Consumer Cryptocurrency Confidence Index (c3i) Consumer Cryptocurrency Confidence Report 2024

"Tracking Crypto Diffusions Between Markets and Politics"

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1. Overview

In our endeavor to grasp the driving forces behind cryptocurrency prices, we have developed the Consumer Cryptocurrency Confidence Index (c3i), derived from a set of questions asked monthly to consumers across the United States.

In our analyses documented in the first report (Fritze et al. 2024; "Consumer Cryptocurrency Confidence Report 2023") we have introduced the c3i, its long-term relation with crypto prices, and uncovered heterogeneity in consumer attitudes and behaviors towards crypto.

In particular, we have found **strong correlations between the c3i and cryptocurrency prices**, particularly for leading coins like Bitcoin and Ethereum. Additionally, **we've observed demographic differences**, for instance, with men generally expressing more confidence in cryptocurrencies compared to women. Notably, over **one-third of participants reported owning cryptocurrencies**. Despite recognizing the volatility of cryptocurrencies, we recognized a prevailing perception of their prominence as a potential online payment method among consumers.

Building on the baseline results and the additional year of data we've collected, **this year's report** expands upon the insights derived from our analyses and ongoing research projects. Specifically, it focuses on **crypto ownership** and adoption, while also **incorporating political perspectives** to inform consumers, managers, and public policy on the evolving crypto landscape.

Looking ahead, our research projects currently focus on three main areas. Firstly, we are rigorously validating to what extent the c3i can accurately predict changes in cryptocurrency prices by exploring whether this relationship is merely correlation or potentially causal. Furthermore, we are delving into the determinants of trust within the cryptocurrency ecosystem, using both survey data and experiments. Finally, we are investigating the factors that either facilitate or hinder the adoption of cryptocurrencies as viable mediums of exchange and stores of value, and in turn explore how crypto economics disseminate into main stream business.

Through these research efforts, our aim is to offer valuable insights into the intricate relationship between consumer sentiment, market dynamics, and the evolving landscape of cryptocurrencies, including insights into the broader domain of blockchain-based markets and goods.

2. Team

The initiative, led by Wharton Professors Dave Reibstein, John Zhang, Cait Lamberton and Visiting Professor Martin Paul Fritze of LMU (Germany), views the c3i as crucial link between conventional financial analysis and the real-life experiences of consumers, which are central to management and marketing research.

This is the first index specifically designed to capture consumers' perceptions of and comfort with the cryptocurrency. The measure, called the "Consumer Cryptocurrency Confidence Index," or Wharton c3i, was **launched in January 2023**, and since then is collected every month.



Martin P. Fritze is Professor of Marketing at Ludwig Maximilian University of Munich (Germany).

Professor Fritze research focus lies on understanding consumer behavior. He applies philosophy to explore the meaning of materiality in a digitized world.



Cait Lamberton is the Alberto I Duran Presidential Distinguished Professor of Marketing at Wharton School and co-editor of the Journal of Marketing.

Professor Lamberton's research is primary in consumer behavior, with particular interests in the sharing economy and marketplace dignity.



David Reibstein is the William S. Woodside Professor and Professor of Marketing, at the Wharton School, University of Pennsylvania.

Professor Reibstein's research focuses on branding, nation branding, marketing metrics, product line decisions, and competitive marketing strategies, among other issues.



John Zhang is currently a Professor of Marketing and Tsai Wan-Tsai Professor at the Wharton School of the University of Pennsylvania.

Professor Zhang's research focuses on pricing strategies, channel management, CRM strategies, luxury goods, and cryptopricing. Professor Zhang has published over 60 articles in many areas of marketing.

The researchers thank **Analytics at Wharton**, the **Mack Institute for Innovation Management**, and the **Wharton Behavioral Lab** at The Wharton School, University of Pennsylvania, for providing support, grants and funds to this project and making it possible.

3. Methodology

Agenda

"There is a great deal of research about the financial markets' response to cryptocurrency," notes Reibstein. "We also know a good amount about attitudes of institutional investors, as captured by organizations like Binance Research. However, **aside from single-shot surveys, we know very little about how consumers** – the people who will ultimately determine whether crypto becomes a commonly-used tool in the market – view cryptocurrency, or how these perceptions change over time."

Along with measures of confidence in cryptocurrency, **modeled after the Michigan Consumer Sentiment Index**, the survey also captures a range of consumer perceptions and beliefs about crypto. For example, the survey tracks consumers' thinking about cryptocurrencies compared to other currencies, whether they perceive them as short-term speculations, or whether they see them as longer-term investments. Further, the index tracks consumers' willingness to use cryptocurrency in various types of marketplace interactions, from payment to donation.

