Research Article

The Economics of Memecoins and the Breakdown of Financial Legitimacy

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ABSTRACT

This paper investigates the extent to which memecoin price movements follow social sentiment trends and how their extreme, hype-driven surges challenge economic theories of value, financial regulation, and cryptocurrency legitimacy. Through a randomized controlled trial simulating exposure to viral memecoin propaganda, the study finds that younger participants significantly underestimated risk and overestimated returns after viewing promotional content, even for a fictional asset with no fundamentals. These behavioral shifts demonstrate how memecoins leverage narrative framing and emotional appeal, particularly among younger investors. The paper then explores how memecoins exist in a regulatory void, using case studies and policy responses to demonstrate the dangers of unregulated attention-based assets. The findings present that memecoins pose systemic risks, not just to individual investors, but to the integrity of financial markets, particularly by eroding public trust in the crypto landscape.

Keywords: Memecoins; Social Sentiment; Financial Legitimacy; Cryptocurrency Regulation; Retail Investor Behavior; Viral Financial Propaganda; Randomized Controlled Trial (RCT)

INTRODUCTION

Over the past few years, the rise of memecoins—tokens created on a cryptocurrency's blockchain and inspired by internet memes and online subcultures—has emerged as one of the most perplexing phenomena in digital finance. Initially, they were launched as satirical alternatives to Bitcoin and mainstream cryptocurrencies; however, coins like Dogecoin ($DOGE), Shiba Inu ($SHIB), and PEPE have, at their peaks, reached market capitalizations in the tens of billions of dollars. These coins are thought to be propelled not by technological innovation or utility, but by viral memes and community sentiment. Dogecoin, for example, reached a market capitalization of over $85 billion in 2021, reportedly driven mostly by Elon Musk's tweets and the Reddit community's momentum (1). There was no tangible project roadmap for the application. This memecoin phenomenon is not merely a niche internet trend, but a financial movement that has attracted millions, particularly young investors, and inserted itself into the center of crypto activity.

At face value, these tokens may appear to be financial novelties. Yet their booming growth, unpredictable movements, and massive retail investor base, in conjunction with the lack of regulation, transparency, and

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in-depth research, suggest deeper implications.

What might appear as trivial or unserious assets have introduced a significant fiscal impact on the digital economy. Purportedly, memecoins have silently created massive and rapid wealth transfers, creating hordes of anonymous millionaires, who often capitalized on early information of viral momentum. These coins' ability to achieve billions in market capitalization, surpassing those of publicly traded companies in mere hours, has reshaped perceptions of what constitutes a 'legitimate' financial asset. Trump ($TRUMP) coin, for instance, crossed an implied market value of $70 billion only a day after launch (2-4).

However, when such wealth is made, it may be unevenly distributed and often comes at the expense of other retail participants, many of whom are drawn in by the hype and misinformation, only to be left holding worthless tokens after orchestrated pump-and-dump schemes. In the Trump ($TRUMP) coin example, while people made millions of dollars, it was also reported that over 810,000 investors collectively lost more than $2 billion when the token plummeted from its $75 peak to roughly $16 within days (5). Evidently, this stark concentration of gains among early investors, coupled with the catastrophic losses endured by a majority of retail traders, reveals how memecoin markets often function as zero-sum games under the guise of decentralized finance. Without formal disclosures or regulatory oversight, memecoins operate in a shadow economy where large sums of wealth are moved, lost, and sometimes even laundered—largely behind the closed walls of traditional financial institutions or legal frameworks. These events do not just represent speculative chaos, but possess real-world impact on individual finances, decentralized digital exchanges, and the broader perception of market ethos in the cryptocurrency world.

This paper seeks to examine: to what extent do memecoin price movements follow social sentiment trends, and how do their extreme, hype-driven surges—often in coins with no inherent utility—challenge traditional economic theories of value, financial regulation, and the legitimacy of cryptocurrency as an asset class, while also influencing wealth inequality and financial stability through the increasing participation of younger investors enticed with viral financial propaganda?

Through conducting sentiment analysis and graphing the interplay between price and social sentiment, I find that price mainly echoes social sentiment. Moreover, via a randomized controlled trial (RCT), I unveil that memecoin propaganda has a strong and direct effect on investor decisions. Thus, I argue that memecoins are driven largely by social sentiment and digital propaganda rather than intrinsic value, not only challenging traditional economic frameworks and regulatory boundaries, but also reshaping perceptions of value, exacerbating wealth inequality, and introducing systemic risk via emotionally influenced, youth-led financial participation. Through the lenses of behavioral finance, economics, and public policy, this paper aims to reevaluate the foundations upon which asset legitimacy and market rationality are traditionally built.

To examine memecoins comprehensively and answer the driving question, I will first conduct a sentiment analysis to quantitatively assess the relationship between social sentiment and memecoin price movement, using the case of $PEPE as a representative token. Then, through a randomized controlled trial (RCT), I will evaluate how exposure to viral promotional content affects investor behavior, particularly among younger demographics. These empirical findings will be contextualized within a discussion of behavioral finance and economic theory, challenging the notion of intrinsic value in modern digital markets. Finally, I will analyze the regulatory landscape, highlight the systemic risks posed by unregulated hype-driven assets, and examine case studies that illustrate how memecoins can undermine the credibility of cryptocurrency markets more broadly. Together, these sections aim to evaluate the implications of a financial system increasingly driven by attention, emotion, and digital virality rather than fundamentals, and to propose a framework for understanding — and eventually regulating — this emerging memecoin economy.

