

-RESEARCH ARTICLE-

## EFFECT OF FINANCIAL INNOVATION, FINANCIAL DECISION-MAKING EFFECTIVENESS, AND STAKEHOLDERS' SATISFACTION ON INVESTMENT DECISIONS: MODERATING ROLE OF DIGITAL LEADERSHIP

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### —Abstract—

The study aimed was to test effect of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction on investment decisions with the moderating role of digital leadership in the banking sector. Data collected from employees of banking sector using convenient sampling technique where structural equation modeling technique used to test the study hypothesis. Result indicated that financial innovation, financial decision making effectiveness and stakeholder's satisfaction have significant impact on investment decisions. On the other hand, digital leadership as a moderating variable also strengthen the impact of financial innovation, financial decision making effectiveness and stakeholder's satisfaction on the investment decisions. The study with the significant findings provides important theoretical and practical implications through highlighting the significant role of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction in enhancing investment decisions in the banking sector. Moreover, moderating role of digital leadership also emphasizes the significant role of digital

Citation (APA): Ghaleb, M. M. S., Mamadjanova, T. (2026). Effect of Financial Innovation, Financial Decision-Making Effectiveness, and Stakeholders' Satisfaction on Investment Decisions: Moderating Role of Digital Leadership. *International Journal of Economics and Finance Studies*, 18(02), 47-74. doi: 10.34109/ijefs.2026180203

leadership which emphasizes the need for banks to strengthen digital leadership capabilities to maximize the positive impact of these factors on investment decision-making efficiency and organizational growth.

**Keywords:** financial innovation, financial decision making, investment decisions, banking sector.

## INTRODUCTION

Over the past years, investment decisions is considered to be one of the integral determinant for the firms sustainability (Almansour et al., 2023). In the digital financial system, investment decisions are being to be recognized that how effectively banks allocate capital, manage risk, and generate long-term value for stakeholders (Yahaya, 2026). Because, effective investment decision making increases the profitability, liquidity, and strategic competitiveness particularly in the highly volatile markets (Olayinka, 2022). Specifically, companies investment decisions are being closely associated along with market efficiency, especially in the banking sector where the uncertainty and risk must be carefully managed (Minh et al., 2022). This is reason, with increasing financial complexity and rapid digital transformation, the determinants of investment decisions have gained significant academic and practical importance (Mittal, 2022). Seeking prior findings importance, this study majorly focused on focusing how the investment decisions of the banking sectors are being affected by various factors.

Among the different factors to improve the company's financial decisions, financial innovation plays a critical role in improving the investment decisions in the digital banking system (Pea-Assounga et al., 2024). Financial innovation refers to the development and effective adoption of new technologies, and various processes such as Fintech platforms, blockchain systems, algorithmic trading, and digital payment systems (Bhatia et al., 2022). These innovations enhance financial transparency, reduce information asymmetry, and improve the speed and accuracy of investment-related decisions (Yan et al., 2022). Other studies also emphasized that financial innovation improves financial intermediation efficiency which increase the companies better investment decisions (Li & Tian, 2025). In addition, Attah et al. (2024) argued that it enhances capital allocation and investment performance. Empirically, Abdeldayem and Aldulaimi (2026) study also found that financial innovation in the banking sectors improve the investors better investment decisions. These studies collectively suggest that financial innovation is a key driver of improved investment decision-making in banking institutions.

On the other hand, financially effective decision making is also other crucial factor to improve the better investment decisions (Tansuchat & Thaicharo, 2025). It consisted of ability to improve the affectivity of banking institutions in making structured,

timely, and evidence-based financial decisions that optimize resource allocation and minimize risk (Ammar et al., 2025). On the other hand, decision making theory also highlighted that rational and systematic decision making process effectively to improve the company's investment decisions through reducing uncertainty and enhancing analytical accuracy (Susanto et al., 2025). In financial contexts, Sunarko and Sutrisno (2025) study highlighted that efficient information processing leads to better investment decisions, while Li and Tian (2025) emphasizes the importance of managerial decision quality in corporate performance. Furthermore, Ali (2025) research also suggested that data-driven financial decision systems significantly enhance investment efficiency in modern banking environments (Susanto et al., 2025). With significance of these studies, research focused to test the influence of financial decision-making effectiveness on the investment decisions.

Furthermore, stakeholder's satisfaction is also an important factor which improve the investment decisions in banking through increasing their returns (Zeb et al., 2025). In the stakeholders includes customers, employees, shareholders, and regulatory bodies whose satisfaction significantly affects organizational trust, reputation, and financial stability (Pirozzi, 2025). It is found that satisfied stakeholders contribute to stronger institutional confidence and more stable investment environments (Al Amosh & Khatib, 2025; Naveed & Qaisar, 2025). In the same aspects, Stakeholder theory also explains that organizational success depends on balancing and fulfilling the expectations of all stakeholder groups (Naveed & Qaisar, 2025). Further, empirical studies also confirmed that stakeholder satisfaction improves organizational performance and customer loyalty, which improves investments in the banking sector (Esposito et al., 2025; Hendratni, 2026). Another study enforced that stakeholder satisfaction reduces uncertainty and strengthens investment decision reliability (Zeb et al., 2025). These prior studies highlighted that stakeholder's satisfaction is an integral factor to important determinant to improve the investment decision. Therefore, study focused on the relationship between stakeholder satisfaction and investment decisions.

In addition to prior studies, digital leadership is being also emerged a critical factor which increase the company's investment decisions (Chen, 2026). The digital leadership refers to the leaders capability with effectively integrate digital technologies, guide innovation, and align technological transformation with organizational strategy (Jaboob et al., 2025). Effective digital leaders are being played a critical role in ensuring that financial innovation being successfully implemented and translated into improved investment decisions (Turan-Torun et al., 2025). Mollah et al. (2025) study also further argued that leadership becomes a key succession factor in improving the investment of companies through providing a digital transformation. On the other hand, Avwokeni (2026) study also emphasizes that a better leadership capability significantly improves the success of digital strategies. Moreover, Malik et al. (2025) study also highlighted that digital transformation requires strong leadership to convert technological investment into performance improvement. Albannai et al.