The **longitudinal nature of the survey** is also intended to help researchers and practitioners better understand factors that may shift consumers' confidence in cryptocurrency. "A lot has been said about cryptocurrencies by a lot of people, but we must **delve deeper to truly understand the implications crypto economics have for consumers, businesses, and politics**," said Fritze. As major events in the marketplace as a whole unfold, the researchers hope to see whether cryptocurrency confidence may be a leading or lagging indicator of other economic measures. Future collaborations with Analytics at Wharton, Zhang says, may be critical in tapping this aspect of the data.

The team's <u>webpage</u>, **hosted by the Mack Institute**, will offer snapshots of key indicators as they change over time, articles, interviews as well as opportunities for researchers and practitioners to submit queries for consideration in subsequent index administrations. Beyond these baseline results they will release annual reports and post research papers on specific insights derived from the data collections.

"Ideally," Lamberton says, "we are able to **create a community** that cares not only about crypto as a monetary innovation, but also as a remarkably promising laboratory. Crypto may offer us the opportunity to understand new forms of trust, consumer behaviors that have not previously been examined, and the way that perceptions and uses for a new technology can evolve over time."

3. Methodology Data Collection Overview

Since January 2023 we have collect a **monthly convenience sample** of at least N=1000 from US Prolific workers (participants 18 years and over). For January-June 2023 for each data collection wave we excluded all potential participants from the pool that participated in one of the previous waves (e.g., for March participants from January and February cannot participate).

Starting from July 2023, we only exclude participants from the wave before (e.g., for July participants from June cannot participate). Consequently, our sample design allows participants to participate in multiple waves, so the data sets of each wave consist partly of new and old participants. Similar sample design approaches are also used by other indices such as the University of Michigan Consumer Sentiment Index.

Prior to analysis, we exclude duplicate IPs (IP stands for "Internet Protocol, a unique address that identifies a device on the internet or a local network) per wave from our sample to reduce the risk of bots and fraudulent answers (Waggoner et al. 2019).

For reporting our **nationally representative** results we employ US representative sample weighting (i.e., post-stratification; Valliant 1993) based on the following variables obtained from the US Census Bureau (www.census.gov): Age, gender, and region (as of July 1, 2022). After calculating individual weights for each variable, they are multiplied to get a final weight variable that adjusts for all the categories simultaneously.

We were only able to obtain quotas for male or female, and as a result, our samples do not include representations for other gender identities. We acknowledge the importance of diverse gender categorizations and aim to address this limitation in future data collection efforts.

For analyses that refer to the full sample (all participants of data collections from January 2023-December 2024) we either report the "gross" (g) sample ($N_g \approx 28,000$), which includes all participants from all waves. Note that for the gross sample, post-stratification has been applied for each wave of data collection individually and hence the gross sample includes duplicate participants according to our sampling approach. The g-sample is reported in all longitudinal results.

For the "net" (n) sample we additionally exclude answers from duplicate IPs after merging the data of all individual waves to exclude answers from participants that in more than one wave of data collection. The n-sample only includes unique responses and post-stratification was applied to the whole sample ($N_n \approx 16,500$. The net sample helps to gain a better cross-sectional understanding of crypto acceptance and adoption.

Based on N_a and N_s , the sampling carry-over rate is approximately 40% (= N_s/N_a).

3. Methodology

Key Indicator and Metrics

A four-item measure* forms our key index, the c3i. Participants were asked to indicate their answers on 1 to 7 scales:

- (1) Now think about the future. If someone asked you to predict the future, how would you say the value of cryptocurrency will change over the next year? (1- definitely decrease; 7- definitely increase)**
- (2) Now think about business conditions in the country as a whole. Do you think that during the next 12 months cryptocurrencies will become more important or less important in business? (1- definitely less important; 7-definitely more important)
- (3) Which would you say is more likely in the next five years—that cryptocurrencies will become more important, or less important for the economy as a whole? (1- definitely less important; 7-definitely more important)
- (4) Generally speaking, do you think now is a good or bad time for people to buy cryptocurrencies? (1- very bad time; 7-very good time)
- * In our 2023 report, we only listed three of the four items

We formed an index out of these items by taking their average.

