

Fostering Government-backed Fintech Adoption: Empirical Insights for Policymakers

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Abstract

Central bank digital currency (CBDC) proponents argue that it holds significant potential to enhance financial inclusion in historically underserved regions such as sub-Saharan Africa and to facilitate international remittance flows across national borders. Beyond these benefits, CBDCs are increasingly recognized as strategic tools for enhancing national competitiveness by improving payment efficiency, strengthening digital financial systems, and fostering innovation within financial ecosystems. Consequently, interest in CBDC has surged in the post-pandemic era. However, empirical understanding of the key factors influencing CBDC adoption remains limited, particularly in emerging African economies. Drawing on Resource Matching Theory, this study investigates the determinants of CBDC acceptability using data from 464 potential adopters in Ghana, where successful CBDC pilot projects have been completed. The study employs partial least squares structural equation modelling (PLS-SEM) to examine the influence of CBDC awareness, subjective norms, and subjective well-being on CBDC acceptability, as well as the moderating role of risk aversion. The results indicate that all three factors significantly and positively influence CBDC acceptability, with awareness emerging as the strongest predictor. Furthermore, risk aversion weakens the positive relationship between subjective well-being and CBDC acceptability. These findings contribute to the literature by extending CBDC adoption research to the African context and by highlighting the importance of behavioural and psychological factors. From a policy perspective, the results provide actionable insights for promoting CBDC adoption and enhancing digital and financial competitiveness in emerging economies.

Keywords: Central bank digital currency (CBDC); publicity campaigns; subjective norms; resource matching theory (RMT); risk aversion; subjective well-being

JEL Classification: E42, E58, G20, O16, O33

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1. Introduction

The introduction of central bank digital currency (CBDC), a digital form of fiat money has gained increasing attention among policymakers and scholars due to its potential to enhance financial inclusion, improve monetary policy transmission, and stimulate innovation in payment systems (Auer et al., 2022; Ozturkcan et al., 2022; The World Bank, 2021). More importantly, CBDCs are increasingly viewed as strategic tools for enhancing national competitiveness by improving payment efficiency (financial competitiveness), strengthening

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digital infrastructure and cashless ecosystems (digital competitiveness), and fostering innovation in financial technologies and services (innovation ecosystems). In this regard, countries that successfully implement CBDC may gain a competitive advantage in the global digital economy

This underscores the importance of studying this technological advancement within economic contexts, such as in Ghana, where successful pilot projects on CBDC have been completed (Bank of Ghana, 2023), to fully understand its implications. Notably, the existing research on CBDC in Ghana is limited, primarily focusing on conceptual comparisons of design frameworks between eCedi and eNaira (Ahiabenu, 2022). Consequently, there is a lack of empirical evidence on the behavioural determinants that drive CBDC adoption and their implications for competitiveness in the Ghanaian context.

In contrast, this study adopts a novel approach by borrowing insights from the resource matching theoretical perspective (Anand & Sternthal, 1989) to propose key determinants that are likely to influence the early adoption rate of CBDC in Ghana, as measured by CBDC acceptability. By doing so, this study contributes to understanding how individuals allocate cognitive and psychological resources when engaging with emerging financial technologies, with implications for digital and financial competitiveness. Additionally, our research diverges from previous CBDC adoption studies (Liu et al., 2022; Ogunmola & Das, 2024; Osakwe et al., 2025; Sandhu et al., 2023) by explicitly addressing two crucial empirical questions for the first time:

- i) What is the relationship between subjective well-being, subjective norms, publicity campaigns (proxied by CBDC awareness) and CBDC adoption?
- ii) How does risk aversion moderate these relationships?

By investigating these questions within the socioeconomic landscape of Ghana, and by extension, the wider African continent, our study enriches the expanding empirical literature concerning CBDC adoption determinants. Notably, we introduce concepts such as subjective well-being and risk aversion into this research domain, thereby broadening its scope. Furthermore, our investigation directly responds to the call from scholars (Ogunmola & Das, 2024; Osakwe et al., 2025; Sandhu et al., 2023; Tronnier et al., 2023) for additional exploratory studies on CBDC adoption. This collective effort aims to gain deeper insights into the diverse critical factors influencing CBDC adoption across various regions worldwide. Our study stands out as one of the pioneering endeavours in Africa, particularly within the Ghanaian context, where the central bank has successfully concluded its CBDC pilot project.

