

CHAPTER 1

INTRODUCTION

The emergence of Web3, encompassing tokenized assets, blockchain technology, and decentralized applications, has sparked widespread public discussion and debate (Ahmad et al., 2024; Wan et al., 2023). Technologies including decentralized finance (DeFi), non-fungible tokens (NFTs), and decentralized autonomous organizations (DAOs) are reshaping industries like social media, governance, entertainment, and finance by decentralizing control and empowering users (Balqis et al., 2024; Ngozi Samuel Uzougbo et al., 2024). While these advancements align with Web3's principles of autonomy, privacy, and data ownership, they also face challenges namely scalability, security, usability, and environmental concerns, which contribute to mixed public sentiment (Ray, 2023).

Web3 represents more than technological progress; it signifies a paradigm shift with profound implications for user interaction with digital systems, making it a critical area of study (Valiente & Pavón, 2024). Public discourse on platforms like X (formerly Twitter), YouTube, and Reddit reflects both enthusiasm for its transformative potential and skepticism about its limitations (Latif et al., 2024; Ruan & Lv, 2023). These challenges create a complex landscape where user trust and engagement hinge on addressing these barriers (Guo et al., 2023). Understanding these perceptions is essential to identifying the drivers and barriers to Web3 adoption and fostering trust in decentralized systems.

Although previous studies have explored specific Web3 domains, namely DeFi or NFTs, they often focus on market trends or technical aspects, overlooking the emotional traits that influence adoption dynamics (Balqis et al., 2024; Guan et al., 2023). Additionally, sentiment analysis in Web3 discourse is often limited in scope, lacking a comprehensive examination of the interplay between thematic categories and public sentiment (Hizam et al., 2022). This study addresses these gaps by uniquely combining thematic categorization with emotional analysis to uncover deeper insights into public adoption dynamics using a two-stage methodology. Stage 1 categorizes discussions into industries—Core Infrastructure, DeFi, NFTs, DAOs,

and Decentralized applications (DApps)—while Stage 2 examines associated emotional traits including optimism, skepticism, frustration, curiosity, and concern.

Preliminary findings indicate that frustration with NFTs and DAOs arises from governance complexities and speculative behavior, while curiosity and optimism dominate discussions about Core Infrastructure and DApps. These insights provide actionable guidance for stakeholders to address barriers, enhance public engagement, and drive Web3 adoption.