International Journal of Basic and Applied Sciences, 14 (5) (2025) 578-592

International Journal of Basic and Applied Sciences

Website: www.sciencepubco.com/index.php/IJBAS
https://doi.org/10.14419/v0sx8509
Research paper

The Strategic Performance of The Central Bank of India: A Mediating Role of Dynamic Capabilities and Moderating Role of Ambidexterity

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Received: July 5, 2025, Accepted: August 24, 2025, Published: September 16, 2025

Abstract

The purpose of this study was to understand the mediating role of dynamic capabilities and the moderating role of ambidexterity in the relationship between innovation capabilities, entrepreneurial capabilities, and strategic performance. The study was conducted in the context of the Central Bank of India, and data were collected based on a survey-based questionnaire. The branches of the Central Bank of India located in Delhi, Mumbai, Chennai, Kolkata, Bangalore, and Lucknow were targeted, and a sample of 222 respondents was collected. Using Partial Least Squares – Structural Equation Model, the study found that both innovation capabilities and entrepreneurial capabilities have a significant impact on dynamic capabilities and strategic performance. Furthermore, the study found that dynamic capabilities have a significant impact on strategic performance. The study found that dynamic capabilities significantly mediate the impact of innovation capabilities and entrepreneurial capabilities on strategic performance. In addition, the study found that ambidexterity positively moderates the impact of innovation capabilities on dynamic capabilities, while it has no moderating role for the impact of innovation entrepreneurial capabilities on strategic performance. However, the study found that ambidexterity does not moderate the impact of dynamic capabilities on strategic performance.

Keywords: *Ambidexterity; Dynamic Capabilities; Entrepreneurial Capabilities; Innovation Capabilities; Strategic Performance.*

1. Introduction

Among twelve public sector banks in India, the Central Bank of India (CBI) remains in 10th position based on market capitalization. (Malali & Gopalakrishnan, 2020). On June 14, 2024, the Reserve Bank of India (RBI) imposed a penalty of Rs 1.45 crore (Indian Rupees) on CBI for non-compliance with certain directions related to loans and advances and customer protection. (Times, 2024). It reflects the negligence by the management of CBI, which is evident in the limited strategic performance. Over the past decade, CBI has been struggling with increasing non-performing assets (NPAs) (Pasunoori et al., 2024) and declining profitability as compared to other public sector banks in India (Gupta & Mahakud, 2020).

The return on assets (ROA) and NPAs are two significant challenges to the strategic performance of CBI. According to the data of March 2024, CBI has an NPA ratio of 14.81% which is one of the highest in the public sector banks in India. (Pasunoori et al., 2024). The highest ratio of NPAs reflects the inability of the CBI to recover its loans and the inappropriate working of the risk management framework. Moreover, ROA for CBI was reported as 44% in 2023, while it is reported as 63% in 2024 (Report, 2024). Whereas ROA for CBI was 30% in 2022 (Report, 2024). Although the bank has improved its efficiency in dealing with ROA, it has no sustainability. Therefore, the poor performance in dealing with ROA reflects the inability of CBI in strategic decision-making and asset management. (Kanoujiya et al., 2023). Similarly, Jayaraman and Bhuyan (2020) Found that the government's weak profitability has affected the capital and performance of CBI, which reflects the hardship for banks to meet the regulatory requirements without the support of the government.

Furthermore, the operational inefficiencies of CBI have further exacerbated its problems. (Dua, 2023). RBI disclosed that CBI is spending significantly more on operations relative to its income, reducing its competitiveness and limiting its ability to invest in new technologies or expand its services. However, digital transformation, which has become crucial for financial institutions worldwide, remains slow in CBI, which limits its reach in the growing fintech market. (R et al., 2021). A major challenge for CBI is the limited growth in its credit portfolio. While the Indian banking industry as a whole experienced a credit growth rate of 15% in FY 2023, CBI recorded a much lower growth rate of 7.6% (Report, 2024). This is a concerning indicator of its weakening ability to extend loans and participate actively in the nation's credit ecosystem. The slower credit growth is reflective of risk aversion due to high NPAs and inefficient capital allocation strategies. (Mohan & Ray, 2023).

Moreover, Jena (2022) Discussed that CBI is facing technology failures in recent years, particularly on mobile and internet platforms. These failures have been attributed to a lack of talented tech professionals, inadequate testing of banking apps, and legacy systems that

are unable to perform adequately. (Goswami & Gulati, 2022). According to Shankar et al. (2020)The central bank's 2022 ombudsperson scheme annual report shows that customers submitted a total of 44,385 complaints related to mobile and electronic banking. Therefore, it is considered that the Indian banking management lacks strategic performance to integrate modern technology effectively to provide effective services. (Kaur et al., 2021).

Accordingly, the strategic performance of the CBI is a practical problem that needs rapid action. (Pasunoori et al., 2024). According to Manohar et al. (2020)There is a need for CBI to adopt a more innovative and strategic approach to remain competitive in the market. Besides, Malali and Gopalakrishnan (2020) Discussed that there is a need to adopt modern technology and new business models for Indian public sector banks to improve their strategic performance. However, Pasunoori et al. (2024) Pointed out that there is a need for different capabilities for the management of CBI to address the issues of transparency, accountability, sustainability, and strategic performance. According to Gupta and Mahakud (2020)The improvement of the strategic performance of CBI is a challenge in practice and the literature.

The above discussion concludes that the CBI has faced significant challenges in strategic performance, primarily due to a combination of regulatory inefficiencies. (Gupta, 2023), poor management practices (Sharma & Choubey, 2022), and economic volatility (Choithani et al., 2024). The rapid pace of technological advancements has also exposed traditional banks to competition from nimble fintech companies, highlighting a lag in digital transformation and customer service innovation. These factors, coupled with the lack of a coherent long-term strategic vision, have impeded the sector's ability to adapt and thrive in a rapidly changing economic landscape. Consequently, the strategic performance of CBI has often fallen short of expectations, necessitating comprehensive reforms and stronger regulatory oversight to ensure sustainable growth and stability. (Pasunoori et al., 2024).

Prior studies have consistently emphasized the importance of examining innovation capabilities, entrepreneurial capabilities, and dynamic capabilities in the context of the Indian banking sector's strategic performance. (Chatterjee et al., 2023). Researchers have highlighted that innovation capabilities are crucial for banks to develop new products, enhance customer experiences, and stay competitive in a technology-driven market. (Kolapo et al., 2021). Entrepreneurial capabilities have been identified as essential for fostering a culture of agility and proactive decision-making, enabling banks to navigate complex regulatory landscapes and economic uncertainties effectively. (Sari et al., 2023). Furthermore, dynamic capabilities include the ability to sense opportunities, seize them, and transform organizational processes, which are seen as vital for sustaining long-term competitive advantage. (Singh & Rao, 2017).

According to Gallego-Gomez and De-Pablos-Heredero (2020)These capabilities allow banks to remain resilient and adaptable amidst rapid market changes. On the other hand, there is also a knowledge gap in the literature as ambidexterity is not tested as a moderating variable between the relationship of innovation capabilities, entrepreneurial capabilities, dynamic capabilities, and strategic performance of the banking sector. Hence, this is a researchable phenomenon to test ambidexterity as a moderator in the relationship between innovation capabilities, entrepreneurial capabilities, dynamic capabilities, and strategic performance of banks. The Indian banking sector's strategic performance issues, including high levels of non-performing assets and slow adoption of digital transformation, underscore the need for a comprehensive understanding of how these capabilities interact and influence overall performance.

1.1. Research Objectives

The objectives of this research are given below.

RO1: To measure the impact of innovation capabilities on dynamic capabilities and strategic performance.

RO2: To measure the impact of innovation capabilities on strategic performance.

RQ3: To measure the impact of entrepreneurial capabilities on dynamic capabilities and strategic performance.

RQ4: To measure the impact of entrepreneurial capabilities on strategic performance.

RQ5: To measure the impact of dynamic capabilities on the strategic performance.

RQ6: To analyze the mediating role of dynamic capabilities in the relationship between innovation capabilities and strategic performance.

RQ7: To analyze the mediating role of dynamic capabilities in the relationship between entrepreneurial capabilities and strategic performance.

1.2. Research Significance

This research is significant theoretically as it addresses the gaps in the literature by measuring the relationship between innovation capabilities, entrepreneurial capabilities, dynamic capabilities, and strategic performance of the banking sector. The study also examines ambidexterity as a moderator in the relationship between innovation capabilities, entrepreneurial capabilities, dynamic capabilities, and strategic performance of the banking sector. The study tests ambidexterity as a moderating variable for the first time on the relationship between innovation capabilities and the strategic performance of banks. Meanwhile, the study is also significant as it contributes to the dynamic capabilities theory. The study also has practical importance as it will help the management of Indian public sector banks. It is critical to highlight factors that are necessary to improve the strategic performance of the banking sector. Hence, practitioners and policymakers of the Indian banking sector will benefit from this research to understand the importance of innovation capabilities, entrepreneurial capabilities, and dynamic capabilities to improve the strategic performance of banks. Similarly, the findings of this research can be generalized to make policies for improving the banking sector in similar economies.

2. Review of Literature

2.1. The Underpinning Theory

The dynamic capabilities theory was presented by David J. Teece (Teece et al., 1997). This theory was presented to highlight the ability of any firm to integrate, build, and reconfigure its internal and external competencies to seize new opportunities while addressing the rapidly changing environment. Furthermore, dynamic capabilities theory focuses on the learning of the firms. This theory clearly focuses on the changing market environment by integrating the new practices in business work. (Teece, 2020).

