

Research Article

Investment Decisions and the Effectiveness of Mobile Deposit Money Banking Agents in Nigeria

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Abstract

This study explores investment decision-making strategies employed by mobile money agents in Nigeria, with particular emphasis on the impact on agent capabilities and risk and uncertainty. The theoretical framework integrates transaction cost theory and the Modigliani-Miller theorem, highlighting the role of cost efficiency, financial structures, and market imperfections in shaping investment decisions. Using a descriptive research method and inferential analysis, data were collected via questionnaires from 60 mobile money agents in South-South Nigeria, with 49 valid responses analyzed using Pearson product movement correlation coefficient and aided with SPSS version 25.0. The findings from correlational analysis results suggest that investment decisions have positive and significant relationship with business effectiveness. Key findings reveal that risk and uncertainty significantly influence investment decisions, often prompting cautious behavior among agents. Additionally, the study underscores the importance of tools such as diversification, financial modeling, and scenario analysis in mitigating investment risks. In conclusion, mobile money banking agent should invest their resources or finance on any business venture that can help them accomplish their goals. The results further highlight that factors such as risk tolerance, market conditions, and access to reliable information play pivotal roles in shaping investment strategies. The study concludes by recommending targeted training programs, improved access to financial resources, and strategic frameworks to help agents navigate the complexities of investment decision-making in dynamic and uncertain environments. The study gave useful perception of mobile money agents and why they should get the right knowledge and know how on how to manage finance as this will help them see reasons to invest more money on mobile money business. These findings contribute to the broader discourse on investment behavior, emphasizing the need for evidence-based approaches to enhance decision-making among mobile money agents.

Keywords

Investment Decision, Business Effectiveness, Agent Capabilities, Risk and Uncertainty

1. Introduction

In the contemporary global economy, investment decision has become a pivotal concern for organizations, including mobile money banking agents. Regardless of whether the business is small, medium, or large, the aspiration to channel

finances—often sourced through loans from family members, friends, sales of personal assets, or financial institutions—into ventures that yields favorable returns remains a key objective for mobile money business owners [23]. Supporting

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this view, Oladipupo [44], define investment as current expenditures made with the expectation of future gains. These authors emphasize that global policies governing investment decisions are often shaped by international organizations such as the World Bank, African Development Bank, and the European Commission [59].

Emerging developments in financial management have sparked renewed interest in determining the optimal forms of investment for organizations [1]. Investments are made with the dual purpose of generating profits and fostering the growth that aligns with shareholder and stakeholder expectations [22]. Dong, and Yang [19] argued that the decision to invest depends significantly on the anticipated profitability of a venture and the availability of financing options. However, unlike earlier subjective approaches, modern investment strategies are heavily influenced by economic forecasting and risk analysis, emphasizing the importance of objective assessments even in uncertain scenarios [35].

Risk and uncertainty play a central role in economic decision-making. According to Sam [54], decision-making under uncertainty involves evaluating the availability of information, interpreting potential risks, and making informed judgments about future outcomes. While theories and empirical analysis provide frameworks for understanding and mitigating risks, their application often depends on the decision-maker's ability to synthesize and adapt these insights to real-world conditions [17]. The rationale behind this study is to explore why mobile money agents often hesitate to invest substantial funds into their businesses. The objectives include evaluating the investment decision-making approaches of mobile money agents, examining the impact of risk and uncertainty on their decision-making processes.

Debates surrounding investment decisions have yielded conflicting findings. For instance, studies such as that by He & Estébanez [25] on the dynamic relationships between R&D investment and firm performance argue that such investments do not necessarily lead to increased sales. Conversely, findings by Sari [55] indicate that R&D expenditures positively impact a firm's financial performance. These divergent perspectives highlight the need for further investigation into the effects of investment decisions, particularly among mobile money agents in Nigeria. This study aims to contribute to the discourse by providing evidence-based insights into the investment behaviors of mobile money agents, focusing on the roles of risk and uncertainty, and agents capabilities in shaping these decisions.

Objectives

- 1) To identify the strategies and capabilities employed by mobile money agents in making investment decisions in Nigeria.
- 2) To explore how risk and uncertainty impact decision-making processes among mobile money agents in Nigeria.