(2026) also confirm that digital leadership enhances Fintech adoption and financial system efficiency in banking institutions. These previous studies enforcing that digital leadership not only help to improve the innovation adoption but it also helps to strengthen the making processes and stakeholder engagement in financial organizations to improve the investment decisions. Therefore, study focused on testing the moderating role of digital leadership.

Despite the extensive literature on the relationship among financial innovation, decision-making effectiveness, stakeholder satisfaction, and investment decisions, important gaps remain unexplored in the prior literature. First, most of the existing studies examine financial innovation, decision-making effectiveness, and stakeholder satisfaction in the isolated models but these studies remain unexplored in a unified framework explaining investment decisions in the banking sector (Abdeldayem & Aldulaimi, 2026; Pea-Assounga et al., 2024; Susanto et al., 2025). Second, while the priors studies have the conducted on the significance of financial innovation, and decision-making effectiveness for the investment decisions but limited research has empirically examined how digital leadership moderates these relationships in banking environments (Abdeldayem & Aldulaimi, 2026; Alexandri et al., 2023; Bhatia et al., 2022; Pea-Assounga et al., 2024; Susanto et al., 2025). Third, financial innovation impact on investment decision has been tested a one-dimensional construct but has limited attention as a multidimensional construct. Forth, the stakeholder's satisfaction has been studied widely in relation to the service quality with performance, but its direct and interactive role in investment decision-making remains underexplored (Jum'a, 2025; Susanto et al., 2025). Lastly, very few studies have developed an integrated model that examines the combined effects of financial innovation, decision-making effectiveness, and stakeholder satisfaction along with digital leadership moderation simultaneously (Abdeldayem & Aldulaimi, 2026; Alexandri et al., 2023; Bhatia et al., 2022; Pea-Assounga et al., 2024; Susanto et al., 2025), which is emphasizing to conduct this research. These prior studies gaps highlighted the need for a comprehensive model that integrates financial, behavioral, and leadership dimensions to better explain investment decision-making in banking institutions. To address prior gaps, study aimed is to test effect of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction on investment decisions with the moderating role of digital leadership in the banking sector.

Theoretical significance of the study lies that this research extended the financial innovation theory, decision-making theory, and stakeholder theory through integrating the digital leadership as an effective moderating variable in the unified investment decision framework. It also contributes to digital transformation literature by empirically validating the role of leadership in strengthening financial and behavioral determinants of investment decisions. The study practically also providing a valuable insight for the banking managers and policy makers through highlighting the importance of financial innovation, effective decision-making systems, and

stakeholder satisfaction in improving investment outcomes. Moreover, study also emphasizes the importance of digital leadership capabilities to increase organizational adaptability and investment efficiency in modern banking systems. The study offers actionable recommendations for improving investment decisions through integrated financial strategies and leadership-driven digital transformation. The study further divided into four different chapters.

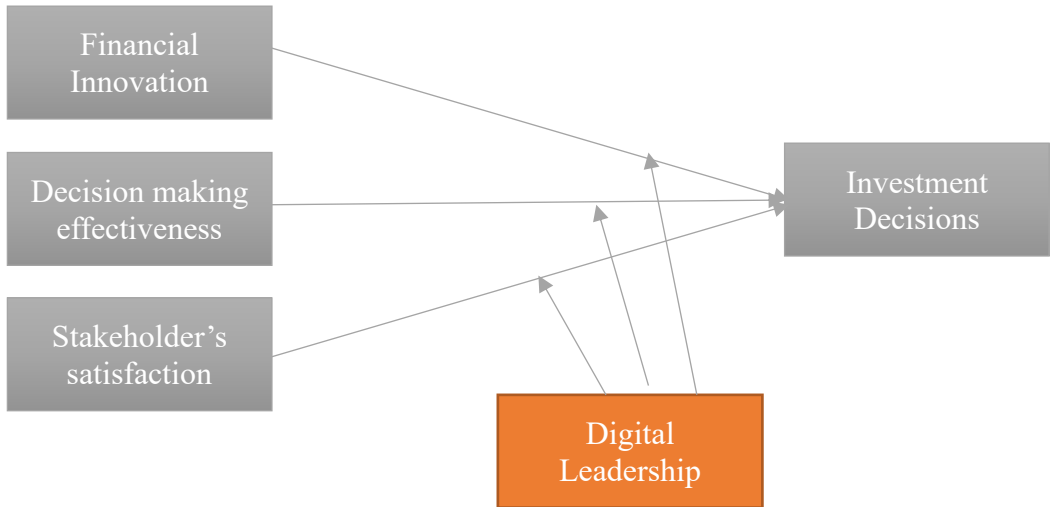
## LITERATURE REVIEW

### Theoretical Foundation

Study theoretical foundations is being based on two following theories namely financial theory and decisions making theory where these theories explained how the investment decisions are shaped in the organizations. Financial theory, particularly the Efficient Market Hypothesis (Fama, 1970) and Portfolio Theory (Markowitz, 1952), emphasizes that investment decisions are optimal when they are based on complete, accurate, and timely financial information, along with rational evaluation of risk and return. In this context, financial innovation plays a key role by improving market efficiency, reducing information asymmetry, and enhancing the speed and accuracy of financial analysis. As highlighted in prior studies, financial innovation strengthens financial intermediation and improves capital allocation efficiency, which ultimately leads to better investment outcomes (Garad et al., 2024; Pea-Assounga et al., 2024). Complementing this, decision-making theory, particularly Simon's Bounded Rationality Theory and Prospect Theory (Bazerman, 1984), explains that investment decisions are made under conditions of uncertainty and cognitive limitations. Therefore, the effectiveness of financial decision-making processes becomes critical in ensuring rational evaluation, reducing bias, and improving investment performance in banking environments. Empirical literature further supports that structured, data-driven decision systems enhance organizational efficiency and financial outcomes (Alkaraan et al., 2023; Turriago-Hoyos et al., 2016).