LITERATURE REVIEW

Existing Research on Cryptocurrency and Financial Behavior

There are several papers that discuss cryptocurrency and its implications on topics such as age vulnerability, investor psychology, financial governance, and more. A paper by Liu and Tsyvinski (6), for instance, finds that cryptocurrencies do not behave like traditional asset classes (e.g., stocks, currencies, and commodities). They analyzed Bitcoin, Ripple, and Ethereum and found that cryptocurrencies exhibit much higher returns and volatility than conventional assets, with frequent and extreme price movements. Moreover, they conducted their own social sentiment analysis, and their study found that increases in Google search volume and Twitter activity predict higher future returns. Additionally, negative attention

(e.g., searches for "Bitcoin hack") predicted lower returns. These results suggest that cryptocurrency markets are strongly driven by hype, sentiment, and investor attention rather than traditional financial metrics. My paper agrees with Liu and Tsyvinski's findings in that social sentiment and price are directly linked.

Next, a paper by Aiello and colleagues (7) explores how cryptocurrencies have become a major part of investment portfolios for many U.S. households, with some seeing huge wealth gains. Their study shows that when people make money from crypto, they tend to spend more on discretionary purchases and even use their gains to buy homes, which has contributed to rising house prices in crypto-heavy areas. They then consider how, although crypto may not be closely tied to traditional financial markets, its impact on real-world spending and housing demonstrates that it has real economic consequences that policymakers might need to consider. This paper is similar to mine in that it alludes to the larger economic consequences policymakers must consider regarding our respective topics.

Lastly, "Do You Even Crypto, Bro? Crypto Currencies in Household Finance" by Weber and colleagues (8) examines who owns crypto, why they invest (or do not), and how their beliefs about risk and returns shape their financial decisions. The findings show that crypto investors are generally young, high-income males who expect high returns, and that non-investors often cite a lack of knowledge or concerns about risk, highlighting how crypto is perceived very differently from traditional assets like stocks and gold. My paper aligns with these findings to a certain degree and expands on the risky implications for young crypto-owners who expect high returns.

While these papers connect to, expand upon, or touch on aspects of my work, the key distinction lies in my focus on the memecoin economy and its implications. In contrast, the other papers approach cryptocurrency more broadly and do not discuss memecoins.

Conceptual Framework and Background

The massive rise of memecoins is inextricably linked to the digital ecosystem in which they circulate. Platforms like X, TikTok, Reddit, Discord, and Telegram act as powerful variables in the price action of memecoins. They have the capabilities to accelerate hype, shape perception, and catalyze the price movement of memecoins. In contrast to traditional financial assets, where price reflects intrinsic value or is derived from intrinsic value, memecoins seemingly follow a different logic that is grounded in visibility and virality.

Preliminary examples suggest that certain posts or social trends may coincide with sharp price swings. For instance, in 2021, Elon Musk tweeted Dogecoin to be "the people's crypto," triggering a 44% spike in DOGE's price within 24 hours (9). Similarly, on TikTok, people made videos encouraging viewers to invest $25 in Dogecoin, claiming to "make everyone rich" (10). This concept racked up millions of views and contributed to a broader notion. Discord servers also play a crucial role in pre-launch token coordination, where hype and speculation compound in a space where there is no regulatory oversight. While anecdotal, these cases underscore a pattern: memecoins often behave like digital sentiment markets.

Importantly, many of these tokens trade on automated market makers (AMMs), like Uniswap, where prices are algorithmically determined using liquidity pools rather than a traditional market of buyers and sellers (11). This means buy pressure, especially in low-liquidity environments, can create rapid, exponential price movements. If a post or meme triggers a flood of buyers, often driven by the "fear of missing out" (FOMO), price spikes can be immediate.

These dynamics raise important questions about whether memecoins' valuations are driven primarily by fundamentals or by digital sentiment. The following section investigates this empirically through a structured sentiment analysis of posts from X, providing quantitative insight into the connection between online sentiment and price behavior.

METHODS AND MATERIALS

In this section, I establish a connection between a coin's price and its social sentiment score and show that price follows social sentiment through graphical analysis. Additionally, the memecoin economy built around memecoins has birthed a new class of financial propaganda — short-form content that triggers emotional, fast-paced investment decisions often detached from fundamentals. This notion raises questions about societal equity and economic vulnerability, especially among young investors. To explore how hype and propaganda distort risk perception and investment behavior, I conducted a randomized controlled trial (RCT) inspired by Weber et al and designed it to simulate the viral environments in which memecoins thrive (8).

Sentiment Analysis

To prove the correlation between viral sentiment and investment behavior, I analyzed and graphed the price

versus social sentiment of the PEPE coin. I chose PEPE as the focal point of the sentiment analysis because it embodies the core dynamics. I aim to investigate extreme price volatility, allegedly driven almost entirely by social sentiment, virality, and internet meme culture, rather than traditional fundamentals. As a memecoin with no intrinsic utility or clear value proposition, PEPE provides a clear lens through which to analyze how financial propaganda, community-driven hype, and online discourse can influence asset prices and investor behavior.

To obtain sentiment data for this analysis, I used Twitter/X's advanced search function to filter posts that mentioned either "$PEPE" or "PEPE," ensuring that only content relevant to the memecoin was included. From this filtered set, I selected the top ten replies on each day within the chosen date range. These "top comments" are determined by Twitter/X's own ranking algorithm, which typically surfaces replies with the most engagement (likes, retweets, or impressions). The comments are not taken from any specific account or influencer; instead, they reflect a broader picture of the $PEPE conversation on the platform that day.