Hypotheses

HO₁: There is no significant relationship between the

strategies and capabilities employed by mobile money agents in making investment decisions in Nigeria.

HO₂: Risk and uncertainty does not significant impact the decision-making processes of mobile money agents in Nigeria.

The reminder of this paper is organized as follows: section 2 briefly discuss both theoretical foundation and empirical evidence. In section 3, the data selection procedure and research methodology are outlined, meanwhile section 4 present our results and analysis. And section 5 summarizes and concludes the research.

1.1. Theoretical Foundations

The theories underpinning this study is the transaction cost theory and the Modigliani-Miller theory. Transaction cost theory posits that firms aim to expand in a cost-effective manner to ensure profitability. However, a significant challenge to achieving transaction efficiency is the uncertainty inherent in a firm's environment. According to Kosanović [29], uncertainty elevates transaction costs by increasing the expenses associated with research, information processing, and adaptation to changing conditions. This highlights the importance of mitigating uncertainties to enhance organizational efficiency.

The Modigliani-Miller theory argues that under perfect capital market conditions, the cost of investment remains the same regardless of the financing method chosen. This involves a matching approach, a conservative approach, or an aggressive approach. Tengerapena et al. [58] further emphasize that the Modigliani-Miller theorem suggests that the decision on the amount to invest is independent of the decision on how to finance the investment. The theory asserts that a firm's value remains unchanged regardless of whether the firm opts for bond issuance (leveraging), uses retained earnings, or raises funds through new equity [52]. However, according to Khan and Shoaib [28], market imperfections such as taxes, transaction costs, and information asymmetry challenge the applicability of this theorem in real-world scenarios, particularly in developing economies. These theories provide a foundational framework for analyzing investment decisions, highlighting the interplay between agent's capabilities and risk and uncertainty in the business environment.

1.2. Investment Decision

Investment involves allocating resources, typically money, with the expectation of future returns that exceed the initial outlay, accounting for inflation, opportunity costs, and associated risks [51]. This aligns with the perspective of Ndukwu, and Nwala [36], who emphasize that an investment requires careful consideration of its potential to yield returns that compensate for these factors. Similarly, Ochimana, et al. [41] argue that investment decisions require firms to allocate current assets to long-term ventures, anticipating a steady flow

of benefits over several years. This view complements the insights of Akinsulire, et al. [13], who highlights the need for businesses to adopt a strategic approach to investment planning.

Furthermore, Nwankwo et al. [39], stress the importance of understanding profitability and risks in investment planning. For instance, mobile money agents and other stakeholders in financial institutions often base their investment decisions on past profits and anticipated returns, provided they account for the costs of the investment and the uncertainties involved [15]. These authors underscore that a comprehensive assessment of risk, uncertainty, and financing costs is crucial in investment decision-making [47].

Investors evaluate the expected rate of profit against the cost of financing. When the anticipated profit margin sufficiently covers the risk level, it becomes rational to pursue the investment. This aligns with the findings of Adeyeye [5], who emphasize that investors consider opportunities such as independent projects, contingent projects, mutually exclusive projects, cost-reduction projects, expansion projects, and research and development initiatives. Investment decisions are influenced by both subjective and objective factors [62]. Subjectively, an investor's perception of risk, familiarity with advanced techniques, and personal expectations is a significant role [2]. Objectively, however, factors such as pay-off periods, financing costs, and projected returns guide investment choices. Arhinful et al. [14] agree that understanding the pay-off period of a project is essential for investors to make informed decisions regarding their expenditures.

Business Effectiveness

The effectiveness of mobile money agent businesses has become a critical factor in expanding financial inclusion, especially in underserved and remote areas [8]. These agents act as intermediaries between financial institutions and end-users, providing essential services such as cash deposits, withdrawals, and money transfers. Their effectiveness is examined through operational efficiency, customer satisfaction, service reach, and profitability. Haruna, and Dibal, [24] highlight their contribution to promoting financial inclusion by offering accessible services to unbanked populations. By eliminating the need for customers to visit physical bank branches, mobile money agents enhance convenience, particularly in rural and peri-urban areas. Agu, et al. [10] points out that streamlined processes, such as digitized transactions and robust agent networks, reduce turnaround times and improve service delivery.