In addition, stakeholder theory provides further theoretical support by explaining the relational and behavioral dimensions influencing investment decisions in banking institutions (Dor & Elovici, 2016). According to Donaldson and Preston (1995) organizations achieve sustainable performance when they effectively manage and satisfy the interests of all stakeholder groups, including customers, employees, investors, and regulators. Stakeholder satisfaction enhances trust, organizational reputation, and financial stability, which directly and indirectly influence investment decision quality (Maqbool et al., 2020). Empirical evidence confirms that higher stakeholder satisfaction improves organizational performance and reduces uncertainty in financial decision-making (Phillips, 2003). When integrated with financial and decision-making theories, stakeholder theory highlights that investment decisions are not only driven by financial efficiency and rational analysis but are also strongly

influenced by trust-based relationships and stakeholder confidence (Phillips, 2003). Together, these three theoretical perspectives provide a comprehensive foundation for understanding how financial innovation, decision-making effectiveness, and stakeholder satisfaction collectively influence investment decisions in the banking sector. Above relationship variables are predicted in Model.1.



**Figure 1:** Research Framework

## Hypothesis Development

In the banking sector, financial innovation has become one of the integral component because it helps to the financial institutions to improve their operational efficiency after introducing new financial products, and strengthen investment-related activities (Pea-Assounga et al., 2024). Financial innovation also referred to the development of new technologies, innovative financial services, digital banking systems, and advanced financial processes that improve banking competitiveness and performance (Carboni & Medda, 2021). It also played a key role in increasing the quality of investment decisions because banks increasingly rely on fintech systems, artificial intelligence, blockchain technologies, automated financial analysis, and digital platforms to evaluate investment opportunities and manage financial risks (Plaskova et al., 2019). On the other hand, complexities in the financial markets also increases the significance of financial innovation because traditional banking approaches are often unable to respond effectively to rapidly changing investment environments (Fostel & Geanakoplos, 2016). Prior studies also highlighted that financial innovation increase the banks' ability in improving their capital allocation, reducing transaction costs, and strengthening risk management system which increase companies investment decisions (Abdeldayem & Aldulaimi, 2026). In other empirical study also found that innovative financial systems improve strategic flexibility and support investment growth by enabling financial institutions to access accurate market

information and develop competitive investment strategies (Susanto et al., 2025). In the same vein, other study also conducted on banking institutions where they found that digital financial technologies improve investment forecasting and decision quality because managers can evaluate financial information more effectively and respond rapidly to market uncertainties (Susanto et al., 2025). Along with significance of financial innovation for the banking sector, prior studies criticized on the overdependence on the technology innovation (Susanto et al., 2025) because more innovation financial innovation in the banks could may expose the banks to cybersecurity risks, technological disruptions, operational uncertainty, and regulatory challenges that can negatively affect investment activities {Hossain, 2025 #7}. In other study also suggested that alone financial innovation could not guarantee a successful investment decisions unless organizations possess adequate managerial competencies, digital infrastructure, and strategic capabilities {Hossain, 2025 #7}. Such kind of inconsistencies in the prior studies highlighted the need to conduct further research. Therefore, the following hypothesis is proposed:

**H1:** *Financial innovation significantly influences investment decisions in the banking sector.*

Financial decision-making effectiveness is other component which helps to improve the investment decisions in the banking institutions. The financial decision making effectiveness increases the ability of the managers in making rational and accurate financial decisions based on financial analysis, available information, and organizational objectives (Tansuchat & Thaicharo, 2025). Better decision making is being considered to be importance because effective investment activities decreases the uncertainties, and increasing long-term financial planning (Rad et al., 2025). In banking institutions, managers continuously evaluate investment opportunities related to financial assets, loans, technological systems, and strategic projects; therefore, the effectiveness of financial decisions directly determines organizational investment success (Rad et al., 2025). Empirical study also found that effective financial decision making increase the company's profitability, reduces investment risks and enhance company's sustainability (Tansuchat & Thaicharo, 2025). In other study also found that companies with effective financial decision-making systems demonstrate better investment performance because managers are able to interpret financial data accurately and respond efficiently to economic changes (Jaboob et al., 2025). Moreover, other study also highlighted that managers financial expertise positively increase the investment efficiency because managers could evaluate financial alternatives more systematically (Bai, 2023) Along with these positive studies, some of the researchers still identified that decision making effectiveness is not effectively improved when they have incomplete information, market volatility, and managerial limitations, particularly in developing financial systems (Kapellas & Siougle, 2017). In other study also found that ineffective managerial judgment could negatively impact to the investment quality even when the companies have financial resources

(Haidari, 2023). These inconsistent findings indicate the need for further investigation into the relationship between financial decision-making effectiveness and investment decisions within banking institutions. Therefore, the following hypothesis is proposed:

**H2:** *Financial decision-making effectiveness significantly influences investment decisions in the banking sector.*

Stakeholder's satisfaction is being considered to be major determinant of investment decisions because the stakeholders represents a key parties which are being effected by company's financial activities and strategic decisions (Asri et al., 2024). Stakeholders consisted of customers, shareholders and business whose positive expectations could significantly improve the company's effective financial decisions (Ojjanwuna, 2023). Stakeholders' satisfaction refers to the extent to which organizations fulfill stakeholder expectations through service quality, transparency, financial stability, and organizational effectiveness (Shahabuddin & Ali, 2024). Modern banking systems increasingly recognize that investment decisions should not only focus on profitability but also consider stakeholder interests because stakeholder trust and satisfaction contribute significantly to long-term organizational success (Abolghasemi et al., 2026). Other empirical studies also highlighted that companies with the positive stakeholders satisfaction could improve the stronger financial stability, improvement investors' confidence that improves the better investment opportunities (Shahabuddin & Ali, 2024). Other researchers also found that stakeholder's satisfaction also significantly supports to the organizational investment which increase the company's financial sustainability (Asri et al., 2024).