Besides our core index c3i and core set of questions on (e.g., Do you currently own any cryptocurrencies yourself?"; no/yes), we constantly refine and update our survey. This includes personal questions like participants' self-assessed socioeconomic status (adopted from Kraus et al. 2010). More Central to the theme of this report, we have included questions pertaining to political conviction:

- Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal (left) to extremely conservative (right). Where would you place yourself on this scale? (1-extremely liberal; 7-extremely conservative)
- Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else? (Republican, Democrat, Independent, Other: _____, No preference)

^{**} For waves 1-2 the item was anchored with 1- no change at all/ stays the same; 7-big change

3. Methodology

Key Indicator and Metrics

One recent discussion on cryptocurrencies revolves around regulation and how consumers view them. Therefore, we asked them to categorize cryptocurrencies, for instance, with the following question:

- Put cryptocurrencies into the category that you think is most appropriate (by dragging cryptocurrencies in the respective box):
 - Long-term investments (e.g., like stocks or bonds)
 - Currencies (e.g., like Dollar or Euro)
 - Payment modes (e.g., like Paypal or Credit Card)
 - Other (please also describe below)

We also asked participants to indicate the extent to which they would feel comfortable using them for payments online and offline.

Regarding regulations, we asked participants whether they want regulations:

• Would you like to see more federal laws or regulations on cryptocurrencies? (1-definitely no; 7-definitely yes)

Our survey also includes questions about trust, for example regarding central institutions:

- To what extent do you trust the following institutions... (1-not at all; 7-very much)
 - ...the SEC (United States Securities and Exchange Commission)?
 - ...the FED (Federal Reserve)?

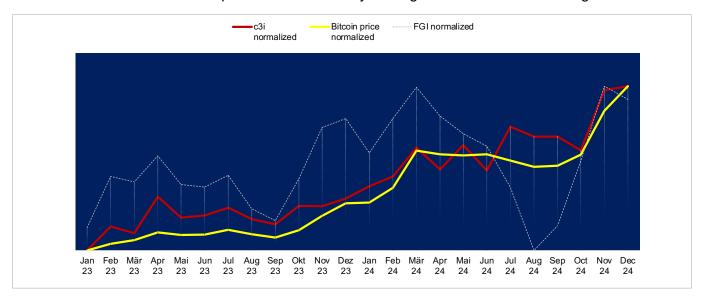
In the latest waves (November and December 2024), we included items to explore to what extent people think the recent political changes in the US will affect the crypto prices:

- To what extent do you believe the US president has an influence on cryptocurrency prices? (1-Not at all; 7-Very much)
- How do you think Trump's election has influenced Bitcoin prices? (1- Very negative; 7-Very positive)

4. The Consumer Cryptocurrency Confidence Index (c3i)

Longitudinal Overview (Ng)

We conducted **analyses of our index against the major cryptocurrency Bitcoin**. As depicted below, the normalized data of the nationally representative c3i index and Bitcoin prices for the monthly averages reveal concurrent longitudinal trends:

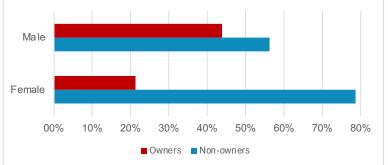


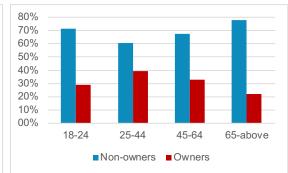
In this graph, we also benchmark our c3i against another existing crypto index, namely the <u>Fear & Greed Index for Bitcoin</u> (FGI). This index aims to reflect crypto market sentiment, but it does not rely on capturing consumer responses through surveys. Instead, it reflects a combination of social media chatter, volatility, and market volume.

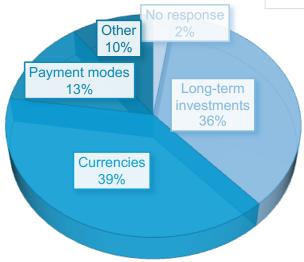
The illustrations and further analyses suggest that our c3i more closely captures crypto price movements than this alternative sentiment index, emphasizing the **importance of directly capturing consumer sentiment**.

5. Who Ownes Cryptos? What Do Consumer Think Cryptos Are? (N.)

As documented in last year's report, around one-third of all participants indicated that they owned cryptocurrency (32.2%). Breaking this down into subgroups by gender and age, we find that men and consumers aged 25-44 are the most represented among crypto owners.