Additionally, business model often allows for scalability, enabling agents to adapt to increasing demand and expand their service offerings [42]. Diversification, such as adding bill payments and micro-lending services, further enhances their value proposition. Madueke and Eyupoglu [31] suggest that prompt and reliable service delivery fosters trust and loyalty among clients. This loyalty translates into increased transaction volumes and repeat business, contributing to higher profitability.

Challenges to Business Effectiveness

Mobile money agents' businesses face significant challenges. One major issue is operational risk, including fraud, security breaches, and technical downtime [49]. Ikenna [26] argue that these risks undermine customer trust and results in financial losses. Additionally, inadequate capital limits agents' ability to expand their operations or offer high-value transactions, reducing their competitiveness [9]. Nneji [38] notes that fluctuating government policies, such as changes in transaction fees or agent commissions, create uncertainties that disrupts business operations. Furthermore, agents often face stiff competition from other financial service providers, including banks and fintech companies, which offer more attractive pricing or advanced digital platforms [20]. This gap necessitates continuous education and awareness campaigns which is resource-intensive.

Strategies for Making Investment Decisions

Investment decision-making involves adopting strategies that optimize returns while mitigating risks. Structured strategies argue that systematic approaches, such as diversification, risk assessment, and financial modeling, enable investors to make informed choices that enhance profitability [63]. Adem, [3] emphasize that diversification involves spreading investments across various assets or sectors, minimizes the impact of adverse events on a single investment. Similarly, Ogunbiyi [43] highlights the use of financial modeling tools, such as discounted cash flow analysis and net present value (NPV) calculations, which allow investors to estimate future returns and compare alternative investment opportunities.

Another widely supported strategy is scenario analysis, which evaluates how different variables influence an investment's performance under various market conditions [7]. Majka [32] notes that scenario analysis helps investors prepare for uncertainties and enhances decision-making in volatile markets. Setyawan, et al. [56] argues that aligning investment decisions with broader organizational objectives ensures that resources are allocated effectively to achieve sustainable growth. On the other hand, Jiang, [27] note that strategies like diversification, while reducing risks, dilute potential gains if not implemented with careful consideration of market trends. Furthermore, Deep [18] contend that financial modeling tools rely on assumptions that do not hold true in unpredictable markets leading to inaccurate forecasts.

Factors that Influence Choice of Investment Strategies

Factors influencing the choice of investment strategies include risk tolerance, market conditions and the availability of information [60]. Investors with high-risk tolerance adopts aggressive strategies, such as leveraging or investing in high-risk assets. Conversely, risk-averse investors prefer conservative approaches, such as fixed-income securities or blue-chip stocks [61]. Market conditions also play a pivotal role, volatile markets prompt the adoption of risk mitigation strategies, while stable markets encourage bolder investments. Moragudi [34] further emphasizes that the quality and timeliness of information significantly shape investment

choices, as accurate data enhances the ability to make well-informed decisions. Critics, however, argue that external factors, such as economic policies and global events override even the most carefully chosen strategies. The sudden policy shifts, such as changes in interest rates or taxation renders investment strategies ineffective. Moreover, behavioral biases, including overconfidence and herd mentality, lead investors to deviate from rational strategies [48].

How Risk and Uncertainty Impact Investment Decision-making Processes

Risk and uncertainty are inherent in decision-making processes, especially for mobile money agents who operate in dynamic and often unpredictable environments. Supporters of structured decision-making frameworks argue that understanding and addressing these factors enable agents to make informed choices, protect their investments and sustain profitability [33]. Yua & Temitope [63] emphasize that risk involves identifiable variables, such as market fluctuations and operational challenges that are measured and managed through effective planning. Uncertainty, however, pertains to unpredictable and immeasurable events such as sudden regulatory changes or technological disruptions which require more adaptive and flexible responses.