Similarly, studies based on stakeholder theory argued that organizations prioritizing stakeholder interests achieve sustainable financial growth and stronger market reputation, which positively affects investment activities (Abolghasemi et al., 2026). In the banking sector, customer satisfaction and investor confidence are particularly important because they directly influence financial stability and investment capacity (Iqbal & Saeed, 2023). Along with these studies, prior researchers still criticize on excessive dependence on stakeholder's satisfaction because balancing stakeholder's expectations could enhance organizational complexity and create conflicts between profitability objectives and stakeholder demands (Asri et al., 2024). In accordance on this criticism, most of the empirical studies still emphasized on the positive relationship between stakeholder satisfaction and investment decisions because satisfied stakeholders improve institutional credibility, market trust, and financial sustainability. Therefore, the following hypothesis is proposed:

**H3:** *Stakeholders' satisfaction significantly influences investment decisions in the banking sector.*

Financial innovation and investment decision relationship is not being cleared in the

prior literature which is showing to conduct research in another context. Prior literature suggested that digital leadership is being emerged as an crucial moderating factor in the modern banking environment because banking institutions increasingly depend on technological transformation and digital innovation (Ioana, 2019). Digital leadership refers to the ability of leaders to manage digital technologies effectively, encourage innovation, support technological adaptation, and align digital strategies with organizational objectives (Jaboob et al., 2025). Digital leadership also helps to the managers in integrating innovative financial technologies into the operational which could lead to improve the investment decisions (Faiz et al., 2024). Other researcher's also suggested that digital leadership strengthens organizational adaptability and technological implementation because digitally competent leaders possess the strategic vision necessary for managing innovation successfully (Jaboob et al., 2025). In other empirical study also found that digital leadership increases organizational innovation, which significantly increase the investment performance of the companies (Li & Tian, 2025). Further research also shown that banks along with strong digital leadership capabilities are more capable of managing financial technologies, reducing technological resistance, and improving investment planning processes (Jaboob et al., 2025). Other studies also highlighted that if the companies have weak digital leadership then it could reduce the effectiveness of financial innovation because organizations may fail to implement technological systems strategically (Jaboob et al., 2025) In this regards, digital leadership is expected to strengthen the positive relationship between financial innovation and investment decisions. Accordingly, the following hypothesis is developed:

**H4:** *Financial innovation significantly influences investment decisions in the banking sector with the moderating effect of digital leadership.*

Financial decision making and investment decision relationship in the prior literature is not clear. This shown the relationship could be tested with another moderating variable. For this purpose, digital leadership could be an integral moderating variable in the relationship between financial decision-making effectiveness and investment decisions (Rad et al., 2025). A better financial decisions mostly rely on the digital system which supports towards the managerial analysis and strategic planning (Costa et al., 2025). Effective digital leaders always encourage on evidence based decision making and innovation oriented cultures which helps to improve the financial judgment quality and investment efficiency (Tansuchat & Thaicharo, 2025). Prior studies demonstrated that companies which have stronger digital managers then they achieve stronger investment performance and improve decision quality because leaders effectively utilize technological systems for financial planning and forecasting (Susanto et al., 2025). Furthermore, digital leadership also minimizes the companies decision making errors through promoting analytical technologies which increase the intention of customers in investment (Cheng et al., 2025). On the other hand, if the managers have inadequate competencies among the firms leaders which may reduce

the effectiveness of financial decision making because managers may struggle to interpret technological data efficiently (Muhammad et al., 2025). These prior studies highlighting that digital leadership is likely to help in strengthening the influence of financial decision-making effectiveness on investment decisions in banking sector and accordingly hypothesis is,

**H5:** *Financial decision-making effectiveness significantly influences investment decisions in the banking sector with the moderating effect of digital leadership.*

Further the relationship among the stakeholder's satisfaction and investment decision making is not clear which is highlighting a need to conduct research with moderating effect. Digital leadership is considered to be moderating variable because digital leadership is expected to moderate the relationship between stakeholders' satisfaction and investment decisions because modern stakeholders increasingly demand digital services, transparent communication systems, and technologically advanced banking solutions (Haverila et al., 2025). Digital leadership facilitates customer-oriented innovation, organizational responsiveness, and technological communication systems that improve stakeholder satisfaction and institutional trust (Tran Thanh Thuy, 2025). Scholars argued that digital leaders enable organizations to fulfill stakeholder expectations more effectively through advanced digital platforms and customer relationship management systems (Alhamis, 2025). Consequently, satisfied stakeholders are more likely to support organizational investment activities when banking institutions demonstrate strong digital leadership capabilities. Other empirical studies shown that digital leadership always improves the customer satisfaction, which positively improves the investment activities (Celestin & Mishra, 2025). Moreover, digital advance leadership technologies also significantly strengthens the stakeholder satisfaction through improving their interest which increase the investment decisions (Jaboob et al., 2025). On the other hand, other researchers suggested that weak digital leadership reduces the stakeholder's confidence because firms may fail to deliver effective digital services and transparent communication (Rahayu, 2025). Based on above findings, digital leadership is expected to be strengthen the associated between stakeholders' satisfaction and investment decisions in banking institutions. Accordingly, the following hypothesis is:

**H6:** *Stakeholders' satisfaction significantly influences investment decisions in the banking sector with the moderating effect of digital leadership.*

## **Research Methods**

The study aimed was to test the effect of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction on investment decisions with the moderating role of digital leadership in the banking sector. To test the study hypothesis, research used the quantitative research as this approach is suitable for

testing hypothesis from the accurate sample size and providing effective and reliable findings (Attneave & Arnoult, 1956). Moreover, researcher's cross sectional research design was being used where data was collected in a onetime to test the study hypothesis. The core reason to choose this design was that it is cost effective and more suitable for test the relationship without the requirement multiple time frames for data collection (Golzar et al., 2022). Therefore, this study used cross sectional research design.