Finally, the remainder of this paper is structured as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 outlines the research methodology. Section 4 presents the empirical results. Section 5 discusses the findings and their theoretical and policy implications. Section 6 presents the study's implications. Section 7 concludes the study. Finally, Section 8 outlines the limitations and directions for future research.

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2. Research foundation and hypotheses

To address the above questions, these authors have borrowed insights from the resource matching theoretical perspective and the research strand on risk aversion. According to Anand and Sternthal (1990), the Resource Matching Theory (RMT) places a strong emphasis on maximizing the user's cognitive resources, such as their task-specific knowledge and effort, in order to improve task completion. Depending on the research circumstance, this theoretical framework's situational constructs change. The current study examines constructs found in previous RMT implementations, especially those pertinent to last-mile delivery, to guarantee alignment with RMT from a consumer standpoint (Koh et al., 2024). Resource matching theory (RMT) posits that consumers possess limited resources to process information or complete tasks effectively (Anand & Sternthal, 1989). More broadly, RMT serves as a motivational framework aimed at elucidating how individuals pursue efficient outcomes by strategically allocating resources in accordance with the required effort for task completion (see also Deitz et al., 2009; Huhmann, 2017).

Building on the research context regarding CBDC adoption, the discussion highlights that awareness is a critical factor influencing initial adoption. This is supported by Kwon et al. (2022), who argue that awareness campaigns are essential for addressing economic concerns like tax evasion and inflation by mitigating misconceptions about CBDCs. Additionally, Wang and Hausken (2022) emphasize the role of understanding household decision-making, suggesting that well-structured awareness efforts can effectively target diverse demographic groups. Consistent with these perspectives, empirical findings by Kim et al. (2022) and Liu et al. (2022) demonstrate that awareness fosters interest in CBDCs, indicating that informed individuals are more likely to adopt such technologies. Consequently, this analysis underscores the hypothesis that CBDC awareness significantly enhances its early adoption by equipping individuals with the requisite knowledge to make informed decisions. This awareness, supported by targeted campaigns, is crucial for transitioning potential users into actual adopters. Accordingly, leading to the following hypothesis:

H1: CBDC awareness positively relates with CBDC acceptability.

Furthermore, an essential sociological and psychological resource that behavioral researchers have consistently found crucial for the early adoption of new technologies such as CBDC is subjective norms (Banerjee & Pradhan, 2022; Osakwe et al., 2022). Subjective norms, a facet of social contagion, indicate the extent to which individuals conform to the influences of their social networks, including family and peers. It is speculated, therefore, that individuals who strongly believe that members of their inner social network expect and support their use of CBDC will have a more positive response towards the acceptance and utilization of CBDC. Hence, the hypothesis below:

H2: Subjective norms positively relate with CBDC acceptability.

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According to Diener et al. (1999), an individual with subjective well-being is characterized as being "blessed with a positive temperament, tends to look on the bright side of things, and does not ruminate excessively about bad events, has social confidants, and possesses adequate resources for making progress toward valued goals" (p. 295). Accordingly, we emphasize the significance of subjective well-being in influencing the early adoption rate of CBDC. Research indicates that individuals exhibiting elevated positive emotions and overall life satisfaction are generally more receptive to adopting both new and established technologies (Purohit et al., 2022). Additionally, studies in other fields reinforce the idea that subjective well-being serves as a crucial internal resource for shaping behavioural intentions (e.g., Kim et al., 2020). Consequently, it is posited that in environments characterized by resource constraints like Ghana, individuals with higher levels of subjective well-being are likely to exhibit a more favourable response to the early adoption of CBDC compared to those with lower levels of subjective well-being. This forms the basis of the hypothesis outlined below:

H3: Subjective well-being positively relates with CBDC acceptability.

Risk aversion, defined as a stable trait at the individual level, signifies a "preference for a guaranteed outcome over a probabilistic one having an equal expected value" (Qualls & Puto, 1989, p. 180). Risk-averse individuals typically exhibit heightened anxiety in response to uncertainty, manifesting a greater preference for predictability (Filbeck et al., 2005; Sharma, 2010). In the realm of new technologies, several studies have explored the moderating impact of risk aversion, and findings in this regard have been mixed (cf. Amor & Yahia, 2022; Lee & Hyun, 2016; Tzeng & Shiu, 2019). However, to date, no study has explored the plausible scenario in which the effects proposed in H1, H2, and H3 are weakened when potential adopters of CBDC show increased risk aversion. This necessitates formulating the following hypothesis:

H4a: Risk aversion weakens the relationship between CBDC awareness and CBDC acceptability.