Dynamic capabilities focus on both exploratory and exploitative activities. (Suddaby et al., 2020). The exploratory activities are based on factors such as searching for new opportunities and experimenting with new technologies. However, the exploitative activities are based on factors such as refining and optimizing existing processes and capabilities of the firms. Balancing both exploratory and exploitative

activities is essential for the sustainable success of the firms. Teece (2016) Emphasized that the ability of firms to foster a dynamic capabilities mindset in the employees is crucial for an organization to remain agile and responsive to change.
Likewise, the dynamic capabilities of firms vary from industry to industry. (Teece, 2010). Hence, the firms can develop a strategic orientation that helps them not only survive but thrive in a dynamic environment. Entrepreneurial capabilities in the banking industry involve the proactive identification and exploitation of market opportunities. (Abdurrahman et al., 2024). According to Kori et al. (2021)Banks with entrepreneurial and solid capabilities are better positioned to introduce new financial products, explore untapped markets, and navigate regulatory changes.

2.2. Research Framework

The framework developed by this research is grounded on the underpinning of dynamic capability theory. Dynamic capabilities theory is used for the underpinning of the research framework because the independent variables (innovation capabilities and entrepreneurial capabilities) and mediating variable (dynamic capabilities) are considered as a cause that has an effect, which is conceptualized as the dependent variable (strategic performance). To sum up, the underpinning of dynamic capability theory in the proposed research framework is both pertinent and essential for explaining the relationships among the variables. This theory asserts that an organization's ability to integrate, build, and reconfigure internal and external competencies is critical for sustaining a competitive advantage in dynamic environments. (Arranz et al., 2020). In this context, dynamic capabilities are conceptualized as the mediating factor that connects organizational resources, such as innovation and entrepreneurial capabilities, to strategic performance outcomes. Hence, the framework of this research is presented in Figure 1. This framework highlights five direct relationships, two mediating relationships, and three moderating relationships.

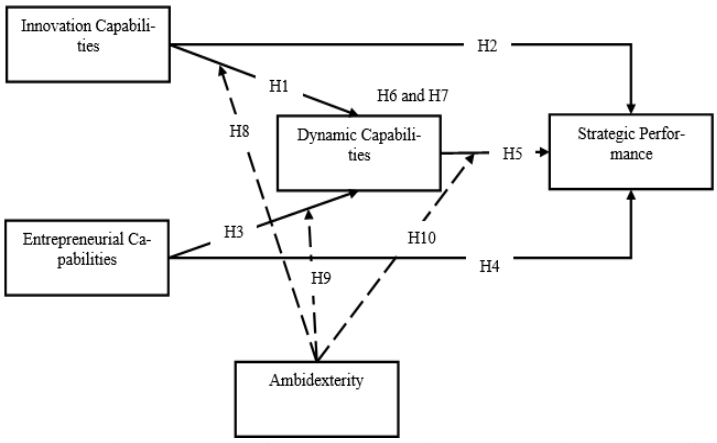

Fig. 1: Research Framework Explaining Direct, Mediating, and Moderating Hypotheses.

2.3. Hypothesis Development

Strønen et al. (2017) Pointed out that dynamic capabilities are improved when the firm can innovate and meet the requirements of the market. Vu (2020) Reported that the innovation capabilities of any firm's employees make it possible to integrate the internal and external resources for the required achievements of goals. Ferreira et al. (2020) Established that the dynamic capabilities of the firms are used for improving business performance, but the role of innovation capabilities improves their worth. According to Valdez-Juárez and Castillo-Vergara (2021)Innovation capabilities help to develop business practices positively, which are reliable for achieving the organizational goals. Teece (2020) Emphasized that dynamic capabilities are interrelated to entrepreneurial capabilities. Therefore, the following hypothesis is developed.
H1: There is a relationship between innovation capabilities and dynamic capabilities.
Chen et al. (2021) Found that the performance of firms can be improved if the management has the capabilities to work innovatively. Meanwhile, Broadstock et al. (2020) Reported that the approach to the invention in work and market is a significant factor in improving the performance of the business. Sawaean and Ali (2020) Confirmed that innovation is key to having a CA that is helpful to meet the goals of reliable performance. However, Migdadi (2020) Reported that strategic performance is a reliable way to improve business practices among competitors, but it is improved with innovation capabilities and business performance. Accordingly, Valdez-Juárez and Castillo-Vergara (2021) Emphasized work on innovative ways to achieve the organizational goals. Hence, the following hypothesis is developed.
H2: There is a relationship between innovation capabilities and strategic performance.
Abu-Rumman et al. (2021) Reported that the entrepreneurial capabilities for business practices are necessary to achieve profitability in firms. Furthermore, Randhawa et al. (2021) Pointed out that entrepreneurial capabilities are strategically helpful for the innovation of products and services in the market by any venture. Matarazzo et al. (2021) Pointed out that the dynamic capabilities of firms are helpful to achieve the goals set by the management of organizations, which can achieve a sustainable profit in business. However, S. K. Singh et al. (2022) Reported that the entrepreneurial capabilities and dynamic capabilities are used to improve the performance of the business strategically. Khan et al. (2020a) Emphasized that the employees of modern businesses should have reliable capabilities to improve their performance. Therefore, the following hypothesis is developed.
H3: There is a relationship between entrepreneurial capabilities and dynamic capabilities.
AlTaweel and Al-Hawary (2021) pointed out that entrepreneurial capabilities are helpful for businesses to introduce new products and services in the market. Sawaean and Ali (2020) confirmed that the business performance is affected by the achievement of entrepreneurial capabilities by any firm. According to Lestari et al. (2020), when a firm is performing well comparatively, it can achieve success in business. Meanwhile, Ali et al. (2020) confirmed that strategic advancement in business practices is possible when the firms meet the market requirement with innovation. Therefore, Nakku et al. (2020) also highlighted the role of entrepreneurial capabilities as a game-changer for business. Hence, the following hypothesis is developed.

H4: There is a relationship between entrepreneurial capabilities and strategic performance.
According to Mikalef et al. (2020)Dynamic capabilities are helpful to upgrade the work of employees according to the modern requirements. Furthermore, Teece (2020) Reported that the integration of new technologies and working codes for the employees can improve their performance strategically. The study Suddaby et al. (2020) Highlights that dynamic capabilities are considered a key to improving the firm's performance. Besides, Mikalef, van de Wetering, et al. (2021) Pointed out that the dynamic capabilities of the business are improved over time when strategically advanced practices are adopted by the management. Meanwhile, Khan et al. (2020a) Reported dynamic capabilities should be considered as a way forward to achieve success with business sustainability. Therefore, the following hypothesis is developed.
H5: There is a relationship between dynamic capabilities and strategic performance.
S. K. Singh et al. (2022) Pointed out that the role of dynamic capabilities is helpful to lead firms towards innovation and performance. Meanwhile, the study Robertson et al. (2023) Highlighted that the dynamic capabilities of firms are improved over time when employees are motivated by research and development. Khan et al. (2020b) Pointed out that dynamic capabilities are helpful for businesses to get away from outdated knowledge. However, Mikalef et al. (2020) Confirmed that the availability of dynamic capabilities in firms helps to improve business performance while focusing on innovation. Buccieri et al. (2020) Pointed out that innovation and dynamic capabilities are necessary for better business practices. Hence, the following hypothesis is developed.
H6: There is a mediating role of dynamic capabilities in the relationship between innovation capabilities and strategic performance.
The study Randhawa et al. (2021) Reported that business practices are improved in the market with entrepreneurial skills. Furthermore, Soluk et al. (2021) Reported that entrepreneurial skills are helpful for the business to advance and compete with other firms in the market. Hence, Bitencourt et al. (2020) Mentioned that the employees' skills are necessary to make their performance effective in dealing with different challenges. Furthermore, Mikalef, Pateli, et al. (2021) Reported that the innovation integration capabilities should be developed in the employees to improve their performance strategically. Ciampi et al. (2021) Confirmed that the entrepreneurial mindset of the employees helps to get better performance of the business. Therefore, the following hypothesis is developed.
H7: There is a mediating role of dynamic capabilities in the relationship between entrepreneurial capabilities and strategic performance.
According to Farzaneh et al. (2022)The learning of firms is necessary to achieve sustainability in business practices. Meanwhile, He and Wu (2022) Reported that the firms that have the appropriate ability to deal with the significant issues can work strategically to improve business practices. Furthermore, Zhou et al. (2021) Reported that the innovation of firms and their performance in the market is possible with sustainable business development. Therefore, Ferreira et al. (2021) Pointed out that ambidexterity in organizational practices is necessary for improving the efficiency of the employees. Besides, Yuan et al. (2021) Reported that ambidexterity is helpful for the strategic development of business practices and improving business performance. Hence, the following hypothesis is developed.
H8: There is a moderating role of ambidexterity in the relationship between innovation capabilities and dynamic capabilities.
Sijabat et al. (2021) Pointed out that ambidexterity is a useful strategy for firms to focus on entrepreneurial capabilities. Furthermore, Peng et al. (2019) Highlighted that ambidexterity is a reliable way for the improvement in the strategic performance of a business. Ceptureanu et al. (2022) Confirmed that employees need continuous learning and adaptation of entrepreneurial skills that are critical to improve their performance. Rono et al. (2021) Emphasized that every organization should have a focus on ambidexterity to achieve sustainability in business. Besides, Elidjen et al. (2022) Reported that organizational ambidexterity can be utilized to boost the entrepreneurial capabilities of the firms. Therefore, the following hypothesis is developed.
H9: There is a moderating role of ambidexterity in the relationship between entrepreneurial capabilities and dynamic capabilities.
The research He et al. (2022) Highlighted that ambidexterity is helpful for the strategic performance of business and sustainable practices development. However, Shafique et al. (2022) Emphasized that organizational ambidexterity is needed when new practices are required to meet the new market requirements. Meanwhile, Yunita et al. (2023) Confirmed that the dynamic capabilities of businesses are helpful for sustainable practices to meet the requirements of the market. Kim et al. (2019) Pointed out that organizational ambidexterity is helpful to achieve the organizational goals, which is crucial to advance strategic performance. Besides, Andrade et al. (2021) Also asserted that organizational ambidexterity should be the main focus of management for adapting to dynamic capabilities. Hence, the following hypothesis is developed.
H10: There is a moderating role of ambidexterity in the relationship between dynamic capabilities and strategic performance.