I limited our sample to ten comments per day to keep the process manageable while still capturing a representative snapshot of the day's prevalent sentiment. These comments were then analyzed using an OpenAI-developed large language model to generate an objective numerical sentiment score ranging from 0 (very negative) to 5 (very positive). More specifically, its basis for giving a score was shown in Table 1.

I tracked the sentiment score from March 1, 2024, to April 2, 2024. This window was chosen because it captures a full narrative arc—beginning with early bullish momentum, peaking in mid-to-late March with euphoric sentiment and major price movements, and ending with a cooling-off period characterized by community resilience and sustained attention. Additionally, this period contains widespread speculation about potential Coinbase listings, heavy retail participation, and viral meme activity throughout social media. It exhibits a phase in which retail sentiment was particularly active and influential, making it an ideal case study to explore the relationship between social sentiment and memecoin price action.

After generating a sentiment score for each day, I created graphs to exhibit the positive correlation I found between social sentiment and price. However, this approach did come with its limitations. First, all posts were treated equally regardless of reach, which may underrepresent the outsized impact of certain posts/tweets. Additionally, the exclusive reliance on X also presents a limitation: many memecoin communities are also active on platforms like Telegram, Discord, or TikTok, meaning this sample may not fully capture broader investor sentiment. Furthermore, the analysis was conducted at a daily interval, potentially missing short-term fluctuations or quick sentiment reversals that could be vital in such a fast-moving market. Despite these limitations, the methodology remains a useful proxy for measuring retail sentiment, especially when analyzed over a longer period.

Randomized Controlled Trial

The objective of this experiment was to empirically examine the effect of viral financial propaganda on investor outlook. To do so, the RCT I designed simulated typical exposure to online memecoin hype. The aim was to test whether brief exposure to social media-style promotional content would influence a participant's risk assessment, investment decision, and return expectations.

Seventeen participants (N = 17), primarily ages 14–34, were randomly assigned to one of two groups at

Table 1. Basis of social sentiment score

Score	Meaning	What it Looks For
0	Extremely negative	Words like "scam," "rug," "dead," "trash," or **clear accusations or despair**
1	Negative	Doubt, sarcasm, skepticism, pessimism ("This isn't going anywhere," "feels like a trap")
2	Neutral	Informational, factual, chart-based, no clear emotion — or mixed tone ("PEPE broke resistance today. Interesting.")
3	Mildly positive	Small hype, optimism, belief — "Looks promising," "Might moon soon"
4	Very positive	Strong hype, emojis, confident claims — "We're going to 100x!! 🚀🔥"
5	Extremely positive / euphoric	**Full-on mania** — "I'm all in," "Life-changing gains," "Next SHIB," etc. **FOMO-heavy tone**

the start of a Google Form survey. I acknowledge that the small sample size limits the generalizability of the findings, but future papers can build on this by scaling the design across diverse demographics and platforms. The study divided participants into two distinct groups. The treatment group (n = 9) yielded a multimedia package modeled after actual viral financial content from platforms like X (formerly Twitter), TikTok, Reddit, and Telegram. In contrast, the control Group (n = 8) received a fact-based, neutral description of the same fictional coin, with no promotional or emotional framing. In both forms, the groups were introduced to a fictional memecoin named $NeuroAI, with no intrinsic utility or potential roadmap. The control participants were shown a plain-text description of tokenomics (1 billion supply, anonymous developer, no utility, high volatility) and example charts showing rapid price rise and fall, just like the charts and behaviors of many memecoins. The treatment participants were shown propaganda-like content: Reddit-style posts with "10,000x" promises, Telegram screenshots of "whale activity" (high-volume trades by large holders), meme-style investment examples (e.g., $26 turning into returns exceeding $600,000), and profit screenshots (e.g., +6915% returns). These conditions were intended to replicate a plausible exposure scenario in real-world social media feeds.

After viewing their assigned content, participants were asked five questions: 1. How likely are you to invest in $NeuroAI? 2. How risky is it as an investment? 3. How much of a $500 hypothetical allocation would you invest? 4. What do you think is the most likely outcome? 5. To what extent does social media affect your investment decisions? All responses were anonymous, and no compensation was provided. The response rate to the survey was 100%.

RESULTS

Tracking the Trend: Social Sentiment Analysis and Price Correlation

The first set of graphs shows the price by date and the social sentiment score by date (Figures 1 and 2). They follow the same dates.

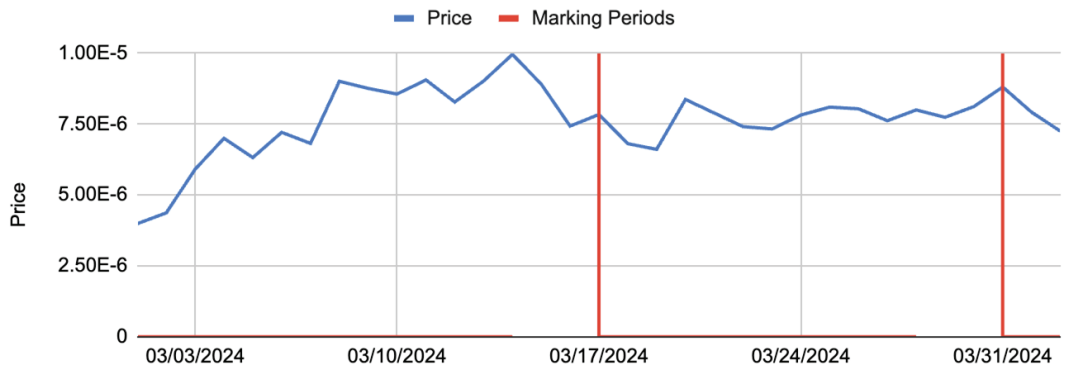


Figure 1. Price by date graph of $PEPE memecoin.

