidexterity that enables short-term efficiency without undermining long-term legitimacy.

Third, some BTPs experiment with integration strategies, which attempt to accommodate contradictory demands simultaneously through novel organizational forms. Also termed "synthesis", this navigation strategy involves the identification of "a novel solution that takes both paradoxical elements into account" (Schad et al., 2016). Examples include the creation of innovative hybrid governance models that combine smart contract-based community voting mechanisms with emergency response protocols (e.g., multisig wallets held by trusted core contributors) or the delegation of technical oversight to semi-autonomous working groups. These forms of partial decentralization seek to uphold user empowerment while preserving platform responsiveness and operational stability. They point toward a more experimental, dynamic form of organizing that could inform broader thinking on governance in distributed ecosystems.

Rather than pursuing definitive "either/or" resolutions through formal logic, weighing the advantages and disadvantages of opposing alternatives, BTPs tend adopting a paradoxical mindset that embraces inherent tensions. This orientation reflects a more fluid and

integrative form of reasoning – referred to as "paradoxical thinking" (Ingram et al., 2016) – which seeks to leverage the distinctions and complementarities between conflicting elements. By drawing on established strategies from the paradox literature, BTPs aim to identify "both/and" solutions (Smith & Lewis, 2022). Such paradox-embracing approach proves to be instrumental for BTPs, as it enables their core teams to devise strategic moves that effectively promote platform growth while acknowledging, rather than eliminating, the underlying paradoxes.

6. LIMITATIONS AND FUTURE RESEARCH

This study has several limitations that also open promising directions for future research. First, our analysis centers on DeFi DApps due to their prominence within the Web3 ecosystem (Kitzler et al., 2023). However, extending the inquiry to other sectors—such as NFT marketplaces (e.g., OpenSea) or music platforms (e.g., Audius)—could test the robustness of our findings across different platform logics.

We grounded our analysis primarily in platform theory, but our findings also revealed the relevance of paradox theory (Smith and Lewis, 2011) to explain the tensions emerging from decentralization. We encourage future studies to deepen this theoretical integration, potentially using mixed methods to complement our qualitative findings with broader empirical validation.

Given the nascent stage of BTPs, our data largely reflect early adopter behavior. As DeFi matures, research should investigate how broader user segments—such as the early or late majority—engage with these platforms. This would help assess whether the paradoxes identified here persist as adoption scales.

Finally, we explored the core team perspective but did not examine BTPs' competitive or collaborative dynamics with other platforms. Phenomena like "vampire attacks" (Zhao et al., 2024) remain underexplored and offer a rich avenue for future work on platform competition in Web3. Future research could also empirically test these findings using large-scale datasets and complementary case studies to validate the mechanisms identified across a broader range of blockchain platforms.

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