H4b: Risk aversion weakens the relationship between subjective norms and CBDC acceptability.

H4c: Risk aversion weakens the relationship between subjective well-being and CBDC acceptability.

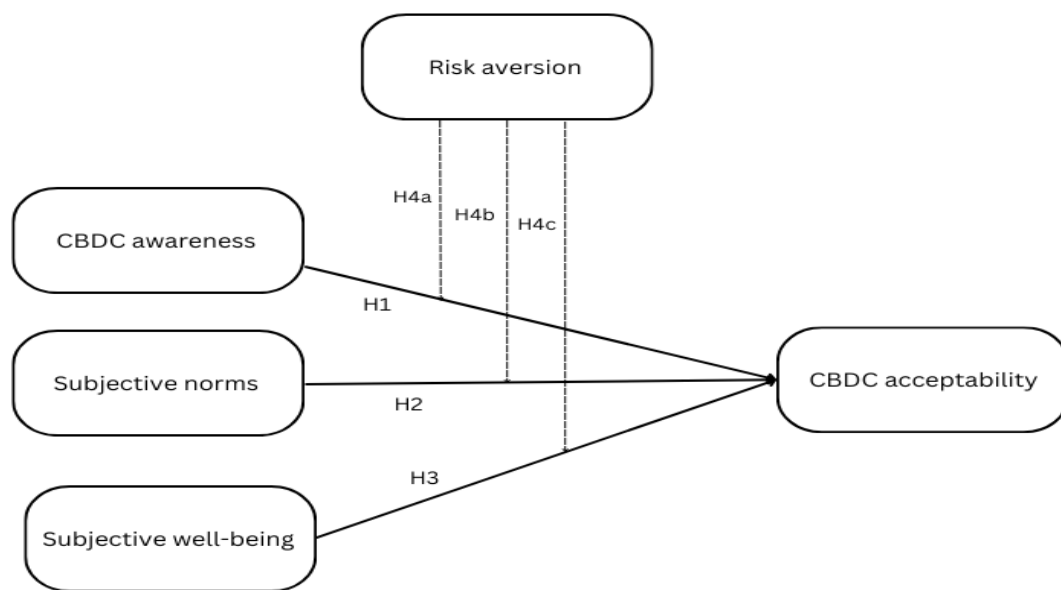


Figure 1: Conceptual framework. (Source: Author’s own)

3. Research Method and Data Analysis

The present study adopts a positivist approach and employs a survey method to empirically test the proposed hypotheses. Data were collected from a sample of 501 respondents using a street-intercept sampling approach in Accra, the administrative and economic capital of Ghana. This non-probability sampling technique enabled the recruitment of participants from diverse demographic backgrounds, thereby enhancing the heterogeneity and practical representativeness of the sample. Respondents were approached in public areas such as commercial centers, transportation hubs, and marketplaces, ensuring the inclusion of individuals with varying socio-economic characteristics. This approach is consistent with prior studies conducted in Africa and other regions (Choi et al., 2013; David-West et al., 2023; Mogaji & Uzundu, 2022; Phonthanukitithaworn et al., 2020) and has been shown to be effective in capturing diverse consumer perspectives (Graham et al., 2014). The data collection process was carried out between February and March 2024. A total of 37 responses were excluded from the final analysis due to failure to meet the study’s participation criteria. Specifically, responses were removed if they were incomplete, failed the attention-check question embedded in the questionnaire, or did not meet the inclusion requirements.

Although a street-intercept approach does not guarantee full statistical representativeness, efforts were made to enhance sample diversity by collecting data across different locations and times of day. The final sample reflects a broad cross-section of respondents in terms of age, gender, and socio-economic background, making it suitable for examining CBDC adoption behavior in the Ghanaian context.

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The final sample size of 464 exceeds the minimum recommended thresholds for structural equation modelling. Prior studies suggest a minimum of 200 observations (Boomsma, 1982; Curran et al., 2003; Hoyle, 1995; Kline, 2016). Additionally, using Green’s (1991) formula ($50 + 8K$, where K is the number of predictors), the required sample size for this study is 82; thus, the current sample size exceeds this requirement by a substantial margin.