Risk and uncertainty influence decision-making by shaping agents' attitudes and behaviors. Risk-averse agents adopt conservative strategies, such as limiting investments to low-risk ventures, which results in missed opportunities for higher returns. Conversely, agents with a higher risk appetite pursue aggressive strategies, such as rapid expansion, which amplifies potential losses in volatile markets [30]. Behavioral factors, including overconfidence and risk perception biases, also play a significant role. Singh [57] argues that agents often overestimate their ability to control risks leading to suboptimal decisions. However, critics of risk mitigation strategies highlight that external factors, such as macroeconomic instability or sudden regulatory changes, undermines even the most carefully designed approaches. For instance, government policies affecting transaction limits or fees disrupt business models, leaving agents vulnerable despite their efforts to anticipate and plan for risks [50].

The Tools and Techniques Used to Manage and Mitigate Risks

Mobile money agents employ various tools and techniques to mitigate risks and uncertainties. For example, scenario analysis, which involves simulating potential future events, enables agents to anticipate challenges and devise contingency plans. Foguesatto, Righi & Müller [21] highlights the value of scenario analysis in preparing agents for economic downturns or shifts in consumer behavior. Additionally, diversification of services, such as offering complementary financial products, reduces dependency on a single revenue stream and minimizes exposure to specific risks [16]. Furthermore, risk assessment frameworks, such as the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis, help agents identify internal vulnerabilities and external

threats, enabling them to make strategic adjustments [4].

On the other hand, the tools and techniques used to manage risks and uncertainties does not always yield the desired outcomes. For instance, Sætra [53] notes that scenario analysis is based on assumptions that may not align with real-world developments, potentially leading to flawed strategies. Similarly, diversification, while reducing specific risks, dilute focus and operational efficiency if not carefully managed. Ajala, [12] caution that over-reliance on formal risk assessment tools lead to rigidity, hindering the ability to adapt quickly to unforeseen circumstances.

Empirical Review

Adigwe et al. [6] employed a mixed-methods approach, combining quantitative surveys with qualitative interviews of 250 mobile banking agents across five Nigerian states. Using regression modeling, the study found that investment decisions are strongly influenced by factors such as prior profitability, access to credit facilities, and risk perception. Agents who reinvested profits into expanding their operations—such as acquiring additional point-of-sale (POS) machines—reported a 35% increase in transaction volume and customer base within a year.

Nnaji [37] conducted a quantitative survey involving 400 mobile banking agents across urban and rural areas in South-East Nigeria. The study employed structural equation modeling (SEM) to explore the relationship between investment strategies and business effectiveness. Findings revealed a positive correlation between investments in customer-focused services, such as SMS alerts and microloans, and customer retention rates. Agents who diversified their service offerings experienced a 40% improvement in customer loyalty and a 25% increase in annual revenue.

Ahmed [11] utilized a longitudinal design to track the financial performance of 150 mobile banking agents over three years. The study revealed that agents who allocated funds to employee training and marketing consistently reported improved business outcomes. Specifically, those who invested at least 10% of their annual income in training observed a 20% rise in transaction accuracy and customer satisfaction, indicating the importance of capacity-building initiatives for business growth.

A case study by Olasunkanmi et al. [46] focused on 50 high-performing mobile banking agents in Lagos State. Through in-depth interviews and financial statement analysis, the study found that agents with clear investment strategies, such as upgrading technological infrastructure and diversifying service portfolios, significantly outperformed their peers. These agents achieved 30% higher profitability and 25% greater market reach. The findings also highlighted the risks associated with overinvestment in high-risk projects, with prudent financial management emerging as a critical factor in sustained success.

Obisesan [40] conducted a qualitative study involving focus group discussions with 100 mobile banking agents and stakeholders. The study revealed that insufficient invest-

ments in risk management tools were a significant challenge for many agents. However, agents who adopted digital fraud detection systems reported a 50% reduction in fraud-related losses, emphasizing the need for modern technological solutions to mitigate operational risks.

Olaniyi et al. [45] used a cross-sectional survey of 300 mobile banking agents in Northern Nigeria to identify predictors of investment effectiveness. Multivariate analysis showed that agents who invested in expanding their service coverage to rural areas experienced a 45% increase in daily transaction volumes. However, the study also highlighted challenges such as limited infrastructure and low financial literacy among rural customers, which hindered the full realization of investment benefits.