The data was collected using self-administered survey instrument which was distributed among the banking sector employees. The respondents of the study were the working employees of banking sector where respondents were selected using convenient sampling technique. A convenient sampling technique was employed due to its practicality and effectiveness in accessing participants. This approach enabled the researchers to collect data efficiently from readily available respondents while minimizing time and resource constraints (Golzar et al., 2022). In other words, this sampling technique is also effective for those studies where the exact population size is unknown and the implementation of probability sampling is impractical (Golzar et al., 2022). 450 questionnaires were distributed among the respondents where 350 questionnaires were returned and among each of the respondent was appropriate for the data analysis because data was collected using online survey instrument. In the social sciences studies more than 300 sample size is good for data analysis (Hair Jr et al., 2017).

## Research Instrument

The research instrument was adopted from the prior studies where it was already tested. Financial innovation comprises from five dimensions namely mobile banking development, out of branch banking, internet banking development, mobile banking development, and POS banking development. From these dimensions, mobile Banking Development was measured using five items, out-of-Branch Banking/ATM Services was measured using eleven items, internet banking development was measured using six items, telephone banking development was measured using three items, and lastly POS banking development was measured using five items. Each of previous dimension was adopted from the study of (Nazaritehrani & Mashali, 2020). Moreover, digital leadership was measured using six items reflecting leaders' role in increasing technological awareness and these items were taken from (Khan et al., 2025). Furthermore, stakeholders' satisfaction was measured using four items comparing the bank's customer satisfaction performance with competitors and overall service satisfaction levels and these items were taken from (Fernández-Portillo et al., 2024). Furthermore, investment decisions was being measured by four items of (Ammar et al., 2025). Lastly, financial decision-making effectiveness was measured using eight items of (Sanz de Acedo Lizarraga et al., 2009). Every items ranked on five point Likert Scale.

## DATA ANALYSIS AND RESULTS

### Demographic Characteristics

This section represents the demographic characteristics where findings indicate that most respondents are male (58.6%) compared to female (41.4%), reflecting a moderately gender-diverse workforce in the banking sector. On the other hand, most of the respondents fall between 25–35 years age group (48%), which is indicating that the sample largely represents early-career professionals who are actively involved in operational and decision-making roles. In terms of education, the majority hold a Master’s degree (50%), suggesting a highly educated workforce capable of handling complex financial tasks. Regarding experience, most employees have 2–5 years of working experience (40.6%), indicating a relatively young but professionally active workforce. [Table 1](#) represents the demographic results.

**Table 1: Demographic Characteristics**

Variable	Category	Frequency	Percentage (%)
<b>Gender</b>	Male	205	58.6
	Female	145	41.4
<b>Age</b>	Below 25 years	62	17.7
	25–35 years	168	48.0
	36–45 years	88	25.1
	Above 45 years	32	9.2
<b>Education Level</b>	Bachelor’s Degree	140	40.0
	Master’s Degree	175	50.0
	MPhil / MS	25	7.1
	PhD	10	2.9
<b>Work Experience</b>	Less than 2 years	58	16.6
	2–5 years	142	40.6
	6–10 years	105	30.0
	Above 10 years	45	12.8

### Measurement Model

The study results are depicted in two measurement and structural models through employing Structural Equation Modeling (SEM) using AMOS. Measurement model shown the construct validity and reliability from convergent and discriminant validity. Convergent validity which shown that whether the measurement items are properly represented the respected construct using factor loadings, Cronbach Alpha, Composite Reliability, and Average Variance Extracted (AVE) values ([Fornell & Larcker, 1981](#)). The convergent validity results indicate that all constructs achieved acceptable reliability and validity levels according to the recommendations of ([Hair et al., 2017](#)). For the factor loadings all values should be greater than from 0.70, indicating strong item reliability ([Hair Jr et al., 2017](#)).

**Table 2: Measurement Model**

<b>Construct</b>	<b>Item</b>	<b>Factor Loading</b>	<b>Cronbach's Alpha</b>	<b>CR</b>	<b>AVE</b>
<b>Mobile Banking Development</b>	MBD1	0.812	0.901	0.927	0.718
	MBD2	0.846			
	MBD3	0.874			
	MBD4	0.832			
	MBD5	0.857			
<b>Out-of-Branch Banking</b>	OBB1	0.781	0.948	0.955	0.661
	OBB2	0.804			
	OBB3	0.836			
	OBB4	0.842			
	OBB5	0.791			
	OBB6	0.818			
	OBB7	0.847			
	OBB8	0.851			
	OBB9	0.823			
	OBB10	0.832			
	OBB11	0.796			
<b>Internet Banking Development</b>	IBD1	0.824	0.914	0.933	0.699
	IBD2	0.851			
	IBD3	0.873			
	IBD4	0.829			
	IBD5	0.845			
	IBD6	0.817			
<b>Telephone Banking Development</b>	TBD1	0.811	0.876	0.915	0.782
	TBD2	0.892			
	TBD3	0.933			
<b>POS Banking Development</b>	POSD1	0.826	0.905	0.930	0.726
	POSD2	0.841			
	POSD3	0.882			
	POSD4	0.861			
	POSD5	0.844			
<b>Digital Leadership</b>	DL1	0.804	0.928	0.943	0.733
	DL2	0.846			
	DL3	0.873			
	DL4	0.857			
	DL5	0.882			
	DL6	0.861			
<b>Stakeholders Satisfaction</b>	STS1	0.871	0.912	0.938	0.791
	STS2	0.902			
	STS3	0.886			
	STS4	0.894			
<b>Investment Decisions</b>	ID1	0.821	0.889	0.923	0.751
	ID2	0.874			
	ID3	0.891			
	ID4	0.858			

**Table 2: Measurement Model (cont...)**

Construct	Item	Factor Loading	Cronbach's Alpha	CR	AVE
<b>Financial Decision Making</b>	FDME1	0.833	0.918	0.939	0.756
	FDME2	0.871			
	FDME3	0.892			
	FDME4	0.864			
	FDME5	0.879			

The Cronbach Alpha values greater than 0.70 which is demonstrating high internal consistency reliability among the measurement items. In the same vein, composite reliability should also be greater than 0.70, confirming strong construct reliability (Bagozzi & Yi, 1988). Furthermore, AVE values above 0.5, exceeding the minimum acceptable value (Fornell & Larcker, 1981). These results fill the criteria for convergent validity in Table.2.