The questionnaire employed a 7-point Likert scale for all measurement items, ranging from 1 = “extremely unlikely (strongly disagree)” to 7 = “extremely likely (strongly agree),” except for demographic variables. All measurement items were adapted from prior validated studies. Details of the constructs and their sources are provided in Appendix Table 1.

Hypotheses were tested using partial least squares structural equation modelling (PLS-SEM) due to its robustness in modelling complex relationships such as moderation and mediation effects (Chakma & Dhir, 2023; Fang et al., 2022; Kozhakhmet et al., 2024; Osei & Rasoolimanesh, 2024; Prisco et al., 2022; Sabol et al., 2023). The measurement model was evaluated following established PLS-SEM guidelines (Hair et al., 2019). Indicator reliability was assessed using outer loadings, with values above 0.70 considered acceptable. Internal consistency reliability was evaluated using composite reliability (CR), with a threshold of 0.70. Convergent validity was assessed using average variance extracted (AVE), where values above 0.50 indicate adequate validity. Moreover, PLS-SEM has been extensively deployed in research at the interface of information systems, public policy, and individuals (Osakwe et al., 2022, 2025; Kwarteng et al., 2024; Nsitful et al., 2023).

4. Results

4.1 Sample characteristics

Gender-wise, 60% of the research participants were males. Age-wise, 59% were between 18-24 years old, and 25% were between 25-34 years old, which is relatively representative of the young Ghanaian population. Additional information about the sample characteristics is shown in Table 1.

Table 1: Sample characteristics. (Source: Author’s own)

Characteristics	Frequency (n=464)	Percentage
Gender		
Female	166	36
Male	278	60
Undisclosed	20	4
Age		
18-24	276	59
25 – 34	115	25
35 – 44	43	9

45- 54	18	4
Over 54	12	3
Educational level		
Junior high school or below	11	2
High school	164	35
Diploma/HND	71	15
Bachelor	189	41
Masters or above	29	6
Bank account ownership		
No	97	21
Yes	367	79

4.2 Common Method Bias assessment

In assessing common method bias (CMB), both ex-ante and ex-post measures were employed throughout the research design and data analysis phases. Specifically, respondents were assured of the confidentiality of their responses and informed that there were no inherently correct or incorrect answers to the questions posed. Various anchors were employed in structuring the questionnaire to ensure clarity and brevity of items. Participation was voluntary, and respondents were not financially incentivized. Furthermore, we adhered to recommendations outlined in the PLS-SEM literature by Kock and Lynn (2012). With variance inflation factors (VIFs) below the stringent benchmark of 3.0, concerns regarding CMB were alleviated. Moreover, none of the correlation coefficients between latent variables exceeded 0.9 (cf. Bagozzi et al., 1991; Chuah et al., 2017), further diminishing concerns regarding CMB. Finally, Harman’s unrotated one-factor test was employed to detect indications of CMB, revealing that the first factor explained only 37.09% of the variance in the dataset (<50%), providing additional reassurance that CMB was not a significant issue.

4.3 Measurement model assessment

In line with PLS-SEM literature (Hair et al., 2019), we evaluated the psychometric properties of the scales using indicator outer loadings, composite reliability (CR), and average variance extracted (AVE). Notably, the minimum reported outer loading was 0.723, surpassing the recommended threshold of 0.7 in the literature. Moreover, all CR and AVE values met the recommended criteria of ≥ 0.7 and ≥ 0.5 , respectively (see Table 2). Additionally, the discriminant validity of the constructs has been confirmed through the HTMT test (Henseler et al., 2015), suggesting therefore that all the study constructs can be sufficiently differentiated from one another by our research respondents (Table 3).

Table 2: Measurement model results. (Source: Author’s own)