3. Methodology

3.1. Research Design

This research is based on a deductive approach where the theoretically developed hypotheses were tested by collecting data from respondents. This research used quantitative data, and a survey-based approach was considered for the collection of data. The research collected one-time data from the respondents to measure the relationships between variables by considering descriptive and inferential data. Therefore, a cross-sectional method of data collection was used to collect one-time data for this research.

3.2. Population of The Study

This research measured the relationship between innovation capabilities, entrepreneurial capabilities, dynamic capabilities, ambidexterity, and strategic performance of the Central Bank of India. The number of branches of the Central Bank of India in six (6) metropolitan cities is reported in Table 1. The branch managers were considered participants in this research. The branches of these banks were considered for data collection. Hence, these participants were considered for data collection with the survey-based method.

Table 1: Branches of the Central Banks of India in Metropolitan Cities

No	Metropolitan Cities	Branches
1	Delhi	125
2	Chennai	49
3	Kolkata	86
4	Mumbai	146
5	Bangalore	55
6	Lucknow	37

3.3. Sample Size

Hair et al. (2021) Discussed, power analysis is the best way to measure the appropriate sample size as it is considered the largest number of predictors in the model to provide a sample size. The guidelines by Memon et al. (2020) We followed a power analysis method for sample size determination. The determined sample size for this research is 92. However, the sample size of this research was doubled to reduce the measurement error and non-response bias. Therefore, the minimum sample size of the current research was 184.

3.4. Measurements

In current research, the strategic performance of the Central Bank of India was measured using a scale developed by Mohamad et al. (2012). This scale consists of 10 items, which include return on assets, return on sales, employment growth, and labor productivity; whilst the latter comprises the items on sales revenue growth, profitability, market share, customer satisfaction, and customer loyalty. The scale items are modified and reformed to fit the context of the Central Bank of India.
The scale items for measuring IC are adapted from Calantone et al. (2002). The scale is adapted to fit the context of this research. The content of the scale is not changed, but the language is also improved to collect data on the Likert scale. In this research, IC was measured using a scale consisting of six (06) items.
The scale items for measuring entrepreneurial capabilities are adapted from Cuevas-Vargas et al. (2019). The scale is adapted to fit the context of this research. Meanwhile, this scale is multidimensional and has been used by previous studies. Cuevas-Vargas et al. (2019). The scale has three dimensions: innovation, proactivity, and risk-taking. In this research, entrepreneurial capabilities were measured using a scale consisting of seven (10) items. There are four (04) items to measure innovation, three (03) items to measure risk-taking, and three (03) items to measure proactivity.
The scale items for measuring dimensions are adapted from Singh and Rao (2016). Besides, this scale is multidimensional and has been used by previous studies. (Singh & Rao, 2016). The scale has four dimensions: learning capabilities, integration capabilities, reconfiguration capabilities, and alliances management capabilities. In this research, entrepreneurial capabilities were measured using a scale consisting of twenty-one (21) items. There are four (04) items to learning capabilities, four (04) items to integration capabilities, four (04) items to reconfiguration capabilities, and nine (09) items to measure alliances management capabilities.
The scale items for measuring ambidexterity are adapted from Singh and Rao (2016). Meanwhile, this scale is multidimensional. The scale has two dimensions: exploitation learning and exploration learning. In this research, ambidexterity was measured using a scale consisting of ten (10) items. There are five (05) items to measure exploitation learning and five (05) items to measure exploration learning.

3.5. Sampling Technique

The population of this study consisted of the branch managers of the Central Bank of India. The research frame of this study was the directory of branch managers of the Central Bank of India. However, the data was collected from the different branches located in six metropolitan cities. The branches of the Central Bank of India in metropolitan cities (Delhi, Mumbai, Chennai, Kolkata, Bangalore, and Lucknow) were visited for data collection. In this research, a probability sampling design was used because of the high generalization of the findings. Therefore, a simple random sampling technique was used for sampling, as each element in the population of the study would have an equal chance to be considered for the data collection.

3.6. Data Collection Procedure

Data collection of this research was based on some steps. To begin with, the branches of the Central Bank of India were visited physically to get information regarding the availability of population. The branches of the Central Bank of India located in Delhi, Mumbai, Chennai, Kolkata, Bangalore, and Lucknow were visited by the researcher. Furthermore, the “data collection letter” was presented to the branch managers of the Central Bank of India to get consent for data gathering. Likewise, the assistance of the bank management was taken to approach the target population of this research for the administration of the questionnaire. Meanwhile, the questionnaires were printed for the collection of data. The information regarding the purpose of this research was delivered to the respondents before data collection. They were assured that the personal information would be used for this research purpose only.
The respondents were informed about the questionnaire and the time for data collection. In this research, 310 printed questionnaires were distributed to the respondents to collect data. In response, only 243 respondents provided the questionnaires with filled responses. During the preliminary analysis, 21 responses were rejected due to missing values and inconsistencies in the data. The purpose of screening and deleting inappropriate responses was to reduce any kind of potential bias in the findings of this research. However, the study obtained 222 responses for this research with a percentage of 71.61%.

4. Data analysis and Findings

4.1. Demographic Analysis

The study also analyzed demographic data using SPSS 30. In the demographic analysis, the study analyzed age, gender, education level, work experience, and position of the respondents. Regarding age, the study found 28% of the respondents were between 20 and 25 years, while 23% were between 26 and 30 years. However, the study found that 9% of the respondents were between 31 and 35 years, and 10% of the respondents were between 36 and 40 years. In addition, the study found that 13% of respondents were between 41 and 45 years, and 17% were above 45 years. On the other hand, the study analyzed the data and found that 43% of respondents were male, while 57% of the respondents were female.
Regarding education level, the study found that 29% of the respondents had a Bachelor's, while 71% of the respondents had a Master's or PhD. Moreover, the study analyzed data related to the work experience and found that 16% of the employees had experience of less than three years, while 84% had experience of more than 3 years. Finally, the data related to the position of the employees was analyzed, and the study confirmed 17% of the respondents were senior managers, 46% were branch managers, and 37% were involved in other positions and responsibilities. The respondents’ profile-related information is shown in Table 2.

Table 2: Respondents' Profile

Variable	Level	Frequency	Total	Proportion
Age	20 - 25 Years	63	222	28%
	26 - 30 Years	52	222	23%
	31 - 35 Years	19	222	9%
	36 - 40 Years	21	222	10%
	41 - 45 Years	29	222	13%
	Above 45 Years	38	222	17%
Gender	Male	95	222	43%
	Female	127	222	57%
Education Level	Bachelor	64	222	29%
	Master/PhD	158	222	71%
Work Experience	Less than 3 Years	35	222	16%
	More than 3 Years	187	222	84%
Position	Senior Manager	38	222	17%
	Branch Manager	101	222	46%
	Other	83	222	37%

4.2. Measurement Model Assessment

The measurement model was assessed using Smart PLS 4. This software is used for robust findings of the study (see Figure 2). The measurement model refers to the implicit or explicit model that relates the latent variable to its indicators (Hair Jr et al., 2020).
The measurement model is used to analyze the internal consistency reliability, individual items' reliability, and convergent validity with average variance extracted (AVE) findings. (Hair et al., 2017). Measurement model assessment is also useful to assess discriminant validity. However, this study used the Heterotrait-Monotrait (HTMT) method and the Farnell and Larcker (F&L) method to assess the discriminant validity of the data.
During the assessment of factor loadings, the value for some items was less than 0.70. According to Hair et al. (2011)Factor loadings values above 0.70 should be considered significant. Therefore, some of the items having factor loadings less than 0.70 were deleted to achieve the significant threshold for convergent validity. Once the convergent validity was achieved, the instruments, even with low factor loadings reported below 0.70, remained in the measurement model assessment. (Murad et al., 2025). The assessment of convergent validity is explained in the next section.

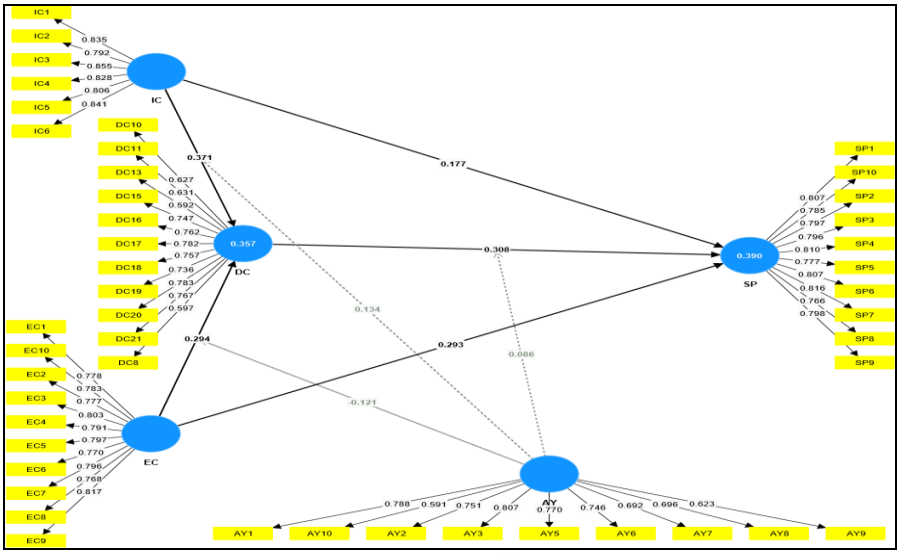

Fig. 2: Measurement Model Assessment.