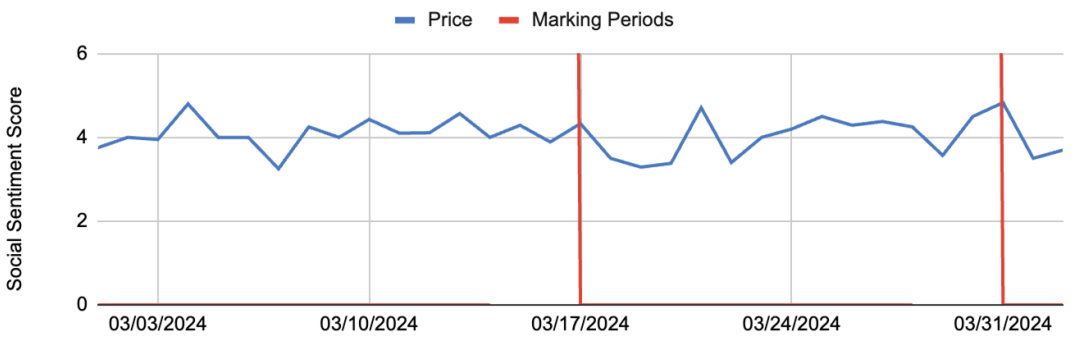


Figure 2. Social sentiment by date graph of $PEPE memecoin.

In the marking periods of Figure 1 and Figure 2, the price and social sentiment graphs follow the same highs and lows, indicating that price and social sentiment are interconnected. The lags can be explained by the feedback loop caused by the two variables. Price and sentiment feed each other in a loop where, when the price surges, people get excited and begin posting bullish content. This, in turn, attracts new investors who fear missing out (FOMO), leading to even more price increases. Conversely, when the price dumps, panic spreads, and people start sharing bearish takes. This negativity triggers additional selling, which causes the price to drop even further. Hence, sentiment can amplify what is already happening.

Moreover, graphing sentiment score against price reveals a positive slope, indicating a statistically significant correlation between the two variables (Figure 3). This relationship is further supported by the regression output summarized in Table 2. Using price and sentiment score data from the selected date range, the linear regression yielded a p-value of 0.0533, which is statistically significant at the 10% level. The estimated slope of approximately 9.8×10^{-7} suggests that for every 1-point increase in the social sentiment score, the price of PEPE coin increases by about 0.00000098. While this absolute change may seem insignificant, it represents a ~13% increase relative to PEPE's average price during the sample period, which is a notable shift for a single unit change in sentiment. For comparison, if an asset like Bitcoin, currently priced at $100,000, experienced a similar 13% swing per sentiment point, that would equate to a hypothetical $13,000 move, clearly illustrating how sentiment wields outsized influence in the memecoin space. While this is presented for illustrative purposes only, it contextualizes the importance of retail-driven sentiment in highly speculative markets.

RCT Results

Investment Likelihood. Participants exposed to hype

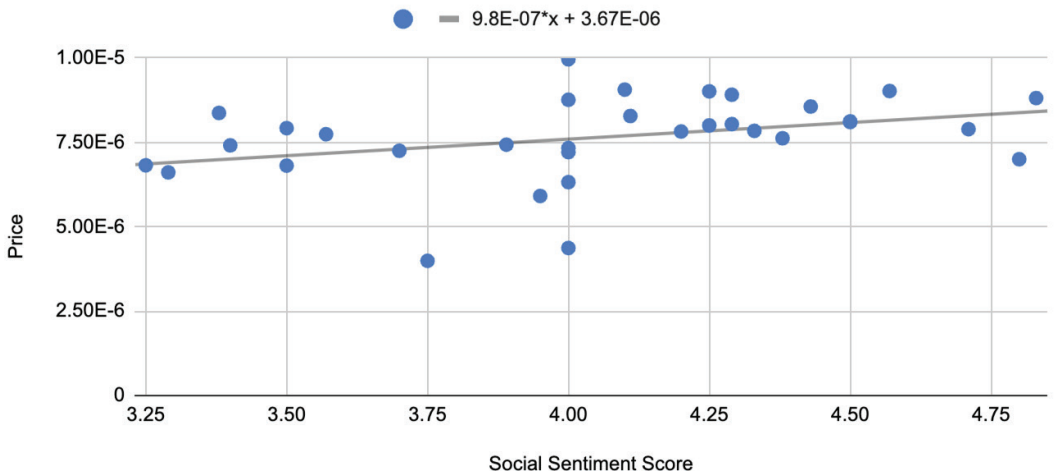


Figure 3. Price by social sentiment graph of $PEPE memecoin.

Table 2. Coefficients and fit metrics for linear regression

Metric	Slope	Intercept
Estimate	0.0000009803457253	0.000003672671806
Standard Error	0.0000004880244583	0.000001988497834
R^2	0.1151780066	0.000001197874053
T-statistic	2.008804494	–
P-value	0.05333559402	–

were much more willing to invest. Among those in the treatment group, 66.7% reported being moderately to extremely likely to invest, compared to just 12.5% in the control group (Figure 4A). Conversely, half of the control participants (50%) indicated they were not at all likely to invest, whereas this was true for only 22.2% of those exposed to hype (Figure 4B). These findings highlight the powerful influence of hype on investment willingness.