Measures	Item	Loadings	CR	AVE
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CBDC Acceptability (ACP)	ACP: I am willing to adopt e-Cedi in the future	0.901	0.944	0.807
	ACP2: I am willing to use e-Cedi as a means of payment for purchases in the future.	0.898		
	ACP3: I plan to adopt e-Cedi for my daily purchases.	0.899		
	ACP4: I intend to use e-Cedi for product purchases in the future.	0.895		
CBDC Awareness (AWR)	AWR1: I believe that e-Cedi needs more awareness in Ghana.	0.841	0.895	0.740
	AWR2: I am aware that e-Cedi will be a means of payment in the future.	0.909		
	AWR3: The need for e-Cedi is increasing.	0.829		
Risk Aversion (RAV)	RAV1: I prefer a routine way of life to an unpredictable one full of change.	0.853	0.827	0.705
	RAV2: I would not describe myself as a risk-taker.	Item dropped due to low loading		
	RAV3: I do not like taking too many chances to avoid making a mistake.	Item dropped due to low loading		
	RAV4: I am very cautious about how I spend my money.	0.825		
Subjective Norms (SNO)	SNO1: My family and friends would support that I use e-Cedi	0.938	0.824	0.704
	SNO2: People who are close to me may influence my decision to use e-Cedi.	0.728		
Subjective Well-being (SWB)	SWB1: In most ways, my life is close to my ideal.	0.736	0.862	0.611
	SWB2: The conditions of my life are excellent.	0.865		
	SWB3: I am satisfied with my life.	0.794		
	SWB4: So far, I have gotten the important things I want in life.	0.723		

Regarding discriminant validity, the HTMT results presented in Table 3 show that all values are below the recommended threshold of 0.85 (Henseler et al., 2015). This indicates that each construct is empirically distinct from the others. For instance, the highest HTMT value (0.649 between CBDC awareness and CBDC acceptability) remains well below the critical threshold, further confirming satisfactory discriminant validity.

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Overall, the results from Tables 2 and 3 provide strong evidence that the measurement model is reliable and valid, thereby supporting the suitability of the constructs for subsequent structural model analysis.

Table 3: Discriminate validity (HTMT ratio) results. (Source: Author’s own)

Variables	1	2	3	4	5
1. CBDC Acceptability					
2. Risk Aversion	0.315				
3. Subjective Well-being	0.399	0.444			
4. CBDC Awareness	0.649	0.411	0.436		
5. Subjective Norms	0.521	0.507	0.361	0.495	

4.4 Structural model assessment and hypothesis testing

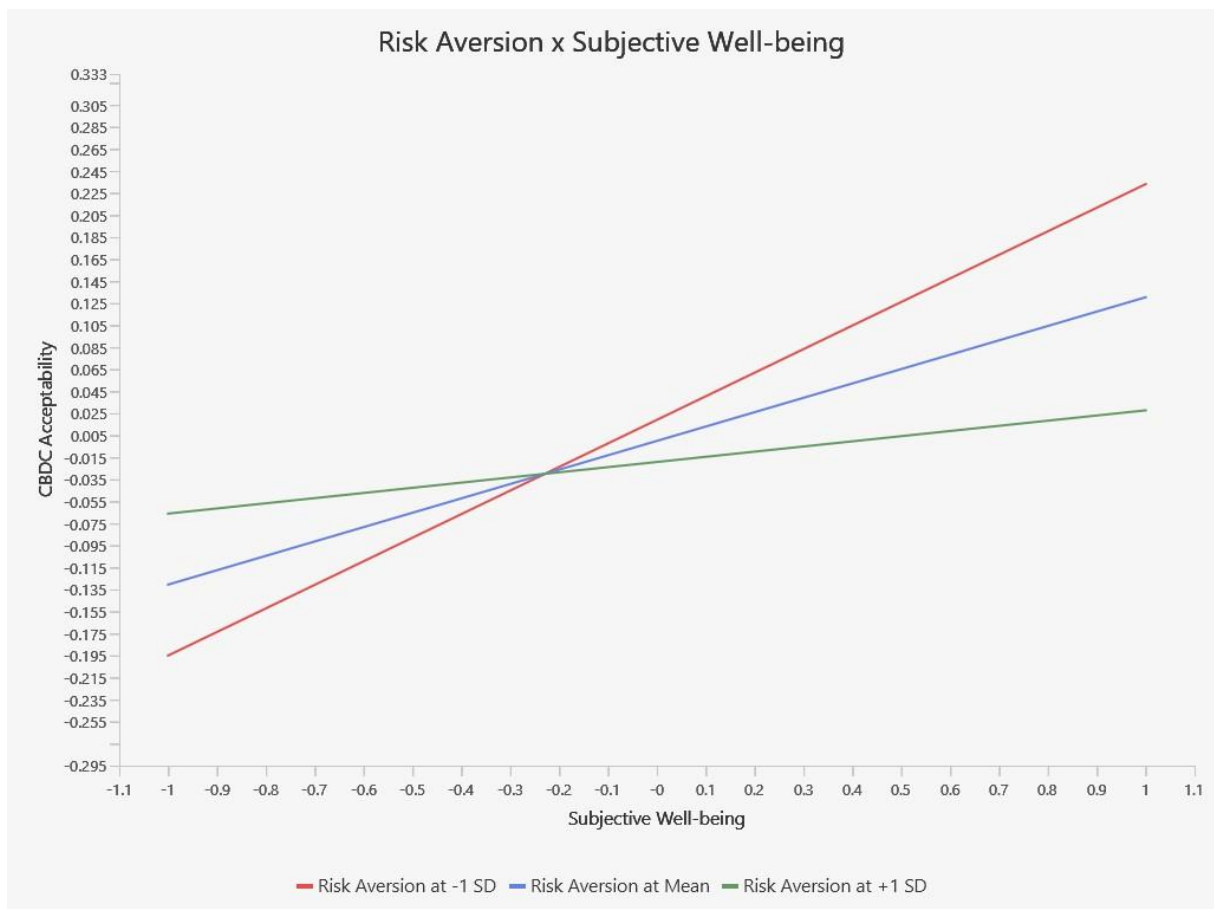
The SRMR (Standardized Root Mean Square Residual) value of 0.069 indicates a good fit between the model and the observed data, falling below the suggested cut-off of 0.08. Our structural model exhibits no collinearity concerns, as indicated by variance inflation factors (VIF) that were well below the threshold of <5 (Table 4).