### Discriminant Validity

This section shown the discriminant validity of the constructs which shown that construct should have discrimination with other constructs. Discriminant validity was tested through the Fornell and Larcker where each diagonal values should be greater than below value which is calculated from the square root of AVE (Fornell & Larcker, 1981). Each diagonal value is greater than from below value and values are predicted in Table.3.

**Table 3: Discriminant Validity**

Construct	MBD	OBB	IBD	TBD	POSD	DL	STS	ID	FDM
<b>MBD</b>	<b>0.847</b>								
<b>OBB</b>	0.642	<b>0.813</b>							
<b>IBD</b>	0.701	0.688	<b>0.836</b>						
<b>TBD</b>	0.574	0.621	0.653	<b>0.884</b>					
<b>POSD</b>	0.668	0.712	0.694	0.635	<b>0.852</b>				
<b>DL</b>	0.547	0.603	0.588	0.566	0.619	<b>0.856</b>			
<b>STS</b>	0.624	0.671	0.642	0.593	0.658	0.691	<b>0.889</b>		
<b>ID</b>	0.518	0.572	0.603	0.547	0.581	0.649	0.711	<b>0.867</b>	
<b>FDM</b>	0.562	0.611	0.648	0.589	0.623	0.706	0.734	0.781	<b>0.869</b>

### Hypothesis results

After the measurement model, next step is to test the study hypothesis using structural model.

### Direct Effects

Hypothesis analysis for direct effects indicates that all independent variables

significantly influence investment decisions in the banking sector. FINI has positive and significant impact on the IND ( $\beta = 0.312$ ,  $SE = 0.064$ ). This suggests that increased use of innovative financial practices and technologies improves the quality of investment decisions in banks. The relatively low standard error indicates a stable and reliable estimate of this relationship. FDME has the strongest positive impact on IND ( $\beta = 0.401$ ,  $SE = 0.066$ ). This implies that banks with more structured, accurate, and efficient financial decision-making processes are more likely to achieve better investment outcomes. The strength of this relationship highlights its central role among all predictors. STS also significantly influences IND ( $\beta = 0.278$ ,  $SE = 0.069$ ). This shows that when stakeholders such as employees, customers, and investors are satisfied, it positively enhances confidence and supports better investment decisions within banking institutions. Above all three direct hypotheses are supported which is confirming that that financial capability and stakeholder satisfaction are key determinants of investment decisions. Above results are in [Table.4](#).

**Table 4: Direct Hypothesis**

Hypothesis	Relationship	Beta ( $\beta$ )	t-value	p-value	Decision
H1	FINI→ IND	0.312	4.85	0.000	Supported
H2	FDME → IND	0.401	6.12	0.000	Supported
H3	STS→ IND	0.278	4.02	0.000	Supported

**Note:** FINI-financial innovation, FDME-financial decision-making effectiveness, STS-stakeholders satisfaction, IND-investment decisions

### Moderating Effects

The moderating analysis shows that DL significantly strengthens all proposed relationships between independent variables and investment decisions. Interaction between the FINI and GL is significant ( $\beta = 0.184$ ,  $SE = 0.053$ ), which is indicating that DL enhances the positive impact of FINI on investment decisions. This suggests that leaders who effectively use digital tools are better able to convert innovation into improved investment outcomes. In the same vein, the interaction between FDME and DL is significant ( $\beta = 0.221$ ,  $SE = 0.054$ ).

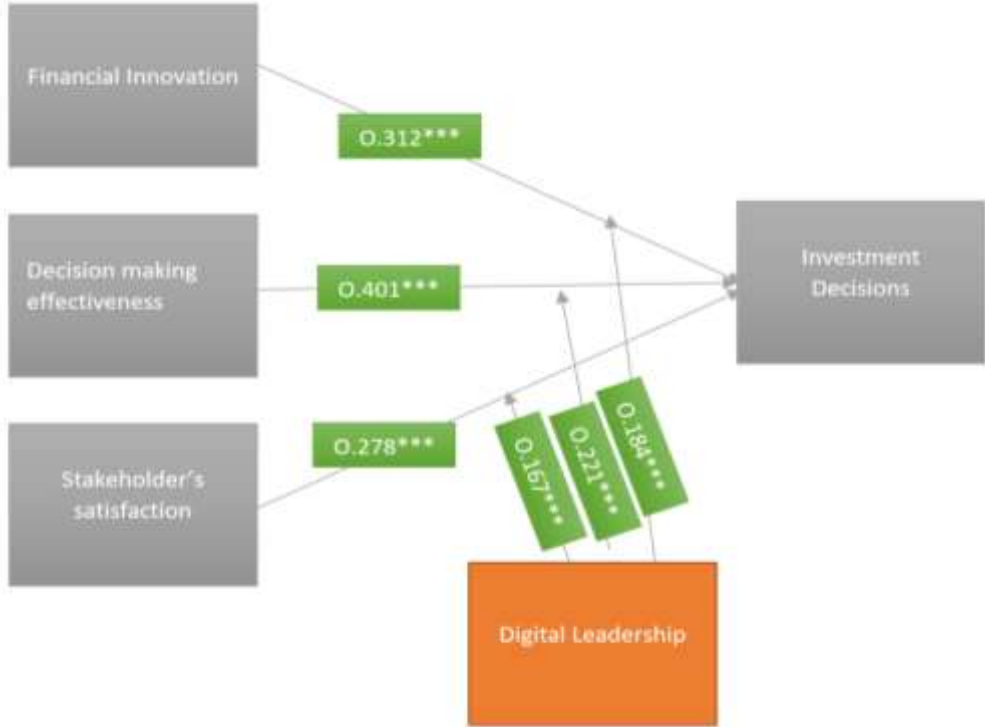
**Table 5: Moderating effect hypothesis results**