Hypothetical Investment Amount. Notably, 22.2% of the treatment group said they would invest the entire $500, while none of the control group participants chose this option (Figure 5A). At the other end of the spectrum, 37.5% of control participants opted to invest nothing at all, compared to just 11% in the treatment group (Figure 5B). Additionally, participants in the treatment group displayed greater confidence, allocating funds more broadly across the mid-to-high investment brackets ($101–$250 and $251–$499). This pattern suggests that hype influences not just the decision to invest, but also the scale and strategy of investment.

Perceptions of risk and expected outcomes varied dramatically between the two groups. While 75% of control participants rated $NeuroAI as a "very high risk" investment, none in the treatment group shared that view (Figure 6A and 6B). Instead, a majority of the treatment group (55.6%) considered it to be only a "moderate risk." When it came to expectations, the contrast was equally striking. Three-quarters (75%) of control participants predicted a total or near-total loss, compared to just 11.1% of those exposed to hype (Figure 6C and 6D). On the other hand, 33.3% of the treatment group expected moderate profits, a level of optimism not shared by any control participants (Figure 6C). These findings suggest that exposure to hype significantly reduces perceived risk and elevates expectations of financial gain, regardless of the asset's inherent volatility.

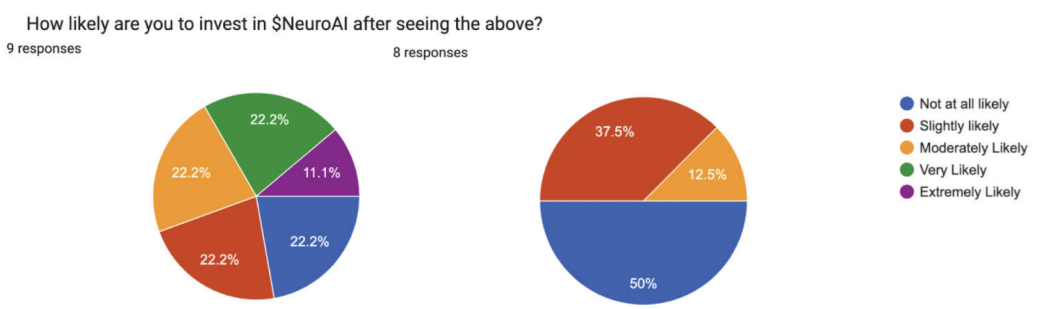


Figure 4. Investment likelihood breakdown of treatment and control groups.

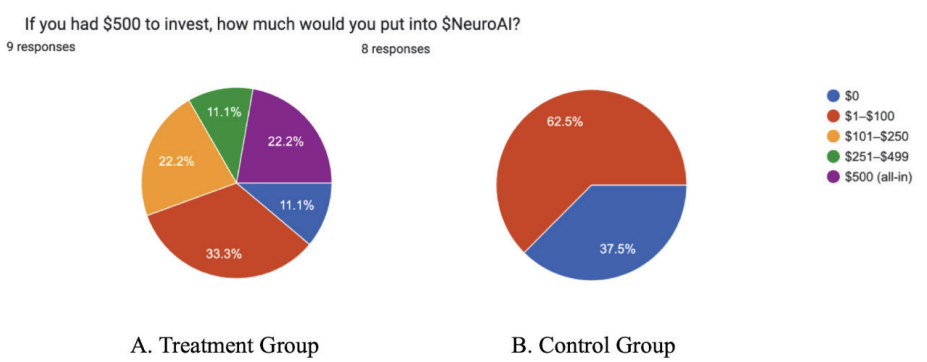


Figure 5. Hypothetical investment amount breakdown of treatment and control groups.