Additionally, our empirical model explains approximately 40% of the variance in CBDC acceptability. Table 1 demonstrates that CBDC awareness, subjective norms, and well-being all exhibit significant and positive relationships with CBDC acceptability, providing empirical support for H1-H3.

Table 4: Hypothesis test results. (Source: Author’s own)

Proposed Relationships	β	<i>p</i> -value	f^2	VIF	Significance
H1: CBDC Awareness \square CBDC Acceptability	0.410	0.000	0.202	1.380	Yes
H2: Subjective Norms \square CBDC Acceptability	0.226	0.000	0.065	1.294	Yes
H3: Subjective Well-being \square CBDC Acceptability	0.130	0.002	0.022	1.380	Yes
H4a: CBDC Awareness \times Risk Aversion \square CBDC Acceptability	-0.019	0.729	0.001	1.829	No
H4b: Subjective Norms \times Risk Aversion \square CBDC Acceptability	0.031	0.537	0.001	1.566	No
H4c: Subjective Well-being \times Risk Aversion \square CBDC Acceptability	-0.084	0.045	0.011	1.493	Yes
Model explanatory power (R^2) = 39.7%					

Finally, our findings only partially support H4, revealing that while the positive



relationship between subjective well-being and CBDC acceptability is ameliorated under high levels of risk aversion (see Figure 1), risk aversion does not significantly moderate the relationships between CBDC awareness, subjective norms, and CBDC acceptability.

Figure 1: Interaction plot showing moderating effect of risk aversion on subjective well-being and CBDC acceptability. (Source: Author’s own)

5. General Discussion

This study examined the determinants of CBDC acceptability using data from 464 potential adopters in Ghana. The findings provide strong empirical support for the proposed model, particularly highlighting the roles of CBDC awareness, subjective norms, and subjective well-being in shaping individuals’ acceptance of CBDC.

First, the results confirm that CBDC awareness has a significant positive effect on CBDC acceptability, supporting H1. Notably, awareness emerged as the strongest predictor in the model, suggesting that individuals who are more informed about CBDC are more likely to adopt it. This finding is consistent with prior studies conducted in India (Ogunmola & Das, 2024), China (Liu et al., 2022), and South Korea (Kim et al., 2022), which emphasize the

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critical role of awareness in reducing uncertainty and enhancing adoption intentions. From a Resource Matching Theory (RMT) perspective, increased awareness reduces cognitive effort required to understand CBDC, thereby facilitating decision-making. Practically, this underscores the importance of large-scale public education and awareness campaigns by policymakers. From a competitiveness perspective, improved awareness can accelerate CBDC adoption, thereby enhancing payment efficiency and strengthening the digital financial ecosystem, which are key drivers of financial and digital competitiveness.