Hypothesis	Relationship	Beta ( $\beta$ )	t-value	p-value	Decision
H4	FINI*DL→ IND	0.184	3.45	0.001	Supported
H5	FDME*DL → IND	0.221	4.10	0.000	Supported
H6	STS*DL→ IND	0.167	3.02	0.003	Supported

**Note:** FINI-financial innovation, FDME-financial decision making effectiveness, STS-stakeholders satisfaction, IND-investment decisions

This implies that the effectiveness of financial decisions becomes more influential on investment outcomes when supported by strong DL capabilities. In other aspect,

interaction STS with DL is also significant ( $\beta = 0.167$ ,  $SE = 0.055$ ). This indicates that DL strengthens the relationship by improving communication, transparency, and responsiveness toward stakeholders, which ultimately enhances IND quality. In above results, hypothesis from 4 to 6 is being supported which is confirming that DL acts as a strong enhancing moderator in the model. Moderating effects results are in [Table.5](#).



**Figure 1: Beta Values**

**R-Square (Direct Model)**

The R Square before moderation is [Table.6](#) is 0.58 which is indicating that FINI, FDME, STS collectively explain 58% of the variation in investment decisions in the banking sector. These effects shown a moderate to strong explanatory power, meaning that the model captures a substantial portion of the determinants of investment decisions. On the other hand, adjusted R-square value of 0.56 confirms the stability and reliability of the model after adjusting for the number of predictors.

**Table 6: R Square without moderating effect**

Dependent Variable	R <sup>2</sup>	Adjusted R <sup>2</sup>
Investment Decisions	0.58	0.56

**R-Square (Moderated)**

Furthermore, after adding the DL as a moderating variable model explanatory power

is being increased from 0.58 to 0.66. This indicates that the model now explains 66% of the variance in investment decisions, showing a substantial improvement of 0.08 compared to the direct model. The increase in R-square demonstrates that DL plays a meaningful role in strengthening the predictive power of the model by enhancing the effects of FINI, STS, and FDME. The results are in [Table.7](#) below,

**Table 7: R Square after moderation**

Dependent Variable	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change in R <sup>2</sup>
Investment Decisions	0.66	0.64	+0.08

## DISCUSSION

The study aimed was to test the effect of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction on investment decisions with the moderating role of digital leadership in the banking sector. The research objective results shown that financial innovation positively and significantly influence to the investment decisions of banking sector. These results highlighted that the banking sector adopted strong financial technology and innovative financial practices to improve investment decisions. Financial innovation enhances access to real-time data, improves analytical accuracy, and strengthens risk evaluation in investment processes. The findings is being supported with the prior studies where authors found that financial innovation improves financial intermediation efficiency and enhances investment performance through technological advancement and better information processing ([Chaudhary et al., 2025](#); [Susanto et al., 2025](#)). These findings indicating that bankis should have proper investment in the fintech solutions, artificial intelligence, blockchain systems, and digital analytics tools while ensuring employees are trained to effectively utilize these innovations in investment decision-making processes that could enhance banking sectors competitive advantage.

After discussing the financial innovation, financial decision-making effectiveness also positively and significantly affected the banking investment decisions. These results highlight that companies structured, timely, and evidence-based financial decision-making improves investment in banking institutions because effective decision-making always increases the efficient allocation of financial resources, accurate risk evaluation, and improved forecasting of investment opportunities. This result emphasizes that technology advanced environment improves the decision making to get more investment decisions in the banking sector. The results are supported with the decision theory where highlighted that rational and systematic decision-making improves investment decisions ([Susanto et al., 2025](#); [Tansuchat & Thaicharo, 2025](#)). Further empirical studies also confirmed that decision support systems and analytical governance improve financial performance and investment efficiency ([Sunarko & Sutrisno, 2025](#)). Consequently, banking industry should focus on the decisions support system, adopt real-time reporting tools, and promote a data-driven decision-

making culture that could increase the investment in the banking sector from both of local and international investors.

Further expanding the analysis shown that stakeholders' satisfaction significantly and positively influences investment decisions in the banking sector. These results shown that in banking sector stakeholders are being satisfied with the banking services which is leading to increasing institutional reputation, and improved investment decision outcomes. Stakeholder satisfaction plays a critical role in ensuring financial stability and capital inflows in banking institutions. The results is strongly supported with the prior stakeholders theory where they argued that organizational success depends on the satisfaction and engagement of all stakeholder groups (Donaldson & Preston, 1995). On the other hand, empirical studies also supported the view that stakeholder satisfaction improves organizational performance, reduces uncertainty, and enhances investment stability (Abolghasemi et al., 2026; Mohapatra et al., 2025). These findings enforcing that banks should focus on improving service quality, enhancing transparency, and strengthening customer relationship management systems, while also ensuring employee satisfaction to maintain a positive investment environment that could increase the banks competitive advantage.

Further results indicated that digital leadership positively strengthen the association of financial and investment decisions of banking sector. This is showing that financial innovation is being become more effective factor when it is being endorse by leaders with strong digital competencies. Because the digital leaders played important role in integrating technology into organizational process and ensuring that innovation translates into effective investment outcomes. The result is being supported with the digital transformational which shown that leadership capability is essential for successful technological adoption in organizations (Ali, 2025; Shahabuddin & Ali, 2024). The findings are also supported with other studies where effect of digital leadership as a significant moderating effect has been found (Alkaraan et al., 2023). These findings indicating that digital leadership helps to increase the innovation outcomes through aligning technological initiatives with strategic financial goals (Shahabuddin & Ali, 2024) which increases to improve the investment decisions. Based on these findings, it is argued that banks should have proper investment in leadership development programs focused on digital skills, innovation management, and strategic technology adoption that could leads to improve the investment decisions.