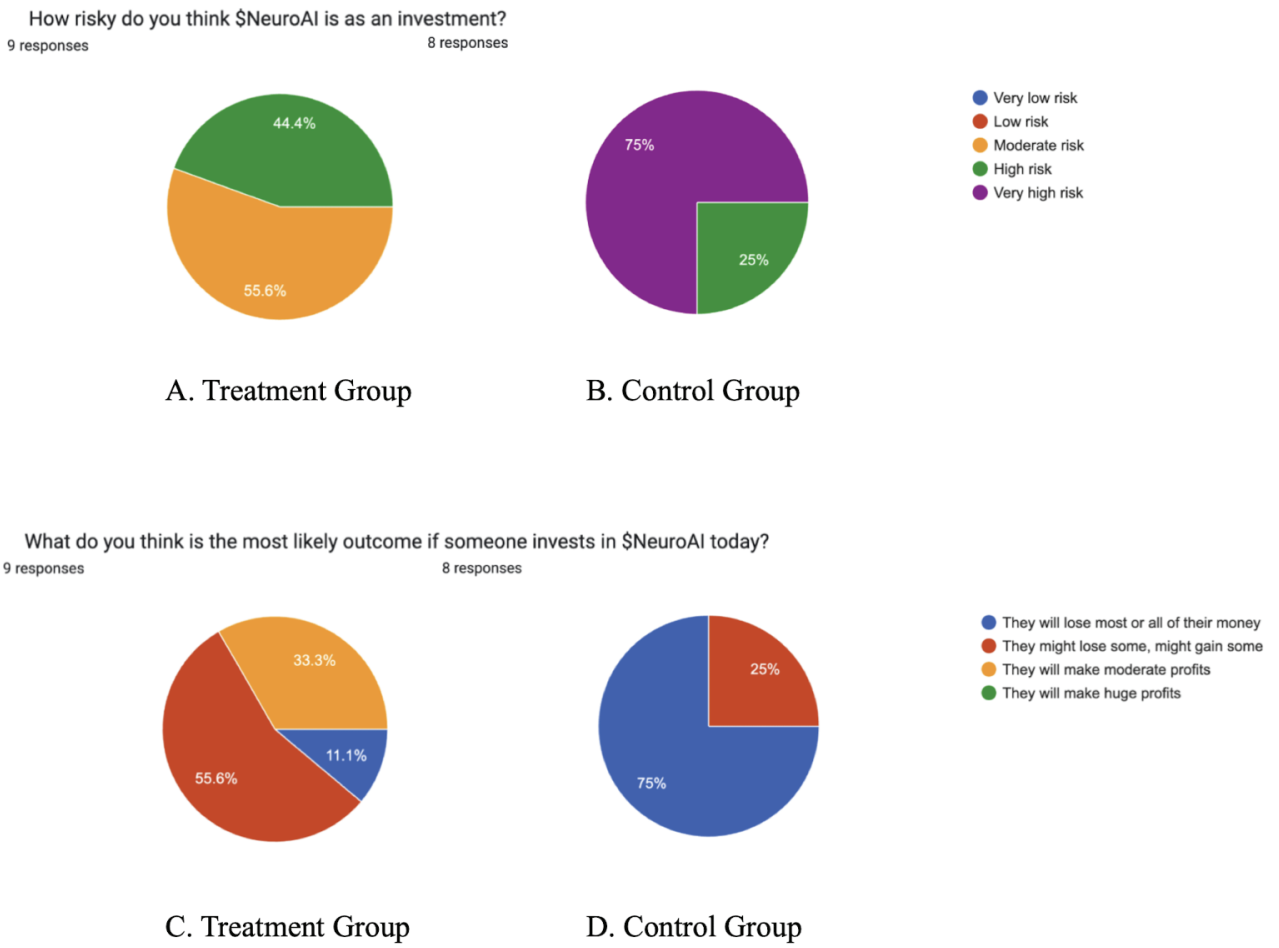


Figure 6. Perceived risk and expected outomes breakdown of treatment and control groups.

DISCUSSION

Interpretation and Theoretical Significance of RCT

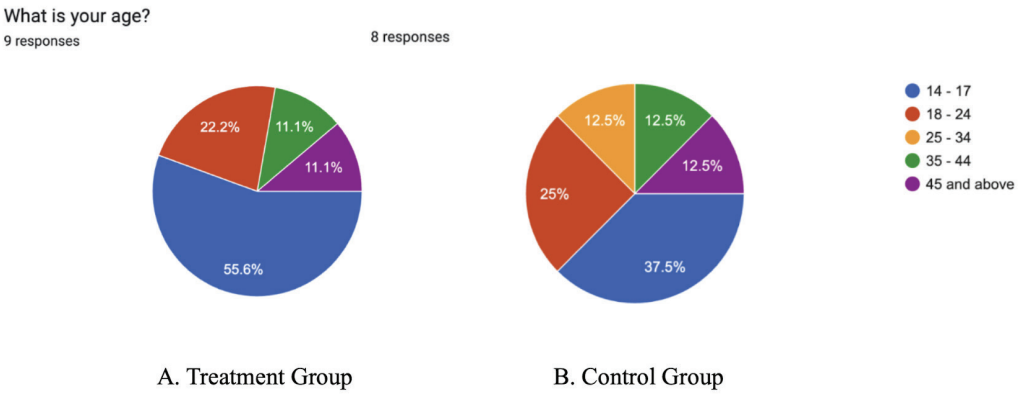
The RCT shows how even brief exposure to propaganda-style content can heavily impact financial decision-making. The token shown, $NeuroAI, was purely fictional and was described as having no utility. Yet, propaganda alone led participants to lower their perceived risk, increase their investment interest, and raise their profit expectations. These shifts demonstrate the behavioral influence of framing, narrative, and FOMO, aspects that prove to be crucial factors in the memecoin market. This also echoes broader concerns about retail investor vulnerability in unregulated crypto spaces where promotional content often substitutes for due diligence.

Age as a Factor in Susceptibility

In the RCT, age emerged as a vital variable in understanding how propaganda shapes investment behavior (Figure 7). Among the participants in the treatment group, 77.8% (7 out of 9) were under the age of 25 (Figure 7A). The largest subgroup, 55.6% (5/9), was high school-aged, between 14 and 17 years old. In contrast, only 25% (2 out of 8) of the control group fell into this 14-17 age range. Older age brackets (ages 35 and up) made up 22.2% of the treatment group and 37.5% of the control group.

These demographic differences came out with clear behavioral trends. Among the 14–17-year-olds in the treatment group, 80% indicated they were "moderately," "very," or "extremely" likely to invest in $NeuroAI. Not one of them rated the coin as "very high risk." By contrast, in the control group, 100% of participants aged 35 and older either selected "$0" or no more than "$100" in the hypothetical investment question, and 100% rated the coin as "very high risk."

Furthermore, only 11% of all treatment participants predicted that most or all of their investment would be



A. Treatment Group B. Control Group

Figure 7. Age breakdown of treatment and control groups.

lost, compared to 75% in the control group, most of whom were over 24. Meanwhile, 33% of the treatment group (3 of 9), all under 25, expected moderate profits, a projection not expressed by a single older respondent.

This skew suggests that younger investors not only responded more positively to hype but also made significantly riskier projections and larger hypothetical investments. These findings mirror broader demographic research on cryptocurrency participation. A 2023 Pew Research Center report found that 43% of men aged 18–29 have engaged with crypto markets, making them the most active demographic in the U.S. retail crypto space (12). Their motivations are often shaped by online culture, social influence, and meme-driven financial narratives rather than institutional research or long-term fundamentals.