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

4.3. Internal Consistency Reliability

The internal consistency reliability was assessed by using composite reliability and Cronbach's alpha values. The findings of composite reliability and Cronbach's alpha are shown in Table 4.5. According to Hair et al. (2017)A composite reliability value above 0.70 is reported as significant. While Sekaran and Bougie (2016) Discussed that Cronbach's alpha value above 0.70 is accepted as a significant threshold. According to Hair et al. (2022)The rule of thumb of Cronbach's alpha and composite reliability confirms the internal consistency reliability. The findings confirmed that both Cronbach's alpha and composite reliability were achieved, confirming the internal consistency reliability.

4.4. Convergent Validity

In the measurement model assessment, convergent validity is achieved with the AVE value. According to Hair et al. (2010), all constructs in a model should have an AVE value above 0.50, which is a rule of thumb for the determination of convergent validity. The findings reported in Table 4.5 confirmed that convergent validity was significantly established as all constructs had an AVE value above 0.50. Therefore, the study found that internal consistency reliability and convergent validity were significantly established in this study. The findings of convergent validity, internal consistency, and composite reliability are reported in Table 3.

Table 3: Convergent Validity

Construct	Items	Factor Loadings	Cronbach's alpha	Composite reliability	Average variance extracted
AY	AY1	0.788	0.886	0.906	0.521
	AY2	0.751			
	AY3	0.807			
	AY5	0.770			
	AY6	0.746			
	AY7	0.692			
	AY8	0.696			
	AY9	0.623			
	AY10	0.591			
DC	DC8	0.597	0.900	0.918	0.506
	DC10	0.627			
	DC11	0.631			
	DC13	0.592			
	DC15	0.747			
	DC16	0.762			
	DC17	0.782			
	DC18	0.757			
	DC19	0.736			
	DC20	0.783			
	DC21	0.767			
EC	EC1	0.778	0.932	0.942	0.621
	EC2	0.777			
	EC3	0.803			
	EC4	0.791			
	EC5	0.797			
	EC6	0.770			
	EC7	0.796			
	EC8	0.768			
	EC9	0.817			
	EC10	0.783			
IC	IC1	0.835	0.907	0.928	0.683
	IC2	0.792			
	IC3	0.855			
	IC4	0.828			
	IC5	0.806			
	IC6	0.841			
SP	SP1	0.807	0.936	0.945	0.634
	SP2	0.797			
	SP3	0.796			
	SP4	0.810			
	SP5	0.777			
	SP6	0.807			
	SP7	0.816			
	SP8	0.766			
	SP9	0.798			
	SP10	0.785			

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

4.4. Discriminant Validity

This study used the HTMT ratio to measure discriminant validity. It is a method to investigate discriminant validity with a robust method. (Henseler et al., 2015). According to Henseler et al. (2015)Discriminant validity is confirmed in the data when the HTMT ratio for all constructs is less than 0.90. The study found that the highest HTMT ratio was 0.552, which is below 0.90. Hence, the rule of thumb for discriminant validity was significantly established, confirming the reliability of the data. The findings of the HTMT ratio are shown in Table 4.

Table 4: Heterotrait-Monotrait Ratio

Construct	AY	DC	EC	IC	SP
AY					
DC	0.161				
EC	0.099	0.476			
IC	0.079	0.552	0.420		
SP	0.071	0.552	0.517	0.488	

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

Furthermore, some researchers recommended investigating discriminant validity with the Fornell and Larcker (F&L) method. (Fornell & Larcker, 1981). According to Hair et al. (2011)"To guarantee the discriminant validity, the square root of the AVE measures must be higher than all the correlations among all the constructs." The findings of discriminant validity with the F&L method confirmed a significant achievement in the rule of thumb. Hence, the findings described in Table 5 found that the discriminant validity for this research model was significantly achieved. Hence, the data were considered appropriate for structural model assessment.

Table 5: Fornell and Larcker

Construct	AY	DC	EC	IC	SP
AY	0.721				
DC	0.156	0.711			
EC	0.070	0.435	0.788		
IC	-0.026	0.499	0.386	0.826	
SP	-0.024	0.511	0.486	0.454	0.796

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

4.5. Structural Model Assessment

The assessment of the structural model was performed after confirmation of the reliability and validity of the data with measurement model assessment. It is also critical to describe the relationship between the variables of the study. However, the important criteria for assessment of structural model are based on coefficients of determination (R^2), effect size (f^2), predictive relevance (Q^2), and path coefficients.

4.6. Coefficient of Determination

The predictive power of the research model is also tested by the coefficient of determination (R^2). According to Hair et al. (2017)The established rule of thumb for the coefficient of determination is based on the field of study and the complexity of the model. Renaud and Victoria-Feser (2010) highlighted, "the value of R^2 0.67 is substantial, 0.33 is moderate, and 0.19 is weak." The findings of determination highlighted that exogenous constructs of this study have 39% variation in the dependent variable, strategic performance. While the exogenous constructs have 35% variation in the variable "dynamic capabilities". Hence, the study found that the predictive power of the independent variables for the dependent variable is moderate. The findings of the coefficients of determination are reported in Table 6.

Table 6: Coefficient of Determination

Construct	R-square	R-square adjusted
DC	0.357	0.342
SP	0.390	0.376

DC = Dynamic Capabilities and SP = Strategic Performance.

4.7. Assessment of Effect Size

In any research model, it is imperative to investigate the effect size. According to Hair et al. (2017)The effect size is used to determine the effect of independent variables on the dependent variables. Cohen (1988) Highlighted that the effect size (f^2) value of 0.02 is small, 0.15 is medium, and 0.35 is large. Similarly, if the effect size value is less than 0.02, it is considered that there is no effect of the independent variable on the dependent variable. The study found that the effect of dynamic capability was reported as small on strategic performance ($f^2 = 0.102$).

On the other hand, the effect of entrepreneurial capabilities ($f^2 = 0.108$) and innovation capabilities ($f^2 = 0.036$) was also reported as small on strategic performance. In addition, the effect size of entrepreneurial capabilities was reported as small on dynamic capabilities ($f^2 = 0.110$), while the impact of innovation capabilities was reported as large on dynamic capabilities ($f^2 = 0.175$). The findings of the effect size are shown in Table 7.

Table 7: Effect Size

Construct	DC	SP
DC		0.102
EC	0.110	0.108
IC	0.175	0.036

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

4.8. Assessment of Predictive Relevance

Using Smart PLS 4, the PLS Blindfolding method was used to determine the predictive relevance of the model. For this purpose, the examination of a cross-validated redundancy approach was used to check the predictive relevance. According to Hair et al. (2017)The Q^2 value above zero (0) reflects that the model has significant predictive relevance for the endogenous construct based on reflective measurements. The findings of this study confirmed that the endogenous construct "strategic performance" achieved the Q^2 value above 0, which is considered a significant predictive relevance for the model. The findings of predictive relevance are presented in Table 8 and Figure 3.

Table 8: Predictive Relevance

Construct	SSO	SSE	Q^2 (=1-SSE/SSO)
AY	1998	1998	0.000
DC	2442	2019.484	0.173
EC	2220	2220	0.000
IC	1332	1332	0.000
SP	2220	1682.2	0.242

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

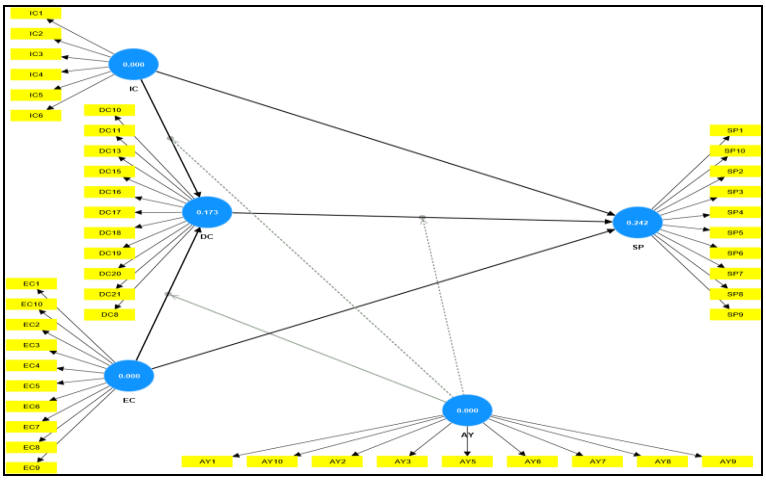

Fig. 3: Predictive Relevance Assessment.

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

4.9. Path Coefficients

According to Wong (2013)The assessment of the structural model is to investigate the inter-relationship between the variables. The structural model assessment was performed with the PLS Bootstrapping method, where a significance level of 0.05 and 5000 sub-samples were used. The findings are reported in Table 9 and Figure 4.

The empirical findings of H1 confirmed that the relationship between innovation capabilities and dynamic capabilities is accepted (β = 0.371, t = 6.328, and p = 0.000). The empirical findings of H2 confirmed that the relationship between entrepreneurial capabilities and dynamic capabilities is accepted (β = 0.177, t = 2.621, and p = 0.009). The empirical findings of H3 confirmed that the relationship between entrepreneurial capabilities and dynamic capabilities is accepted (β = 0.294, t = 5.098, and p = 0.000). The empirical findings of H4 confirmed that the relationship between entrepreneurial capabilities and strategic performance is accepted (β = 0.293, t = 4.424, and p = 0.000). The empirical findings of H5 confirmed that the relationship between dynamic capabilities and strategic performance is accepted (β = 0.308, t = 4.309, and p = 0.000). Hence, H5 was supported in this study.

The findings of H6 (β = 0.114, t = 3.547, and p = 0.000) confirmed that the mediating role of dynamic capabilities between innovation capabilities and strategic performance was supported. The findings of H7 (β = 0.090, t = 3.367, and p = 0.000) confirmed that the mediating role of dynamic capabilities between entrepreneurial capabilities and strategic performance was supported.