Second, subjective norms were found to significantly and positively influence CBDC acceptability, supporting H2. This finding indicates that social influence plays a crucial role in shaping individuals' adoption decisions. Empirically, this aligns with prior research (Banerjee & Pradhan, 2022; Osakwe et al., 2022), which highlights the importance of peer and social network effects in fintech adoption. In socially interconnected contexts such as Ghana, leveraging community leaders and social networks can accelerate CBDC adoption, thereby supporting the development of inclusive digital financial systems and enhancing national competitiveness.

Third, the results demonstrate that subjective well-being significantly enhances CBDC acceptability, supporting H3. This suggests that individuals with higher life satisfaction and positive emotional states are more open to adopting new financial technologies. This finding is consistent with prior research (Purohit et al., 2022; Kim et al., 2020), which shows that well-being positively influences behavioral intentions. Importantly, this study extends the CBDC literature by identifying subjective well-being as a novel determinant of adoption. From an RMT perspective, individuals with higher well-being may possess greater psychological resources, enabling them to engage more confidently with new technologies. This highlights the broader role of socio-economic development in facilitating digital financial inclusion.

Similarly, like Amor and Yahia (2022), whose findings on the moderating role of risk aversion in the relationship between perceived ease of use and trust were inconclusive, our research also provides inconclusive evidence regarding the moderating role of risk aversion in the relationships between CBDC awareness, subjective norms, and CBDC acceptability. These findings collectively suggest that while risk aversion significantly weakens the relationship between individuals' subjective well-being and CBDC acceptability in our research context, it is insufficient to undermine the positive relationship between, for example, CBDC awareness and the acceptability of this digital currency. This implies that while psychological barriers such as risk aversion may hinder adoption to some extent, strong awareness and social influence mechanisms can sustain CBDC uptake, thereby supporting broader digital transformation and competitiveness goals.

From an international perspective, CBDC adoption exhibits notable differences across countries, shaped by institutional, technological, and behavioural factors. In China, the development and adoption of the digital yuan (e-CNY) have been largely driven by strong state-led digital infrastructure, government coordination, and integration with existing mobile payment ecosystems (Dong et al., 2024). In contrast, India's CBDC initiatives emphasize

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financial inclusion and digital literacy, where awareness and user readiness play a critical role in adoption (Bhatnag,2025). Similarly, Nigeria’s eNaira one of the first operational CBDCs in Africa-has faced challenges related to low adoption rates, limited public trust, and inadequate user engagement despite early implementation (Ozili, 2023). Compared to these contexts, our findings suggest that in Ghana, behavioural factors such as awareness, social influence, and subjective well-being are particularly influential in shaping CBDC acceptability. These cross-country differences highlight that while technological infrastructure and policy support are important, behavioural and socio-economic factors remain critical drivers of CBDC adoption, especially in emerging economies.

Altogether, our study significantly contributes to the expansion of knowledge regarding the determinants of CBDC acceptability. Unlike previous research, which primarily focused on select Asian countries such as India (Ogunmola & Das, 2024; Sandhu et al., 2023), China (Liu et al., 2022), and South Korea (Kim et al., 2022), our study fills a notable gap by empirically investigating the critical factors influencing CBDC acceptability in Ghana and by extension the African region. This research endeavour is particularly significant given the potential of CBDC introduction to enhance financial inclusion and facilitate cross-border trade throughout the African continent.

Finally, we note that this study represents the first attempt to apply the theoretical framework of RMT to the CBDC domain, expanding its scope beyond previous applications by Anand and Sternthal (1989), Deitz et al. (2009), and Huhmann (2017). This novel perspective offers the research community an alternative approach to understanding the determinants of CBDC acceptability, complementing existing frameworks utilized in prior CBDC adoption research (Liu et al., 2022; Ogunmola & Das, 2024; Sandhu et al., 2023). By linking RMT with CBDC adoption, this study also contributes to understanding how cognitive and psychological resource allocation influences innovation uptake and, ultimately, national competitiveness in the digital economy.

6. Implication

This research enhances the developing literature on Central Bank Digital Currency (CBDC) adoption by incorporating perspectives from resource matching theory (RMT) and behavioral economics. This research enhances existing theoretical frameworks by elucidating the influence of publicity campaigns, subjective norms, and subjective well-being on CBDC acceptance, highlighting the significance of socio-behavioral factors in the adoption of financial technology. Furthermore, the moderating effect of risk aversion introduces a new aspect, emphasizing the intricate interactions between individual traits and economic as well as psychological factors that influence adoption behaviors. These findings provide a basis for future research to investigate the intersections of technology, societal attitudes, and financial behavior, especially in contexts characterized by differing levels of financial infrastructure and trust in central authorities.