This matters because the question of memecoin legitimacy cannot be independent of who is investing and why. The meme economy does not only distort value, rather it also redistributes financial risk to younger, less financially experienced individuals, often under the guise of accessibility and democratization.

Memecoins in the Regulatory Void: Legitimacy, Loopholes and Systemic Risks

Given the results shown thus far, particularly the strong influence of social sentiment on price action and the disproportionate susceptibility of young investors to propaganda-style content, it becomes clear that memecoins pose risks to consumers and the financial landscape at large. The evidence suggests that these assets can distort investor behavior, amplify financial misinformation, and normalize emotionally driven speculation. These factors allude to a broader challenge: how to regulate a financial space that is decentralized, fast-moving, and ingrained in digital culture.

The memecoin economy poses regulatory challenges, legitimacy issues, and systemic risks. It draws on public regulatory responses, case studies, and documented market behavior to explore how memecoins exist largely outside traditional financial oversight, the consequences of that gap, and how these dynamics undermine confidence in the cryptocurrency markets as a whole. It also evaluates how these unregulated conditions leave younger investors particularly exposed to risk.

Why Not Regulate Memecoins?

Despite their volatility, some may argue that memecoins do not need regulatory oversight. Proponents of this view often mention the principles of decentralization and individual autonomy. They may argue that memecoins are speculative assets — "akin to collectibles" as phrased by the U.S. Securities and Exchange Commission (SEC) — and that adults should be free to engage in potentially high-risk behavior without intervention (13). Others point out that overregulation could stifle innovation in a rapidly evolving Web3 economy, where creativity, humor, and community-driven finance play a central role.

Case for Regulation

However, these arguments lose weight when viewed in light of real-world consequences. Before presenting the core justifications for regulatory intervention, it is crucial to understand the current terrain, how memecoins operate outside institutional norms and regulatory frameworks.

The Legal Grey Zone. Despite memecoins' huge market capitalization and real-world financial impact, most memecoins operate in a regulatory grey zone. Unlike

traditional financial assets, like stocks or bonds, which have institutional oversight and backing, memecoins often lack formal disclosures, identifiable developers, and even federal oversight. This lack of clarity creates challenges in navigating an opaque and unregulated space.

In the United States, the SEC and U.S. Commodity Futures Trading Commission (CFTC) have struggled to categorize these tokens. The SEC has publicly stated that "neither meme coin purchasers nor holders are protected by the federal securities laws" (13). This means that unethical practices in the space—such as rug pulls (a form of exit scam where developers withdraw liquidity and abandon a project), market manipulation, and related schemes—are not subject to SEC oversight. While some crypto assets have been categorized as unregistered securities (e.g., Ripple's XRP), many memecoins, despite creating billions in market cap, are largely ignored.

This discrepancy reflects the lack of a comprehensive legal framework capable of adapting to unconventional, decentralized assets. Moreover, this regulatory inconsistency not only enables memecoin proliferation but also legitimizes ambiguity in digital finance.

Institutional Caution and Public Hype. The disconnect between institutional caution and retail euphoria is stark. The federal government and SEC remain distant from the world of memecoins, only implicitly cautioning investors by saying things such as:

- "Meme coins also typically have limited or no use or functionality... their value is driven primarily by market demand and speculation." (13)
- "Given the speculative nature of meme coins, they tend to experience significant market price volatility..." (13)
- "Accordingly, neither meme coin purchasers nor holders are protected by the federal securities laws." (13)
- "In this regard, meme coins are akin to collectibles." (13)
- "Fraudulent conduct related to the offer and sale of meme coins may be subject to enforcement action..." (13)

Evidently, the SEC suggests proceeding with caution and explicitly states that they do not regulate memecoins. Yet, these gestures have little effect in a digital culture where hype outpaces caution. In these environments, regulation is often reactive, not preventive. Meanwhile, exchanges list memecoins rapidly to capitalize on trading volume and social momentum, despite offering little in terms of investor disclosures or protections. This creates a feedback loop: social sentiment drives attention (see section 3), which justifies exchange listings, which then creates a sense of legitimacy on fundamentally weak or opaque tokens. Rather than the federal government or the SEC acting as gatekeepers of legitimacy, platforms often reinforce speculative momentum. The implication is not only that memecoins bypass institutional oversight, but that they reveal a vulnerability in the broader financial infrastructure, where legitimacy can be fabricated by attention rather than earned through transparency or utility.

Implications of an Unregulated Market

These background conditions lay the foundations for the following sections to offer the clearest rationale for why regulation is not just advisable, but necessary.

Contamination and the Crisis of Legitimacy. Firstly, the lack of regulation means that memecoins are not just a regulatory issue, but they are a credibility issue for the entire crypto ecosystem. As their market share grows, they blur the line between serious blockchain innovation and speculative gambling. When meme-based tokens dominate trending charts and news coverage, they drag down the perceived legitimacy of even technically sound projects.

This creates a contamination effect: retail investors become disappointed after losses, while institutional players grow more skeptical of crypto as an asset class. This double disaffection weakens the connection between mainstream finance and decentralized innovation. Memecoins thus contribute to a broader legitimacy crisis.

A case study that exhibits this notion is $LIBRA, which was launched by Argentina's government in early 2025. The coin was promoted by President Javier Milei as a symbol of economic independence and digital modernization. Within 48 hours of launch, the coin reportedly reached a peak market capitalization of approximately $4.6 billion. However, the price rapidly collapsed by over 94%, erasing more than $4.4 billion in market value and prompting widespread accusations of a "rug pull" (14). Research from Nansen, a reputable blockchain analytics firm known for its on-chain data intelligence, estimated that approximately 86% of retail traders lost money, with total investor losses surpassing $251 million (15). Political fallout was swift: opposition parties accused the Milei administration of enabling or facilitating market manipulation, and public outrage deepened after the government abruptly disbanded a special investigative committee that had been established to review the scandal (16).