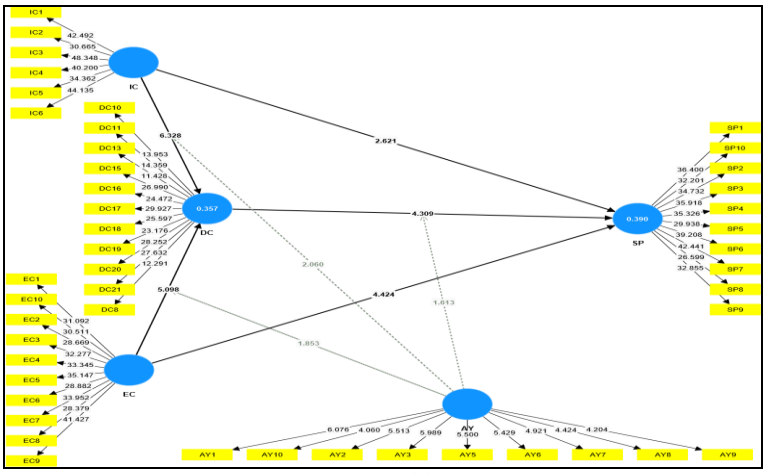

Fig. 4: Structural Model Assessment.

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

The empirical findings of H8 confirmed that there is a significant and acceptable moderating role of ambidexterity in the relationship between innovation capabilities and dynamic capabilities (β = 0.134, t = 2.060, and p = 0.039). Hence, the study found that with the moderating interaction of ambidexterity, the impact of innovation capabilities is positively improved on dynamic capabilities. Figure 5 graphically highlights the moderating interaction of ambidexterity on the relationship between innovation capabilities and dynamic capabilities. The study confirmed that ambidexterity strengthens the positive relationship between innovation capabilities and dynamic capabilities.

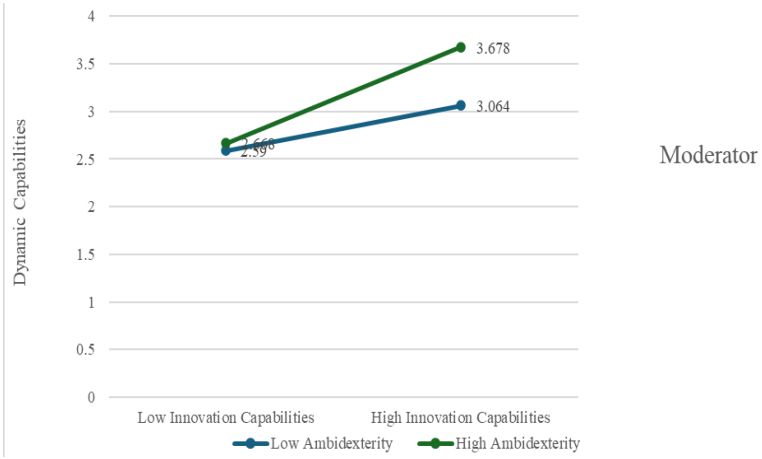

Fig. 5: Moderating Interaction of Ambidexterity between Innovation Capabilities and Dynamic Capabilities.

However, the empirical findings of H9 confirmed that the moderating interaction of ambidexterity on the relationship between entrepreneurial capabilities and dynamic capabilities was not supported (β = -0.121, t = 1.853, and p = 0.064). Therefore, H9 was not supported in this research. Finally, the study tested H10, which stated that there is a moderating role of ambidexterity in the relationship between dynamic capabilities and strategic performance. The statistical findings confirmed that the moderating role of ambidexterity between dynamic capabilities and strategic performance was not supported (β = 0.086, t = 1.613, and p = 0.107). Therefore, the study found that the H10 was not supported by the findings.

Table 9: Path Coefficients

Hypothesis	Paths	Original sample	Standard deviation	T statistics	P values	Decision
H1	IC -> DC	0.371	0.059	6.328	0.000	Supported
H2	IC -> SP	0.177	0.068	2.621	0.009	Supported
H3	EC -> DC	0.294	0.058	5.098	0.000	Supported
H4	EC -> SP	0.293	0.066	4.424	0.000	Supported
H5	DC -> SP	0.308	0.071	4.309	0.000	Supported
H6	IC -> DC -> SP	0.114	0.032	3.547	0.000	Supported
H7	EC -> DC -> SP	0.090	0.027	3.367	0.001	Supported
H8	AY x IC -> DC	0.134	0.065	2.060	0.039	Supported
H9	AY x EC -> DC	-0.121	0.065	1.853	0.064	Not Supported
H10	AY x DC -> SP	0.086	0.053	1.613	0.107	Not Supported

IC = Innovation Capabilities, EC = Entrepreneurial Capabilities, DC = Dynamic Capabilities, SP = Strategic Performance, and AY = Ambidexterity.

5. Discussion and Conclusion

The findings of the current study confirmed a significant relationship between innovation capabilities and dynamic capabilities (H1). This supports the earlier proposition of Strønen et al. (2017), who noted that firms capable of innovating are better equipped to develop dynamic capabilities. Vu (2020) Similarly, it is emphasized that innovation capabilities enhance a firm's ability to integrate internal and external resources to achieve organizational goals. The current result also aligns with Ferreira et al. (2020), who identified innovation as a vital driver that enhances the effectiveness of dynamic capabilities. Thus, the study reinforces the theoretical assertion that innovation capabilities are foundational to the firm's capacity to respond to changing environments through dynamic capabilities.

The acceptance of H2 in the study indicates that innovation capabilities significantly impact strategic performance. This finding corroborates the conclusions of Chen et al. (2021), who observed that innovation-driven firms tend to perform better due to their adaptability. Additionally, Broadstock et al. (2020) Reported that innovation in product and process contributes positively to firm performance. The study by Sawaean and Ali (2020) Also supports this result by demonstrating that innovation is critical for achieving competitive advantage and long-term success. Therefore, the current research validates that innovation capabilities are an essential asset for organizations aiming to enhance their strategic performance.

The findings revealed a significant positive relationship between entrepreneurial capabilities and dynamic capabilities (H3). This is consistent with Abu-Rumman (2021), who argued that entrepreneurial capabilities drive profitability by promoting resource utilization and adaptability. Randhawa et al. (2021) Added that these capabilities support product and service innovation, thus facilitating the development of dynamic responses. Moreover, Matarazzo et al. (2021) and A. Singh et al. (2022) Emphasized the strategic synergy between entrepreneurial and dynamic capabilities in enabling sustainable competitive advantage. Hence, the results underscore the idea that entrepreneurial capabilities are not standalone traits but integral to the configuration of dynamic capabilities.

H4 was also accepted, indicating a strong association between entrepreneurial capabilities and strategic performance. This finding is in alignment with AlTaweel and Al-Hawary (2021), who reported that entrepreneurial traits enable firms to introduce innovative offerings that enhance market competitiveness. Additionally, the work of Sawaean and Ali (2020) and Lestari et al. (2020) Supports the idea that entrepreneurial capabilities lead to better strategic outcomes by encouraging proactive market responses. Nakku et al. (2020) Further positioned these capabilities as game changers in modern business strategy. Collectively, the present findings support the theory that entrepreneurial orientation is a crucial determinant of strategic success.

The positive relationship between dynamic capabilities and strategic performance (H5), confirmed in this study, is in line with the findings of Mikalef et al. (2020) and Suddaby et al. (2020), who considered dynamic capabilities a cornerstone for achieving sustained competitive advantage. Teece (2020) emphasized the role of dynamic capabilities in strategically aligning firm activities with environmental demands, while Khan et al. (2020a) Argued that such capabilities are vital for ensuring business sustainability. The alignment of the current findings with these prior studies provides robust evidence for the strategic value of dynamic capabilities in navigating complex business environments.

The study results showed that dynamic capabilities mediate the relationship between innovation capabilities and strategic performance (H6). This outcome supports the argument by Singh and Verma (2023), who emphasized the intermediary role of dynamic capabilities in linking innovation to outcomes. Mikalef et al. (2020) Confirmed that dynamic capabilities enable firms to transform innovative inputs into strategic achievements. Buccieri et al. (2020) Also advocated for considering both innovation and dynamic capabilities as necessary for effective business practices. The present findings, therefore, suggest that innovation alone is insufficient without the transformational power of dynamic capabilities to generate strategic impact.

The confirmation of H7 highlights that dynamic capabilities mediate the effect of entrepreneurial capabilities on strategic performance. This finding aligns with Soluk et al. (2021), who noted that entrepreneurial skills foster the creation of flexible organizational systems, which are further enabled by dynamic capabilities. Randhawa et al. (2021) and Bitencourt et al. (2020) Emphasized that such mediation helps convert entrepreneurial intent into concrete performance metrics. This result also validates the view of Mikalef, Pateli, et al. (2021), who suggested that dynamic capabilities bridge the gap between entrepreneurial action and organizational outcomes. Therefore, dynamic capabilities catalyze leveraging entrepreneurial potential in strategic contexts.

The results of the study support H8, indicating that ambidexterity significantly moderates the relationship between innovation capabilities and dynamic capabilities. This finding is consistent with Farzaneh et al. (2022) and Ferreira et al. (2021), who highlighted the critical role of ambidexterity in enhancing organizational responsiveness to innovation. Ambidexterity allows firms to balance exploration and exploitation, enabling them to integrate innovative efforts into their dynamic capability development. Yuan et al. (2021) Emphasized that ambidextrous organizations are more adaptable to external pressures and internal transformations, which strengthens their dynamic capabilities. The result affirms the relevance of ambidexterity in ensuring that innovation efforts are effectively internalized and transformed into dynamic competencies within the organization, particularly in complex and competitive environments like the banking sector.