2. Methods

This article made use of descriptive research method and inferential technique to analyze its data. Information for the study was collected via questionnaire and the information was summed and analyzed with the help of Pearson Product Movement Correlation analysis and finally supported with SPSS version 25.0. This study was carried out in south-

south Nigeria on some mobile money banking agents. A total of 60 mobile money banking agents were given copies of questionnaires to respond to. A total 49 copies of questionnaire were retrieved from the mobile money agents and used for this analysis. The secondary data analysis was carried out using the Pearson Product Movement Correlation tool at a 95% confidence interval. Specifically, the tests cover hypotheses H_{O1} to H_{O2} which were bivariate and all stated in the null form. The 0.05 significance level is adopted as criterion for the probability of either accepting the null hypotheses at ($p > 0.05$) or rejecting the null hypotheses at ($p < 0.05$).

3. Findings

Result and Frequency Analysis

The analysis was conducted using primary data, focusing on the individual variables of the study to explore their inter-relationships and provide insights into their mutual influence. The Mean scores and standard deviations of each variable are illustrated. The presentation begins with the independent variable which is investment decisions. It then proceeds to the dependent variable of business effectiveness whose measures are agents' capabilities and risk and uncertainty.

Table 1. Response rates for investment decision.

| | Investment decisions | SA | A | N | D | SD | X | Std. |
|---|---|----|----|---|----|----|------|-------|
| 1 | An increment in revenue is an indication for a firm to increase her investment. | 12 | 10 | 9 | 10 | 8 | 2.86 | 1.470 |
| 2 | The cost of finance determine the type of investment that a firm invest in | 15 | 10 | 9 | 8 | 7 | 3.16 | 1.454 |

Source: Survey Data, 2025

Table 1 illustrates the response rates of investment decisions measured on a 2 item instrument and scaled on a 5-point Likert scale. From the data, the first question item shows a mean score of 2.96 which is on the moderate range

of the scale. The second question items with 3.16 mean scores indicates that the respondents are more inclined to the agree and responses are moderately distributed.

Table 2. Response rates for agent's capabilities.

| | Agent's capabilities | SA | A | N | D | SD | X | Std. |
|---|---|----|----|---|----|----|------|-------|
| 1 | A business with good expertise and experience will be successful. | 12 | 13 | 5 | 12 | 7 | 3.12 | 1.464 |
| 2 | A proficient training on business objectives promotes good performance. | 19 | 16 | 4 | 6 | 4 | 3.60 | 1.369 |
| 3 | To promote investment in local businesses /enterprises is good. | 18 | 17 | 2 | 12 | 5 | 3.42 | 1.419 |

SPSS 25.0 data Output, 2025

Table 2 illustrates the response rates for agent's capabilities measured on a 3-item instrument and scaled on a 5-point Likert scale. From the data, the first and second question items show a moderate mean scores of 3.26, and 3.42 respectively

while the third question item with a mean score of 3.60 illustrates that the respondents are more inclined to the agree range of the scale used in measurement.

Table 3. Descriptive statistics for the study variables.

| | N | Minimum | Maximum | Mean | Std. Deviation |
|------------------------|----|---------|---------|--------|----------------|
| Investment decisions | 49 | 1.00 | 5.00 | 3.1240 | 1.36516 |
| Business effectiveness | 49 | 1.44 | 5.00 | 3.2507 | 1.22773 |
| Valid N (listwise) | 49 | | | | |

Source: SPSS 25.0 data Output, 2025

The data in Table 3 illustrates the descriptive statistics summary for the study variables which are investment decisions and business effectiveness.

HO₁: There is no significant relationship between the strategies employed in making investment decisions and capabilities of the mobile money agents in Nigeria.