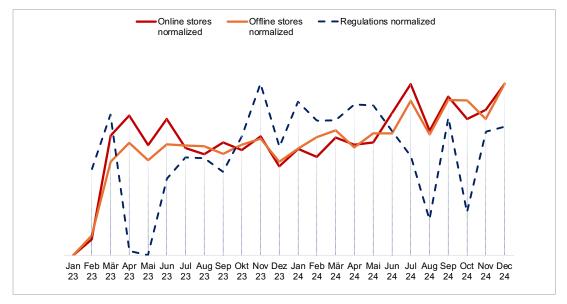


Interestingly, the majority of consumers overall perceive cryptocurrencies as currencies, which we find noteworthy given the ongoing controversy surrounding their role as alternative currencies without government backing rather than purely speculative investments (Zhang 2013). However, we also identified a relationship between consumers' perceptions of cryptocurrencies and their ownership status. Among crypto owners, the most frequently mentioned category was long-term investments, with 49.5% identifying cryptocurrencies in this way. In contrast, non-owners most commonly (42.4%) described cryptocurrencies as currencies, viewing them primarily as a medium of exchange. This distinction suggests that ownership status may shape, or be shaped by, differing perspectives on the primary purpose of cryptocurrencies.

6. Crypto Payments and Regulations (Na)

Connected to consumers' perceptions of what cryptocurrencies are, we also observe over time that consumers increasingly believe cryptocurrencies are accepted in online and offline stores, which appears to be linked to their long-term desire for cryptocurrency regulation*:

*We started to collect this question in the second wave (as of February 2023).



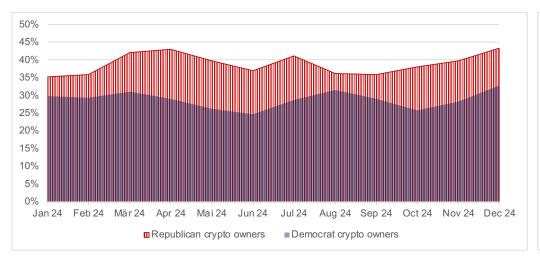
In January 2023, participants indicated that they think around 15.52% (5.05%) of online (offline) stores accept crypto. This number increased to 25.13% (14.09%) in December 2024. While consumers' desire for regulations peaked in November 2023, it bounced back again to a relatively high level towards the end of 2024. This glimpse into the longitudinal relationship between crypto usage and the need for regulations warrants further investigation.

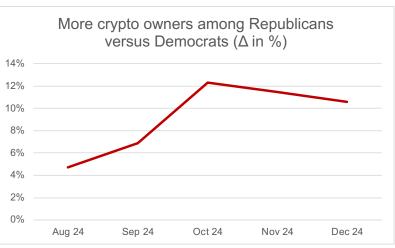
7. Crypto Politics (Nn)

In our recent Knowledge at Wharton article, we outlined how political convictions influence consumer confidence and acceptance of cryptocurrencies. Specifically, we find that as political conservatism increases, so does confidence in cryptocurrency.

Additionally, here we observe that as political conservatism rises, so does the belief that the president influences cryptocurrency prices. Notably, Republicans, compared to Democrats, perceive Trump's election as having a more positive impact on crypto prices while simultaneously expressing lower levels of trust in central institutions like the SEC or FED.

Interestingly, as illustrated below (N_g), we also observe a **gap between Democrats and Republicans in crypto ownership**, which trends toward the end of 2024 and aligns with Donald Trump's election and inauguration as the 47th president:





8. Summary and Conclusions

In our first report (Fritze et al. 2024), we observed a **rising trend in confidence in cryptocurrencies**, despite ongoing volatility and lingering skepticism. After another year of data collection, we can **confirm this trend**. Not only does our index exhibit a strong longitudinal correlation with Bitcoin prices, but it also outperforms other indices in tracking these developments. Moreover, we find growing confidence in crypto reflected in increasing ownership rates and expanding use cases, both online and offline.

Based on these results, we anticipate a continued rise in confidence regarding the mainstream applications of cryptocurrencies, particularly given the emergence of new Blockchain-based innovations such as in the context of Non-fungible Tokens (Fritze et al. 2025). We will closely monitor how these trends influence volatility across different cryptocurrencies (Koutmos 2018) and the potential spillover effects between NFTs and crypto prices (Dowling 2022).

Interestingly, while cryptocurrencies are fundamentally built on decentralized principles, our initial findings on the intersection of crypto and politics suggest that consumer confidence may increasingly be shaped by interventions from centralized actors. This is illustrated, for example, by the perceived impact of Trump's election on crypto prices. Such developments could, over time, challenge the foundational trust in cryptocurrencies as an alternative system of exchange and value storage. It remains to be seen whether and how crypto markets will adapt.

In line with our previous findings, we expect these shifts to drive heterogeneity among crypto owners, reflecting differing motivations for participating in crypto markets (Vomberg & Von Gegerfelt 2025). Consequently, the future trajectory of crypto markets may move beyond the traditional debate over whether these assets can function as money (Ammous 2018). Instead, it may increasingly hinge on consumer belief in cryptocurrencies' ability to sustain a decentralized and secure system for asset storage and circulation.

9. References

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