Contrary to expectations, H9 was not supported in this study. This outcome suggests that ambidexterity does not significantly influence the strength of the relationship between entrepreneurial capabilities and dynamic capabilities in the given context. This finding diverges from prior research by Sijabat et al. (2021) and Ceptureanu et al. (2022), who argued that ambidexterity supports firms in effectively channeling entrepreneurial efforts into adaptive capabilities. The lack of support may be attributed to the rigid operational structure in public sector banking, where entrepreneurial activities are limited and may not translate directly into dynamic capability development. It is also possible that contextual constraints, such as hierarchical decision-making and regulatory barriers, dilute the moderating effect of ambidexterity. In the case of CBI, entrenched bureaucratic procedures and multi-layered approval systems often delay decision-making and restrict managerial autonomy, making it difficult for entrepreneurial initiatives to be scaled into dynamic capabilities. Moreover, regulatory compliance pressures may further discourage experimentation, thereby weakening the potential role of ambidexterity. These challenges are consistent with Goswami and Gulati (2022), who highlight how operational inefficiencies and rigid institutional frameworks in Indian public sector banks hinder innovation and responsiveness. Future studies should examine this relationship in more flexible or innovation-driven sectors to explore whether organizational context plays a significant role in these dynamics.

H10 was also not supported, indicating that ambidexterity does not significantly moderate the relationship between dynamic capabilities and strategic performance in this study. This contradicts earlier findings by Yunita et al. (2023) and Andrade et al. (2021), who proposed that ambidexterity enhances the effectiveness of dynamic capabilities in achieving strategic goals. The current finding suggests that, within the context of the Central Bank of India, the presence of ambidexterity does not significantly influence how dynamic capabilities translate into strategic performance. One plausible explanation is that in public sector institutions, structural rigidity and risk-averse cultures may limit the ability to simultaneously pursue exploration and exploitation. For CBI in particular, performance-driven use of dynamic capabilities may be undermined by outdated processes, procedural bottlenecks, and legacy systems that slow down the implementation of strategic initiatives. As noted by Goswami and Gulati (2022)Such inefficiencies not only constrain operational agility but also reduce the effectiveness of organizational capabilities in driving competitive outcomes. Thus, even when dynamic capabilities exist, the inability to deploy them ambidextrously within a highly regulated and hierarchical environment may explain their limited impact on strategic performance. Future research should consider how institutional constraints or cultural factors might moderate this relationship differently across various organizational settings.

6. Theoretical Implications

This study contributes to the theoretical development of strategic performance in the banking sector by empirically validating the interplay between innovation capabilities, entrepreneurial capabilities, dynamic capabilities, and strategic performance under the lens of Dynamic Capabilities Theory. One of the key contributions lies in confirming the mediating role of dynamic capabilities between both innovation and entrepreneurial capabilities and strategic performance. This reinforces prior theoretical assumptions that dynamic capabilities serve as a mechanism for transforming core organizational competencies into performance outcomes.

A novel contribution of this research is the supported moderating role of ambidexterity between innovation capabilities and dynamic capabilities, affirming its importance in enhancing adaptability and learning. This finding aligns with theories that position ambidexterity as a facilitator of exploration–exploitation balance. However, the non-significant moderating effects of ambidexterity between entrepreneurial capabilities and dynamic capabilities, and between dynamic capabilities and strategic performance, challenge existing theoretical assumptions. These results suggest that the influence of ambidexterity may be context-dependent, especially in highly regulated or rigid environments such as public sector banking. This insight invites scholars to refine the boundaries of ambidexterity's effectiveness and explore its varying impact across organizational structures, sectors, or cultures, contributing to a more nuanced application of dynamic capabilities theory in different empirical contexts.

7. Practical Implications

The findings offer several practical insights for bank executives, strategists, and policymakers, particularly in the context of public sector banking. The study confirms that innovation and entrepreneurial capabilities alone are not sufficient; their influence on performance becomes effective when transformed through dynamic capabilities. Managers should therefore invest in strengthening dynamic capabilities such as sensing market shifts, seizing opportunities, and reconfiguring internal resources to remain competitive. Importantly, the study shows that ambidexterity strengthens the effect of innovation capabilities on dynamic capabilities. This highlights the need for banks to balance exploitation (improving existing services) and exploration (adopting innovation). Managers should create systems and leadership practices that allow innovation to be embedded into operational capabilities. Training programs that promote creative thinking while also supporting procedural efficiency are essential.

However, the lack of significant moderation by ambidexterity in other tested relationships signals that merely promoting dual structures may not yield strategic benefits unless supported by appropriate autonomy, incentives, and institutional flexibility. For public sector banks, this may mean rethinking rigid bureaucratic processes and fostering a culture where experimentation and adaptability are encouraged. Policymakers should support such shifts through regulatory reforms that enable more agile decision-making and performance-driven governance in the public banking sector.

In addition, banks can leverage digital transformation initiatives such as adopting advanced analytics, artificial intelligence, and digital customer interfaces to enhance sensing and seizing capabilities at scale. Equally important is investment in structured talent development programs that cultivate digital literacy, adaptive thinking, and cross-functional collaboration, ensuring employees can fully support transformation efforts. By aligning digital initiatives with human capital strategies, public sector banks can accelerate innovation diffusion and sustain long-term competitiveness.

8. Limitations and Future Directions

Despite its contributions, this study has several limitations that must be acknowledged. First, the data was collected from a single public sector bank, the Central Bank of India, which limits the generalizability of the findings across the broader banking sector in India or globally. Second, the study employed a cross-sectional design, capturing responses at one point in time, which restricts the ability to assess changes in capabilities and performance over time. Third, the research relies on self-reported data, which may be subject to biases such as social desirability or respondent subjectivity. Additionally, while the study tested mediating and moderating effects, it did not account for contextual variables such as organizational structure, leadership style, or regulatory changes, which could influence the relationships studied.

Future research should consider a longitudinal approach to observe how innovation, entrepreneurial, and dynamic capabilities evolve and interact over time. Expanding the sample to include multiple banks, both public and private, would enhance the generalizability of the results. Scholars should also explore additional moderating or mediating variables such as digital maturity, organizational culture, or market turbulence to deepen understanding. In addition, scholars are also recommended to use other contextual variables such as fintech competition, regulatory changes, and market competition to interpret the findings with a better insight. Lastly, qualitative studies could complement the quantitative approach to provide richer, more contextualized insights into capability-building and strategic performance in banking.

Acknowledgement

We are thankful to the management of the Central Bank of India (CBI) for their support in data collection.

References

[1] Abdurrahman, A., Gustomo, A., & Prasetio, E. A. (2024). Impact of Dynamic Capabilities on Digital Transformation and Innovation to Improve Banking Performance: A TOE Framework Study. *Journal of Open Innovation: Technology, Market, and Complexity*, 100215. https://doi.org/10.1016/j.joitmc.2024.100215.

[2] Abu-Rumman, A. (2021). Transformational leadership and human capital within the disruptive business environment of academia. *World Journal on Educational Technology: Current Issues*, *13*(2), 178-187. https://doi.org/10.18844/wjet.v13i2.5652.

[3] Abu-Rumman, A., Al Shraah, A., Al-Madi, F., & Alfalah, T. (2021). Entrepreneurial networks, entrepreneurial orientation, and performance of small and medium enterprises: Are dynamic capabilities the missing link? *Journal of Innovation and Entrepreneurship*, *10*(1), 1-16. https://doi.org/10.1186/s13731-021-00170-8.

[4] Ali, G. A., Hilman, H., & Gorondutse, A. H. (2020). Effect of entrepreneurial orientation, market orientation, and total quality management on performance: Evidence from Saudi SMEs. *Benchmarking: An International Journal*, *27*(4), 1503-1531. https://doi.org/10.1108/BIJ-08-2019-0391.

[5] AlTaweel, I. R., & Al-Hawary, S. I. (2021). The mediating role of innovation capability on the relationship between strategic agility and organizational performance. *Sustainability*, *13*(14), 7564. https://doi.org/10.3390/su13147564.

[6] Andrade, J., Franco, M., & Mendes, L. (2021). Technological capacity and organisational ambidexterity: the moderating role of environmental dynamism on Portuguese technological SMEs. *Review of Managerial Science*, *15*, 2111-2136. https://doi.org/10.1007/s11846-020-00416-x.

[7] Arranz, N., Arroyabe, M., Li, J., & Fernandez de Arroyabe, J. C. (2020). Innovation as a driver of eco-innovation in the firm: An approach from the dynamic capabilities theory. *Business Strategy and the Environment*, *29*(3), 1494-1503. https://doi.org/10.1002/bse.2448.

[8] Bitencourt, C. C., de Oliveira Santini, F., Ladeira, W. J., Santos, A. C., & Teixeira, E. K. (2020). The extended dynamic capabilities model: A meta-analysis. *European Management Journal*, *38*(1), 108-120. https://doi.org/10.1016/j.emj.2019.04.007.

[9] Broadstock, D. C., Matousek, R., Meyer, M., & Tzeremes, N. G. (2020). Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. *Journal of Business Research*, *119*, 99-110. https://doi.org/10.1016/j.jbusres.2019.07.014.

[10] Buccieri, D., Javalgi, R. G., & Cavusgil, E. (2020). International new venture performance: Role of international entrepreneurial culture, ambidextrous innovation, and dynamic marketing capabilities. *International Business Review*, *29*(2), 101639. https://doi.org/10.1016/j.ibusrev.2019.101639.

[11] Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, *31*(6), 515-524. https://doi.org/10.1016/S0019-8501(01)00203-6.

[12] Ceptureanu, S. I., Ceptureanu, E. G., & Cerqueti, R. (2022). Innovation ambidexterity and impact on the performance in IT companies: the moderating role of business experience. *Technology Analysis & Strategic Management*, *34*(7), 746-759. https://doi.org/10.1080/09537325.2021.1918337.

[13] Chatterjee, S., Chaudhuri, R., Mariani, M., & Fosso Wamba, S. (2023). The consequences of innovation failure: An innovation capabilities and dynamic capabilities perspective. *Technovation*, *128*, 102858. https://doi.org/10.1016/j.technovation.2023.102858.