Table 4. Strategies for investment decision and agent capabilities.

| | | | Strategies of Investment Decision | Agents Capabilities |
|---------------------------------|-----------------------------------|-------------------------|-----------------------------------|---------------------|
| Pearson product Correlation (r) | Strategies of Investment Decision | Correlation Coefficient | 1.000 | .969** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 49 | 49 |
| | Agent's Capabilities | Correlation Coefficient | .926** | .968** |
| | | Sig. (2-tailed) | .000 | .000 |
| | | N | 49 | 49 |

SPSS 25.0 data Output, 2025

The analysis presented in Table 4 evaluates the relationship between the strategies employed in making investment decisions and the capabilities of mobile money agents in Nigeria. Pearson product correlation was used to test the hypothesis (H₀₁) that there is no significant relationship between these variables. The results, derived from SPSS 25.0, reveal a strong positive correlation ($r = 0.926^{**}$, $p = 0.000$), indicating a statistically significant association between the

strategies for investment decisions and agents' capabilities. With a p-value less than 0.01, the null hypothesis is rejected, demonstrating that these variables are significantly related. This emphasizes the critical role that agents' skills and competencies play in effective decision-making processes.

HO₂: Risk and uncertainty does not significant impact the decision-making processes of mobile money agents in Nigeria.

Table 5. Risk and uncertainty and decision making process.

| | | | Strategies of Investment Decision | Agents Capabilities |
|---------------------------------|-----------------------------------|-------------------------|-----------------------------------|---------------------|
| Pearson product Correlation (r) | Strategies of Investment Decision | Correlation Coefficient | 1.000 | .969** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 49 | 49 |

| | | Strategies of Investment Decision | Agents Capabilities |
|----------------------|-------------------------|-----------------------------------|---------------------|
| Agent's Capabilities | Correlation Coefficient | .926** | .968** |
| | Sig. (2-tailed) | .000 | .000 |
| | N | 49 | 49 |

SPSS 25.0 data Output, 2025

The results show a correlation coefficient of 0.926 with a p-value of 0.000, indicating that the capabilities of mobile money agents are closely linked to the strategies they employ in navigating risk and uncertainty. This suggests that as agents' skills and competencies improve, they become more effective in addressing risks and uncertainties in their decision-making processes. This highlights the critical role of robust investment strategies in enhancing agents' ability to manage challenging situations. The findings reject the null hypothesis (H_0) and confirm that risk and uncertainty significantly influence the decision-making processes of mobile money agents. These results underscore the need for targeted training and strategic planning to enhance agents' capabilities, equipping them to effectively handle the complexities of risk and uncertainty in the mobile money sector. By strengthening these areas, agents can make more informed and effective decisions, ultimately contributing to the growth and resilience of the industry.

4. Conclusion

The findings of this study highlight the significant interplay between investment decisions and business effectiveness with variables of agents' capabilities and the challenges posed by risk and uncertainty in the mobile money sector in Nigeria. Investment decisions are strongly influenced by the competencies of agents, with well-trained and experienced agents being more capable of making effective decisions. Moreover, risk and uncertainty were shown to significantly impact the decision-making process, reinforcing the importance of robust strategies and enhanced agent capabilities. These relationships underline the critical role of strategic investment planning and the development of agents' skills in driving business effectiveness and sustainability in the mobile money industry.

5. Recommendations

- 1) Mobile money service providers should invest in comprehensive training programs focused on risk management, financial decision-making, and strategic planning. By equipping agents with the necessary skills, they can better handle uncertainties and make more effective investment decisions.

- 2) Businesses operating in the mobile money sector should establish clear and practical investment decision frameworks that incorporate risk assessment and mitigation strategies. This will enable agents to make informed decisions, even under conditions of uncertainty.
- 3) Mobile money agents should be encouraged to share experiences and best practices through regular workshops, conferences, or online platforms. Such collaboration will enhance collective learning and improve agents' capabilities in addressing common challenges.
- 4) Service providers should leverage technology, such as business intelligence tools, to monitor market trends, evaluate risks, and guide investment decisions. This will enhance the precision of decision-making processes and help agents adapt to changing market conditions.
- 5) Policymakers and industry regulators should develop supportive policies to stabilize the mobile money sector, reducing uncertainties for agents. Engaging with stakeholders will ensure that strategies align with the realities of the industry and the needs of agents.
- 6) Implement robust monitoring and evaluation frameworks to assess the effectiveness of investment strategies and training programs. Regular feedback will help identify gaps and improve decision-making processes over time.

Abbreviations

R&D Research and Development

Author Contributions

Aaron Agbeche: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Methodology, Project administration, Writing – original draft, Writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

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