Instead of creating a sense of trust in crypto-backed innovation, the $LIBRA incident intensified public skepticism. In a poll conducted by a major Argentine news outlet shortly after the event, over 60% of respondents said they were less likely to invest in *any* cryptocurrency in the future, even those not connected to the government (17). These scandals show how a lack of legitimacy in turn can contaminate perceptions of the broader crypto ecosystem, reinforcing the idea that memecoin-style volatility and manipulation are endemic to the space, even when these assets carry institutional or national backing.

Ultimately, the contamination effect displays that memecoins do not exist in isolation. Their volatility, manipulation, and collapse seep into public perceptions of crypto more broadly, fortifying the idea that there only exists a very fine line between innovation and exploitation. This blurring of lines is what threatens the long-term credibility of the crypto space and intensifies calls for regulatory intervention.

Legal Loopholes and Unchecked Manipulation. Additionally, the lack of regulation makes the memecoin space a perfect space for manipulation and murky practices. Common schemes include:

- Pump and dumps: Coordinated efforts to artificially inflate the price through hype before mass-selling.
- Insider trading: Developers or early holders using privileged access to time market exits.
- Rug pulls: Developers vanish after extracting liquidity, leaving latecomers with worthless tokens.

Cases that use such exploitative techniques often go unpunished due to the lack of oversight by the SEC. Moreover, because many coins are projects that are decentralized or based in offshore jurisdictions, victims have limited or no legal recourse. In traditional finance, similar actions would prompt lawsuits, investigations, or regulatory sanctions. In memecoin markets, they are often dismissed as part of the game.

This regulatory vacuum rewards opacity and discourages transparency, creating an environment where retail investors are structurally disadvantaged.

Challenges to Economic Theories of Value

Traditional economic theories of asset valuation rely on the idea that price reflects expected future cash flows, earnings, or utility. Assets like stocks are priced based on dividend potential, earnings reports, and prospects. Memecoins, by contrast, offer none of these.

Most memecoins have no whitepapers, roadmaps, utility, or sometimes even websites. Their appeal is almost entirely narrative, built through memes, tweets, and viral videos. In this context, value becomes detached from substance and linked to sentiment. This poses a direct challenge to classical models like discounted cash flow (DCF) or risk-adjusted return frameworks, which depend on rational expectations and measurable fundamentals.

The sentiment analysis conducted in this paper supports this break from economic theories of value. By collecting top posts on X containing "$PEPE" or "PEPE," analyzing their sentiment using a large language model, and tracking price responses, I find strong correlations between social mood and price action. Essentially, price responds not to earnings or future cash flows, but to emotional appeal and viral energy. Our randomized controlled trial further supports this: 100% of participants acknowledged that social media influenced their investment decisions, with one-third saying it affected them "quite a bit."

These findings suggest that attention, rather than value, is the principal factor in the memecoin economy. When paired with algorithmic AMM trading, shallow liquidity, and the absence of regulatory guardrails, a single viral post can lead to a vicious cycle: price rise, then optimism spreads, bullish posts increase, new buyers enter, and prices rise again.

In this way, memecoins expose the fragility of classical economic assumptions when applied to decentralized and narrative-driven assets. They raise urgent questions about what "value" means in a world where a tweet can drive millions of dollars in capital movements, and where the primary investor motivation is not belief in utility, but belief in virality.

CONCLUSION

Memecoins have evolved to be a momentous and increasingly consequential asset in financial markets. This paper aims to investigate the extent to which memecoin price movements follow social sentiment trends, and how their hype-driven volatility challenges traditional economic theory, investor behavior, and regulatory oversight. Through my social sentiment analysis and randomized controlled trial (RCT), the findings confirm that memecoins are primarily driven by narrative and emotional appeal, not by fundamentals. Furthermore, the RCT study reveals that these dynamics have a disproportionate influence on younger investors, who should increase investment interest and decrease risk perception when exposed to promotional content.

Moreover, the unregulated nature of the memecoin

economy presents broader systemic risks, from public disillusionment to market manipulation and institutional distrust. Case studies like Argentina's $LIBRA coin show how credibility collapses can contaminate trust across the broader cryptocurrency ecosystem. These outcomes reinforce the case for regulation, not as a constraint on innovation but as a safeguard for legitimacy, transparency, and investor protection.

To mitigate the risks posed by memecoins, several actionable measures should be considered. Regulatory bodies may require exchanges to issue disclaimers or implement listing standards for tokens that lack clear fundamentals. Investor education, particularly among youth, should be incorporated into school curricula and online financial platforms to improve literacy in high-risk environments. Technological interventions, such as AI-powered risk detection tools that flag deceptive behavior or identify tokens with pump-and-dump characteristics, could provide real-time warnings to retail investors. Together, these approaches create a more transparent and responsible digital asset space.

Future research should expand the scale and scope of the experimental methodology. A larger, demographically diverse RCT sample could help verify age-related susceptibility patterns and other individual differences. Additional sentiment analysis across platforms like TikTok, Discord, and Telegram would provide a more comprehensive understanding of how social sentiment drives price movements. Finally, more targeted policy analysis, with specific regulatory proposals, could help identify effective models for governing memecoins in a decentralized financial environment.

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DECLARATION OF CONFLICT OF INTEREST

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