[14] Chen, Q., Wang, C.-H., & Huang, S.-Z. (2021). Effects of organizational innovation and technological innovation capabilities on firm performance: evidence from firms in China's Pearl River Delta. In *Inside the Changing Business of China* (pp. 72-96). Routledge. https://doi.org/10.4324/9781003057352-6.

[15] Choithani, T., Chowdhury, A., Patel, S., Patel, P., Patel, D., & Shah, M. (2024). A comprehensive study of artificial intelligence and cybersecurity on bitcoin, crypto currency and banking system. *Annals of Data Science*, *11*(1), 103-135. https://doi.org/10.1007/s40745-022-00433-5.

[16] Ciampi, F., Demi, S., Magrini, A., Marzi, G., & Papa, A. (2021). Exploring the impact of big data analytics capabilities on business model innovation: The mediating role of entrepreneurial orientation. *Journal of Business Research*, *123*, 1-13. https://doi.org/10.1016/j.jbusres.2020.09.023.

[17] Cohen, J. (1988). Statistical power analysis for the behavioural sciences. 2nd edn. Hillsdale, NJ: Lawrence Erlbaum.

[18] Cuevas-Vargas, H., Parga-Montoya, N., & Fernández-Escobedo, R. (2019). Effects of entrepreneurial orientation on business performance: The mediating role of customer satisfaction—A formative–Reflective model analysis. *SAGE Open*, *9*(2), 2158244019859088. https://doi.org/10.1177/2158244019859088.

[19] Dua, P. (2023). Monetary policy framework in India. In *Macroeconometric Methods: Applications to the Indian Economy* (pp. 39-72). Springer. https://doi.org/10.1007/978-981-19-7592-9_3.

[20] Elidjen, E., Pertiwi, A., Mursitama, T. N., & Beng, J. T. (2022). How potential and realized absorptive capacity increased ability to innovate: the moderating role of structural ambidexterity. *VINE Journal of Information and Knowledge Management Systems*. https://doi.org/10.1108/VJIKMS-12-2021-0298.

[21] Farzaneh, M., Wilden, R., Afshari, L., & Mehralian, G. (2022). Dynamic capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *Journal of Business Research*, *148*, 47-59. https://doi.org/10.1016/j.jbusres.2022.04.030.

[22] Ferreira, J., Cardim, S., & Coelho, A. (2021). Dynamic capabilities and mediating effects of innovation on the competitive advantage and firm's performance: The moderating role of organizational learning capability. *Journal of the Knowledge Economy*, *12*, 620-644. https://doi.org/10.1007/s13132-020-00655-z.

[23] Ferreira, J., Coelho, A., & Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, *92-93*, 102061. https://doi.org/10.1016/j.technovation.2018.11.004.

[24] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing research*, *18*(1), 39-50. https://doi.org/10.1177/002224378101800104.

[25] Gallego-Gomez, C., & De-Pablos-Heredero, C. (2020). Artificial intelligence as an enabling tool for the development of dynamic capabilities in the banking industry. *International Journal of Enterprise Information Systems (IJEIS)*, *16*(3), 20-33. https://doi.org/10.4018/IJEIS.2020070102.

[26] Goswami, A., & Gulati, R. (2022). Economic slowdown, NPA crisis and productivity behavior of Indian banks. *International Journal of Productivity and Performance Management*, *71*(4), 1312-1342. https://doi.org/10.1108/IJPPM-01-2020-0010.

[27] Gupta, N., & Mahakud, J. (2020). CEO characteristics and bank performance: evidence from India. *Managerial auditing journal*, *35*(8), 1057-1093. https://doi.org/10.1108/MAJ-03-2019-2224.

[28] Gupta, R. (2023). Industry 4.0 adaption in indian banking Sector—A review and agenda for future research. *Vision*, *27*(1), 24-32. https://doi.org/10.1177/0972262921996829.

[29] Hair, J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. https://doi.org/10.1007/978-3-030-80519-7.

[30] Hair, J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications. https://doi.org/10.1007/978-3-030-80519-7.

[31] Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). Multivariate data analysis: A global perspective (Vol. 7). In: Upper Saddle River, NJ: Pearson.

[32] Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, *45*, 616-632. https://doi.org/10.1007/s11747-017-0517-x.

[33] Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, *19*(2), 139-152. https://doi.org/10.2753/MTP1069-6679190202.

[34] Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101-110. https://doi.org/10.1016/j.jbusres.2019.11.069.

[35] He, X., & Wu, X. (2022). Social networks and ambidextrous innovation in SMEs: the mediating role of dynamic capabilities and the moderating role of technological turbulence. *Technology Analysis & Strategic Management*, 1-14. https://doi.org/10.1080/09537325.2022.2157710.

[36] He, X., Wu, X., Croasdell, D., & Zhao, Y. (2022). Dynamic capability, ambidexterity and social network—empirical evidence from SMEs in China. *Journal of Small Business and Enterprise Development*, *29*(6), 958-974. https://doi.org/10.1108/JSBED-05-2020-0181.

[37] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8.

[38] Jayaraman, A. R., & Bhuyan, P. (2020). Impact of NPA and loan write-offs on the profit efficiency of Indian banks. *DECISION*, *47*(1), 35-48. https://doi.org/10.1007/s40622-020-00235-9.

[39] Jena, R. K. (2022). Examining the factors affecting the adoption of blockchain technology in the banking sector: An extended UTAUT model. *International journal of financial studies*, *10*(4), 90. https://doi.org/10.3390/ijfs10040090.

[40] Kanoujiya, J., Bhimavarapu, V. M., & Rastogi, S. (2023). Banks in India: a balancing act between profitability, regulation and NPA. *Vision*, *27*(5), 650-660. https://doi.org/10.1177/09722629211034417.

[41] Kaur, B., Kiran, S., Grima, S., & Rupeika-Apoga, R. (2021). Digital banking in Northern India: The risks on customer satisfaction. *Risks*, *9*(11), 209. https://doi.org/10.3390/risks9110209.

[42] Khan, O., Daddi, T., & Iraldo, F. (2020a). Microfoundations of dynamic capabilities: Insights from circular economy business cases. *Business Strategy and the Environment*, *29*(3), 1479-1493. https://doi.org/10.1002/bse.2447.

[43] Khan, O., Daddi, T., & Iraldo, F. (2020b). The role of dynamic capabilities in circular economy implementation and performance of companies. *Corporate Social Responsibility and Environmental Management*, *27*(6), 3018-3033. https://doi.org/10.1002/csr.2020.

[44] Kim, C. Y., Lim, M. S., & Yoo, J. W. (2019). Ambidexterity in external knowledge search strategies and innovation performance: Mediating role of balanced innovation and moderating role of absorptive capacity. *Sustainability*, *11*(18), 5111-5111. https://doi.org/10.3390/su11185111.

[45] Kolapo, F. T., Mokuolu, J. O., Dada, S. O., & Adejayan, A. O. (2021). Strategic marketing innovation and bank performance in Nigeria [Article]. *Innovative Marketing*, *17*(1), 120-129. https://doi.org/10.21511/im.17(1).2021.10.

[46] Kori, B. W., Muathe, S. M., & Maina, S. M. (2021). Strategic Intelligence and Firm Performance: An Analysis of the Mediating Role of Dynamic Capabilities from Commercial Banks in Kenya. *Journal of Business*, *9*(1), 1-11.

[47] Lestari, S. D., Leon, F. M., Widyastuti, S., Brabo, N. A., & Putra, A. H. P. K. (2020). Antecedents and consequences of innovation and business strategy on performance and competitive advantage of SMEs. *The Journal of Asian Finance, Economics and Business*, *7*(6), 365-378. https://doi.org/10.13106/jafeb.2020.vol7.no6.365.

[48] Malali, A. B., & Gopalakrishnan, S. (2020). Application of artificial intelligence and its powered technologies in the indian banking and financial industry: An overview. *IOSR Journal Of Humanities And Social Science*, *25*(4), 55-60.

[49] Manohar, S., Mittal, A., & Marwah, S. (2020). Service innovation, corporate reputation and word-of-mouth in the banking sector: A test on multigroup-moderated mediation effect. *Benchmarking: An International Journal*, *27*(1), 406-429. https://doi.org/10.1108/BIJ-05-2019-0217.

[50] Matarazzo, M., Penco, L., Profumo, G., & Quaglia, R. (2021). Digital transformation and customer value creation in Made in Italy SMEs: A dynamic capabilities perspective. *Journal of Business Research*, *123*, 642-656. https://doi.org/10.1016/j.jbusres.2020.10.033.

[51] Memon, M. A., Ting, H., Cheah, J.-H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample size for survey research: Review and recommendations. *Journal of Applied Structural Equation Modeling*, *4*(2), 1-20. https://doi.org/10.47263/JASEM.4(2)01.

[52] Migdadi, M. M. (2020). Knowledge management, customer relationship management and innovation capabilities. *Journal of Business & Industrial Marketing*, *36*(1), 111-124. https://doi.org/10.1108/JBIM-12-2019-0504.

[53] Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. (2020). Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information & Management*, *57*(2), 103169. https://doi.org/10.1016/j.im.2019.05.004.

[54] Mikalef, P., Pateli, A., & van de Wetering, R. (2021). IT architecture flexibility and IT governance decentralisation as drivers of IT-enabled dynamic capabilities and competitive performance: The moderating effect of the external environment. *European Journal of Information Systems*, *30*(5), 512-540. https://doi.org/10.1080/0960085X.2020.1808541.

[55] Mikalef, P., van de Wetering, R., & Krogstie, J. (2021). Building dynamic capabilities by leveraging big data analytics: The role of organizational inertia. *Information & Management*, *58*(6), 103412. https://doi.org/10.1016/j.im.2020.103412.