In the same vein, result also indicated that digital leadership strengthens the relationship between financial decision-making effectiveness and investment decisions. This result suggested that effective decisions always helps to increase the investment decision making when it is being supported by digitally competent leadership. Digital leaders improve decision-making by promoting advanced analytics, enabling real-time financial insights, and facilitating faster response to

market changes. This enhances the overall efficiency and accuracy of investment decisions. The results align with the prior studies where it has been identified that digital leadership improves organizational agility, decision quality, and strategic responsiveness in financial institutions (D'Acunto & Rossi, 2023). In this regard, the banking sector should have proper focus on the leadership capability development in digital analytics, artificial intelligence systems, and technology-driven financial management that could lead to improve the investment decisions of individuals in the banking sector. Lastly, the results show that digital leadership also significantly strengthens the association between stakeholders' satisfaction and investment decisions. These results show that when the financial banks are being led through strong digital leaders, the positive impact of stakeholder satisfaction on investment decisions becomes stronger. It is due to the fact because digital leadership helps to increase the communication, transparency, and stakeholder engagement through digital platforms which increase the customer satisfaction to improve their investment in banking. This supports stakeholder theory in the context of digital transformation, where leadership plays a crucial role in managing stakeholder relationships effectively (Mahajan et al., 2023). Empirical studies also show that digital engagement and leadership responsiveness improve customer satisfaction and financial performance in banking systems (Chatterjee et al., 2023; Senadjki et al., 2024). Based on these findings, it is argued that the banking sector should have proper implementation in the digital customer relationship management system for actively engaging with stakeholders through digital channels which could lead to improve the investment decisions.

## IMPLICATIONS

The study theoretically firstly extended the literature on the investment decision making in the banking sector through empirically validating the significant role of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction as key determinants of investment decisions in the context of the banking sector. The findings reinforce classical financial management and stakeholder theories by confirming that both internal financial capabilities and external relational factors jointly shape investment outcomes in banking organizations. Secondly, the study findings contributed to the literature in the context of financial innovation theory through demonstrating that innovation is not only a technological driver, but it is also a strategic enabler of investment decisions. It highlights that financial innovation enhances decision quality through improved access to information, automation, and analytical capabilities, thereby extending prior conceptual arguments into an empirical banking context. While, thirdly, the study contributed to the literature on the decision-making theory perspective through confirming that effective financial decision processes significantly enhance investment performance. It adds empirical support to the idea that rational, structured, and data-driven decision systems are essential for reducing uncertainty and improving financial outcomes in complex banking environments.

Lastly, study contributed literature in the context of stakeholders through theory through demonstrating that stakeholder's satisfaction has paid a significant role in the increasing the investment decision making of investors in banking sectors because stakeholder influence is not limited to organizational reputation or performance, but it also directly affects strategic investment decisions in financial institutions. Fourthly, study contributed to a novel theoretical contribution through introducing a moderating role of digital leadership in the banking sector. These results confirmed that digital leadership strengthens the relationships between financial innovation, decision-making effectiveness, stakeholder satisfaction, and investment decisions. This represents a significant extension of leadership theory by integrating it with financial decision-making and digital transformation perspectives.

Practically, the study results provided a clear guidance for the banking sector managers with a significant role of innovation that should be prioritized as a strategic investment area. Banks should invest in advanced financial technologies such as artificial intelligence, blockchain, predictive analytics, and automated decision systems to improve investment decision accuracy and efficiency. Secondly, the results suggest that banks must strengthen financial decision-making systems and governance structures. Practically, this can be achieved by implementing real-time financial reporting systems, advanced decision-support tools, and integrated risk management frameworks. This will help managers make faster, more accurate, and evidence-based investment decisions. Thirdly, the study highlights the importance of stakeholder satisfaction management in banking operations. Banks should focus on improving customer service quality, employee engagement, and investor relations. Transparent communication, responsive service delivery, and trust-building mechanisms are essential for improving stakeholder confidence, which directly influences investment decisions. Fourthly, the findings emphasize the need for developing digital leadership capabilities in banking institutions. Bank executives and managers should be trained in digital skills, data analytics, and technology-driven strategic management. Leadership development programs should focus on enhancing the ability of leaders to integrate digital tools into financial decision-making processes. Lastly, this is first study which contributed the literature with the moderating effect and combined effect of digital leadership in this integrated model, and accordingly banking institutions should recognize that investment decisions are not driven by isolated factors. Instead, they are the result of an interconnected system where financial capabilities and leadership-based digital transformation work together. Therefore, strategic planning in banks should adopt a holistic approach that integrates innovation, decision systems, stakeholder management, and digital leadership into a unified investment decision framework.

## **CONCLUSION AND FUTURE DIRECTIONS**

The study aimed is to test effect of financial innovation, financial decision-making

effectiveness, and stakeholders' satisfaction on investment decisions with the moderating role of digital leadership in the banking sector. Data collected from employees of banking sector using convenient sampling technique where structural equation modeling technique used to test the study hypothesis. Result indicated that financial innovation, financial decision-making effectiveness and stakeholder's satisfaction have significant impact on investment decisions. On the other hand, digital leadership as a moderating variable also strengthen the impact of financial innovation, financial decision-making effectiveness and stakeholder's satisfaction on the investment decisions. The study with the significant findings provides important theoretical and practical implications through highlighting the significant role of financial innovation, financial decision-making effectiveness, and stakeholders' satisfaction in enhancing investment decisions in the banking sector. Moreover, moderating role of digital leadership also emphasizes the significant role of digital leadership which emphasizes the need for banks to strengthen digital leadership capabilities to maximize the positive impact of these factors on investment decision-making efficiency and organizational growth.

With the significant findings, there are still limitations which needs to be addressed in further research. Firstly, current study focused on moderating impact while ignored mediating which emphasizes the need to conduct research with moderating effect. Therefore, further research needs to be conducted with mediating effect to improve the model predictive relevance. Secondly, study tested model on cross sectional research design while ignored the longitudinal research design where data could be collected in different time frames to know the variation in results. Lastly, data collected from employees while ignored the top-level board of directors, hence further research might be conducted after adding above indicators to know the variation in the results using multi group analysis.

## FUNDING

This work was supported by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia [Grant Number KFU262575]'.

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