Policymakers seeking to enhance CBDC adoption, particularly in underbanked regions like sub-Saharan Africa, can leverage these findings to develop effective strategies. Publicity campaigns should emphasize awareness by rectifying misconceptions and showcasing the benefits of CBDCs, such as the facilitation of cross-border remittances and the improvement of financial inclusion. Furthermore, leveraging subjective norms through community influencers and esteemed institutions can improve acceptance among potential adopters. Implementing strategic measures to alleviate risk aversion, such as enhancing the perceived security and reliability of CBDCs, is crucial for converting interest into concrete action. Ultimately, policies linking CBDC adoption to improvements in subjective well-being, such as enhanced financial security and reduced transaction costs, can facilitate early adoption and broader acceptance in resource-constrained settings.

7. Concluding Remarks

The primary objective of this study was to enhance understanding of the factors influencing the early adoption of CBDC, with a particular focus on CBDC awareness, subjective well-being, subjective norms, and the moderating impact of risk aversion on CBDC acceptability. Our findings revealed that CBDC awareness, indicative of the effectiveness of CBDC publicity campaigns, emerged as the most influential predictor of CBDC acceptability, followed by subjective norms and well-being. Additionally, we observed that the positive correlation between subjective well-being and CBDC acceptability is notably attenuated, particularly among individuals with high levels of risk aversion. As underscored previously, policymakers in Ghana and beyond should take heed of these findings, alongside insights from other scholars such as Kim et al. (2022), Liu et al. (2022), Ogunmola and Das (2024) and Osakwe et al. (2025), when formulating CBDC rollout strategies.

Beyond these empirical insights, the findings highlight the broader role of CBDC adoption in enhancing financial system efficiency, supporting digital innovation, and strengthening national competitiveness. By facilitating faster, more secure, and inclusive payment systems, CBDCs can contribute to the development of resilient digital financial ecosystems in emerging economies. Overall, CBDC adoption can serve as a catalyst for enhancing Ghana's competitiveness in the global digital economy.

8. Limitation and future research

This study is subject to several limitations. First, the use of a non-probability street-intercept sampling approach may limit the generalizability of the findings beyond the study context. Second, the focus on Ghana constrains the applicability of the results to other countries with different institutional, cultural, and economic environments. Third, the cross-sectional nature of the data limits the ability to draw causal inferences or capture changes in CBDC adoption behaviour over time.

Future research should address these limitations by conducting cross-country comparative studies to examine how CBDC adoption varies across different economic and regulatory contexts. In particular, comparisons with countries such as China, India, or Nigeria

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could provide valuable global insights. Additionally, longitudinal research designs would help capture how adoption behaviours evolve as CBDC systems mature. Finally, future studies could incorporate macroeconomic and competitiveness-related indicators, such as GDP growth, digital competitiveness indices, and financial inclusion metrics, to better link CBDC adoption with broader economic performance and national competitiveness.

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Appendix:

Table 1: Measures and corresponding items. (Source: Author’s own)

Construct	Items	Sources	
CBDC awareness	CA1: I believe that e-Cedi needs more awareness in Ghana. CA2: I am aware that e-Cedi will be a means of payment in the future. CA3: The need for e-Cedi is increasing.	Kim et al., (2022)	7-point Likert
Subjective norms	SN1: My family and friends would support that I use e-Cedi. SN2: People who are close to me may influence my decision to use e-Cedi.	Osakwe et al.,(2022)	7-point Likert
Subjective well being	SW1: In most ways, my life is close to my ideal. SW2: The conditions of my life are excellent. SW3: I am satisfied with my life. SW4: So far, I have gotten the important things I want in life.	Diener et al.,(1985)	7-point Likert
Risk aversion	RA1: I prefer a routine way of life to an unpredictable one full of change. RA2: I would not describe myself as a risk-taker. RA3: I do not like taking too many chances to avoid making a mistake. RA4: I am very cautious about how I spend my money.	Sharma, P. (2010).	7-point Likert
CBDC acceptability	CAC1: I am willing to adopt e-Cedi in the future. CAC2: I am willing to use e-Cedi as a means of payment for purchases in the future. CAC3: I plan to adopt e-Cedi for my daily purchases. CAC4: I intend to use e-Cedi for product purchases in the future.	Kim et al. (2022)	7-point Likert

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