[56] Mohamad, M. R., Kuswantoro, F., & Omar, A. R. C. (2012). Competitive strategies and firm performance : a comparative study of Malaysian and Indonesian small and medium enterprises. 3rd International Conferene of Business and Economic Research (3rd ICBER 2012) Proceeding.,

[57] Mohan, R., & Ray, P. (2023). Non-performing Assets of Indian Banking: An Evolutionary Journey. In D. K. Srivastava & K. R. Shanmugam (Eds.), *India's Contemporary Macroeconomic Themes: Looking Beyond 2020* (pp. 267-313). Springer Nature Singapore. https://doi.org/10.1007/978-981-99-5728-6_12.

[58] Murad, M., Othman, S., & Kamarudin, M. A. I. (2025). Entrepreneurial university input, core strategic plan and output: research on undergraduates entrepreneurial behaviour and career. *Entrepreneurship Education*. https://doi.org/10.1007/s41959-025-00137-w.

[59] Nakku, V. B., Agbola, F. W., Miles, M. P., & Mahmood, A. (2020). The interrelationship between SME government support programs, entrepreneurial orientation, and performance: A developing economy perspective. *Journal of Small Business Management*, *58*(1), 2-31. https://doi.org/10.1080/00472778.2019.1659671.

[60] Pasunoori, V., Kumar, B. M., Janakiram, M., Sastry, E., & Indira, M. (2024). A study on financial performance of central bank of India. *International Research Journal on Advanced Engineering and Management (IRJAEM)*, *2*(03), 276-280. https://doi.org/10.47392/IRJAEM.2024.0041

[61] Peng, M. Y.-P., Zhang, Z., Yen, H.-Y., & Yang, S.-M. (2019). Dynamic capabilities and firm performance in the high-tech industry: quadratic and moderating effects under differing ambidexterity levels. *Sustainability*, *11*(18), 5004. https://doi.org/10.3390/su11185004.

[62] R, A., Kuanr, A., & Kr, S. (2021). Developing banking intelligence in emerging markets: Systematic review and agenda. *International Journal of Information Management Data Insights*, *1*(2), 100026. https://doi.org/10.1016/j.jjimei.2021.100026.

[63] Randhawa, K., Wilden, R., & Gudergan, S. (2021). How to innovate toward an ambidextrous business model? The role of dynamic capabilities and market orientation. *Journal of Business Research*, *130*, 618-634. https://doi.org/10.1016/j.jbusres.2020.05.046.

[64] Renaud, O., & Victoria-Feser, M.-P. (2010). A robust coefficient of determination for regression. *Journal of Statistical Planning and Inference*, *140*(7), 1852-1862. https://doi.org/10.1016/j.jspi.2010.01.008.

[65] Report, M. C. (2024). *Central Bank of India Ltd.* Money Control. https://www.moneycontrol.com/financials/centralbankindia/results/yearly/CBO01

[66] Robertson, J., Caruana, A., & Ferreira, C. (2023). Innovation performance: The effect of knowledge-based dynamic capabilities in cross-country innovation ecosystems. *International Business Review*, *32*(2), 101866. https://doi.org/10.1016/j.ibusrev.2021.101866.

[67] Rono, L. C., Korir, M., & Komen, J. (2021). Moderating Effect of Organizational Ambidexterity on the Relationship between Dynamic Capabilities and Performance of Food and Beverages Companies in Kenya. *African Journal of Education, Science and Technology*, *6*(2), 53-65.

[68] Sari, D., Kusuma, B. A., Sihotang, J., & Febrianti, T. (2023). The role of entrepreneurial marketing & innovation capability in the performance of SMEs during covid-19 pandemic: Evidence of MSMEs in West Java. *Cogent Business & Management*, *10*(1), 2194091. https://doi.org/10.1080/23311975.2023.2194091.

[69] Sawaean, F., & Ali, K. (2020). The impact of entrepreneurial leadership and learning orientation on organizational performance of SMEs: The mediating role of innovation capacity. *Management Science Letters*, *10*(2), 369-380. https://doi.org/10.5267/j.msl.2019.8.033.

[70] Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. john wiley & sons.

[71] Shafique, I., Kalyar, M. N., Shafique, M., Kianto, A., & Beh, L.-S. (2022). Demystifying the link between knowledge management capability and innovation ambidexterity: organizational structure as a moderator. *Business Process Management Journal*, *28*(5/6), 1343-1363. https://doi.org/10.1108/BPMJ-11-2021-0713.

[72] Shankar, A., Jebarajakirthy, C., & Ashaduzzaman, M. (2020). How do electronic word of mouth practices contribute to mobile banking adoption? *Journal of Retailing and Consumer Services*, *52*, 101920. https://doi.org/10.1016/j.jretconser.2019.101920.

[73] Sharma, M., & Choubey, A. (2022). Green banking initiatives: a qualitative study on Indian banking sector. *Environment, Development and Sustainability*, *24*(1), 293-319. https://doi.org/10.1007/s10668-021-01426-9.

[74] Sijabat, E. A. S., Nimran, U., Utami, H. N., & Prasetya, A. (2021). The effects of dynamic capabilities, entrepreneurial creativity and ambidextrous innovation on firm's competitiveness. *The Journal of Asian Finance, Economics and Business*, *8*(1), 711-721.

[75] Singh, A., Singh, H. P., Alam, F., & Agrawal, V. (2022). Role of education, training, and E-learning in sustainable employment generation and social empowerment in Saudi Arabia. *Sustainability*, *14*(14), 8822. https://doi.org/10.3390/su14148822.

[76] Singh, B., & Rao, M. (2016). Effect of intellectual capital on dynamic capabilities. *Journal of Organizational Change Management*, *29*(2), 129-149. https://doi.org/10.1108/JOCM-12-2014-0225.

[77] Singh, B., & Rao, M. K. (2017). To Gear Up Firm Performance in Banking Industry: The Role of Dynamic Capability [Article]. *Global Business Review*, *18*(4), 1019-1040. https://doi.org/10.1177/0972150917692404.

[78] Singh, B., & Verma, P. (2023). How does intellectual capital drive firm performance via dynamic capabilities: evidence from India [Article]. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-10-2022-0555.

[79] Singh, S. K., Del Giudice, M., Chiappetta Jabbour, C. J., Latan, H., & Sohal, A. S. (2022). Stakeholder pressure, green innovation, and performance in small and medium-sized enterprises: The role of green dynamic capabilities. *Business Strategy and the Environment*, *31*(1), 500-514. https://doi.org/10.1002/bse.2906.

[80] Soluk, J., Miroshnychenko, I., Kammerlander, N., & De Massis, A. (2021). Family influence and digital business model innovation: the enabling role of dynamic capabilities. *Entrepreneurship Theory and Practice*, *45*(4), 867-905. https://doi.org/10.1177/1042258721998946.

[81] Strønen, F., Hoholm, T., Kværner, K. J., & Støme, L. N. (2017). Dynamic capabilities and innovation capabilities: The case of the 'Innovation Clinic'. *Journal of Entrepreneurship, Management and Innovation*, *13*(1), 89-116. https://doi.org/10.7341/20171314.

[82] Suddaby, R., Coraiola, D., Harvey, C., & Foster, W. (2020). History and the micro-foundations of dynamic capabilities. *Strategic management journal*, *41*(3), 530-556. https://doi.org/10.1002/smj.3058.

[83] Teece, D. J. (2010). Technological innovation and the theory of the firm: the role of enterprise-level knowledge, complementarities, and (dynamic) capabilities. In *Handbook of the Economics of Innovation* (Vol. 1, pp. 679-730). Elsevier. https://doi.org/10.1016/S0169-7218(10)01016-6.

[84] Teece, D. J. (2016). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm. *European Economic Review*, *86*, 202-216. https://doi.org/10.1016/j.euroecorev.2015.11.006.

[85] Teece, D. J. (2020). Hand in glove: Open innovation and the dynamic capabilities framework. *Strategic Management Review*, *1*(2), 233-253. https://doi.org/10.1561/111.00000010.

[86] Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z.

[87] Times, T. E. (2024). *RBI imposes Rs 1.45 cr penalty on Central Bank of India*. The Economic Times. https://economictimes.indiatimes.com/industry/banking/finance/rbi-imposes-rs-1-45-cr-penalty-on-central-bank-of-india/articleshow/111002168.cms?from=mdr.

[88] Valdez-Juárez, L. E., & Castillo-Vergara, M. (2021). Technological capabilities, open innovation, and eco-innovation: Dynamic capabilities to increase corporate performance of SMEs. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 8. https://doi.org/10.3390/joitmc7010008.

[89] Vu, H. M. (2020). A review of dynamic capabilities, innovation capabilities, entrepreneurial capabilities and their consequences. *The Journal of Asian Finance, Economics and Business*, *7*(8), 485-494. https://doi.org/10.13106/jafeb.2020.vol7.no8.485.

[90] Wong, K. K.-K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, *24*(1), 1-32.

[91] Yuan, C., Xue, D., & He, X. (2021). A balancing strategy for ambidextrous learning, dynamic capabilities, and business model design, the opposite moderating effects of environmental dynamism. *Technovation*, *103*, 102225. https://doi.org/10.1016/j.technovation.2021.102225.
[92] Yunita, T., Sasmoko, S., Bandur, A., & Alamsjah, F. (2023). Organizational ambidexterity: The role of technological capacity and dynamic capabilities in the face of environmental dynamism. *Heliyon*, *9*(4). https://doi.org/10.1016/j.heliyon.2023.e14817.
[93] Zhou, L., Peng, M. Y.-P., Shao, L., Yen, H.-Y., Lin, K.-H., & Anser, M. K. (2021). Ambidexterity in social capital, dynamic capability, and SMEs' performance: quadratic effect of dynamic capability and moderating role of market orientation. *Frontiers in Psychology*, *11*, 584969. https://doi.org/10.3389/fpsyg.2020.584969.